LEYSIN AMERICAN SCHOOL
EDUCATIONAL RESEARCH

LAS Educational Research White Paper

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- Introduction
- History
- Current Situation
- Blue Sky Meetings
  - Participants
  - Survey Responses
  - Meeting Notes
    - From the role plays
      - Creating a culture for continuous growth
      - Training the trainers
      - Demonstration of learning by teachers and students
        - Faculty
        - Students
      - Physical spaces
    - Open discussion to end the meetings
      - Ad hoc support for faculty members
      - Good reputation for the school
  - Discussion
  - Next Steps
- Appendix 1 - Blue Sky Thinking meeting agenda
- Appendix 2 - LASER Overview shared before the Blue Sky Sessions
- Appendix 3 - Full survey results

Appendix 4 - Success Stories

Appendix 5 - Publications describing LASER's vision

Introduction

LAS Educational Research (LASER) has had a remarkable history dating back to its origins in a single professional learning program for 20 faculty members in the 2009-2010 school year.

LASER's activities are wide ranging, with varying impact and staying power. Many initiatives have helped mold the current shape of LAS. Yet there is no resting on past successes, as the ever-evolving nature of schools, with the departure of students making way for new students (and their families) and the comings and goings of staff demanding constant innovation, or as it often goes, risking the end of an innovative program.

Now during COVID, LASER has met perhaps its largest existential threat. Program activities that were highly visible were curtailed as we quit hosting visiting scholars, discontinued all face to face conferences, and cancelled one large LAS Summer school group, recruited through LASER activities. New faculty have arrived while LASER activities have been quieter.

It's time for a new phase of LASER, starting with a reckoning of where things currently stand and, importantly, what value LASER's multiple areas of programming bring to a school like LAS.

History

The deepest roots of the research center are the early years of in-house professional development programs supported by Reuben Mota and professional development funds diverted from outside speakers to in-house programming. Program A (2009) has had a remarkable run, still in place and largely unchanged 13 years later. Program A led to Program B in 2011, and eventually a range of professional learning programs (starting in 2013) including SEN and training in pedagogical technology among others.

In 2013 LASER produced its largest research report, comparing the use of Samsung Smart School Solutions in a math and ESL class to paired math and ESL classes without it. The serendipitous reception of the LAS report by a VP in Seoul provided at least three significant affordances for LASER. First, the formal establishment of LASER itself. Second, a connection with CHILI (EPFL) director, Pierre Dillenbourg. And third, the chairman of the board, Steve Ott, asked us: "What next?"

"What next?" led to a lab school, housed in a space renovated to fit for purpose in Beau Reveil. The goal of the lab school was to expand on the success of the Samsung research study by investigating other educational technologies. Early research projects included iPads, SmartBoards, and observation tools developed by LASER, including a digital version of Program B teacher feedback and an application called ProLearning created in cooperation with Juan Prieto from the CHILI lab at EPFL.

The research of existing projects, development of new products, expanding professional development opportunities, and experimental work with students (e.g. Hack School (2013-2014), DIY Language (2014-2015), agile and scrum in the classroom (2014 and on), student scholars (2018 and on), and Above & Beyond (2021 and on) coalesced into a vibrant center for experimentation with innovative teaching and learning. The addition of the Alpine Institute (2013-2014), with its focus on Citizen Science, helped broaden the scope of LASER further, adding for example long-term environmental projects (e.g. LETS, TEDx, GLOBE Conference, and the Beau Site Garden), as did the request for LASER to lead the accreditation process (2014 and on), develop and run the middle school (2015-2019), and develop and run the Edge Program (2019 and on).

Based on the number of interesting activities and projects related to innovative teaching and learning, LASER started offering workshops in 2014 to internal and external educators, beginning with Google Suite for Education and eventually including events for educators in math, outdoor education, agility, scrum, computational thinking, STEAM, Professional Learning, and more. LASER also assisted a number of faculty members to present at international conferences, network, publish on the website and, eventually, publish in refereed journals and books. Members of LASER have also been invited to work with schools, universities, and organizations abroad, in countries as far reaching as Germany, The Netherlands, Russia, Spain, Taiwan, Turkey, and the USA.

In 2014, LASER started inviting visiting scholars to work alongside our faculty members. LASER has hosted over 50 individuals, from graduate students to professors, from consultants to small business owners, who have collaborated on research projects, curriculum development, and more. Visiting scholars complement LASER's sponsorship and mentorship of LAS faculty members as resident scholars, also starting in 2014. As of December 2021, 52 projects have been successfully carried out by faculty members.

Current Situation

COVID has been and continues to be a major disruptor for LASER. In March 2020, LASER cancelled trips to Iceland and Turkey (for three different faculty members) and hasn't, as of December 2021, scheduled any further trips of any kind. LASER cancelled visiting scholars scheduled between March and May 2020 and only restarted, with three visiting scholars, in the Fall of 2021. LASER has also not not hosted any conferences or groups during that time. LASER did experience an uptick in the number of presentations online and the number of blogs, articles, and book chapters it was able to produce during quarantine-like conditions.

It is in this relatively quiet time for LASER that we hosted two evenings of Blue Sky Thinking sessions to contemplate LASER's place at LAS and possible next stages of development.

Blue Sky Meetings

Two Blue Sky Thinking sessions were held the evenings of November 29 and 30, 2021. The 90-minute sessions were “blue sky” by way of asking participants to imagine themselves in two ideal situations, in which they role played educators reporting on activities they were sure brought value to two hypothetical centers similar to LASER. Common constraints such as money and time, for example, were not considered.

Before the session, all participants received a survey, asking about the value of hypothetical programs similar to what LASER has supported over the years. A second question mirrored the first, but used LASER terminology for those same activities. After the session, participants received an additional survey question, asking if there was anything they felt had been missed or something they wanted to add to the discussion but weren’t able to.

Participants

Multiple email invitations were sent to the entire academic faculty of LAS (n = 152). Those faculty members who responded were invited to attend one of the two 90-minute sessions. Former resident scholars and visiting scholars not working at LAS were also invited, six of whom (a majority) accepted and were present. Only the director of LASER, Paul Magnuson, was at both sessions. He also played the role of facilitator.

Table 1. *Participants.*

Status of participants	**Number of participants**
Current LAS faculty members	15
Former resident scholars	3
Former visiting scholars	3

Current LAS faculty members (n=15) included current and former resident scholars and professional development program leaders, and faculty from academic, residential, and administrative departments.

Former LAS faculty (n=3) had played various roles with LASER. All three of them were asked to attend because they had been resident scholars, but among them, they had further participated in LASER through various activities, including TEDx, presenting internationally, authoring LASER publications, running experimental programs, accreditation, and developing curriculum.

Former visiting scholars (n=3) had visited LAS once (n=2) or twice (n=1) and had remained connected with LAS since before COVID through a combination of presenting and writing articles together, networking together, and consulting with each other.

Former and visiting scholars participated via Google Meet (in addition to three LAS faculty members). The other 12 participants met face to face on campus.

Survey Responses

The survey (see Appendix 1) asked two questions. The first was written in a general format, asking which of 11 different activities would be likely to bring value to any school. The second question was specifically about LAS and asked the same questions, but with LAS specific terminology when it existed.

For example, the first generic question included a chance to mark “stipends for special teacher-led projects” and “hosting visitors” as bringing value to a school, while the second LAS-specific question included a chance to mark “resident scholars” and “visiting scholars” as bringing value to a school. This format was used to make sure non-LAS faculty members had equal footing when replying to at least one of the two questions, and as a way to check the pattern of responses. One would expect the two sets of answers to be similar - any response that was wildly divergent would probably be the fault of the survey.

The results for all options receiving over 70 percent “yes” results (as in, this activity adds value) are shown in Table 2 and Table 3.

Table 2: *Mark all items associated with a research center that you believe are very likely to bring value TO ANY SCHOOL, n = 22 (at least one LAS faculty member responded to the survey who did not attend either of the sessions)*

Over 90% found value in	supporting the passion projects of individual students (n = 21)
	hosting visitors (n = 20)
	offering workshops to the school’s own faculty (n = 20)
Over 80% found value in	stipends for teacher-led projects (n = 19)
	supporting professional learning activities (n = 19)
	helping faculty get presentations accepted (n = 19)
Over 70% found value in	observing classrooms and debriefing with teachers (n=17)
	supporting student led conferences (n=16)

Table 3: Mark all items associated with a research center that you believe are very likely to bring value TO LAS IN PARTICULAR, *n = 22 (at least one LAS faculty member responded to the survey who did not attend either of the sessions)*

Over 90% found value in	offering workshops to the school's own faculty (n = 20)
Over 80% found value in	NA
Over 70% found value in	visiting scholars
	resident scholars
	helping faculty get published

One general pattern that emerged is that LASER activities, when presented as potentially valuable for any school, scored higher than when asking about the value of LASER activities at LAS. Part of this is due to the six external participants not knowing the names of specific programs that started after they left LAS. For example, one respondent wrote: "Some of the items ...I didn't check only because I didn't know/remember what they are (Above & Beyond, etc.)." The same may be true for some internal participants who are not familiar with all LASER programs.

A second general pattern that emerged is that offering workshops to internal faculty, hosting visiting scholars, and supporting residential scholars scored higher no matter if the question was asked in general or specific to LAS.

A third general pattern favors activities which support LAS faculty members over activities designed to support educators from outside LAS (but see Meeting Notes below for a discussion about the outreach potential LASER has for faculty recruitment and branding).

Survey respondents were also given the opportunity to add an activity that they believed would bring value to a school. Table 4 presents these additions for a general school or for LAS specifically, without further comment.

Table 4. *Additional activities that respondents believed can bring value to any school and to LAS specifically.*

any school	bridging the gap between K-12 and higher ed
	developing and supporting learning coaches to work with teachers
	providing an internal Institutional Review Board for research projects

	affiliation with an MA program
	giving inspiration to other international schools to start their own research center
	accreditation involvement
	workshop leaders for IB, etc.
	bringing educational research into the school and into practice
	supporting strategic developments
LAS	learning walks
	learning school, where LAS provides opportunities for student teachers
	teachers teaching teachers
	sustainability

Finally, survey respondents were asked two questions in an attempt to pin down one activity that they found most valuable. For responses which contain two distinct responses, both are included here, separately. Themes are shown in Table 5 and Table 6.

Table 5. *When you think about a research center at a high school, what activity do you imagine is likely to bring THE MOST VALUE to the school?*

Activity	**Number of responses**
Teacher agency / independent projects / research / incubator	4
- Presentation of research to each other internally	- 1
- Informing teachers of best practice and supporting those who want to try new approaches	- 1
Supporting professional learning / professional learning communities	4
Helping teachers integrate current research-based best practices into their practice	3
Observing in classrooms	2
Creating an international community of practice (outreach/networking) / visitors working with faculty	2
Supporting places that allow students to learning by doing (eg. makerspace,	2

music, art, sports, outdoors) - 2	
Helping students start their own businesses	1

Table 6. *In your experience with LASER, what activity do you think brings THE MOST VALUE to the school?*

Activity	**Number of responses**
PLCs / professional learning / Wednesday mornings	7
Resident scholars and teacher agency, supporting teacher research	6
- Teachers demonstrate learning as a role model for students	- 1
Visiting scholars, networking and outreach	3
TEDx	1
Above & Beyond	1

Tables 5 and 6 support conclusions from the rest of the survey: professional learning and the resident scholar program (which is a subset of professional learning) are viewed as the activities of LASER that bring the most value, with visiting scholars and the application of research occupying a second tier.

Follow up survey

After each session, participants received a one-question survey that simply asked if there was anything they were thinking about that was missed, misunderstood, or that came to mind afterwards.

Three participants responded. One participant reflected on how the impact of all the activity needed to be internal, noting in particular how the resident scholar program fed into school goals and growth. Another was a bit philosophical, reflecting on how LASER is more complex than a simple internal or external orientation, since the "internal impact … can also have external impact (reputation building, etc) if it is packaged and branded well externally."

One participant mentioned to me after the meeting that we hadn't talked much about how LASER supports students directly. LASER does indeed support student scholars (in addition to visiting and residential scholars), and has been attempting to provide direct individual support for student passion projects for several years, most recently under the moniker "Above & Beyond."

See full survey results in Appendix 3.

Meeting Notes

Both meetings followed the same format. Participants received the agenda beforehand, with links to the session's process, the survey results, and the most recent statement of LAS's vision: the whole child; innovation, creativity, and entrepreneurship; and family. There was no check on whether participants looked at supporting documentation or not.

The evening included a minor activity to break the ice, and then three major sections, including two role plays and then general discussion. The role plays provided best case scenarios of school systems eager to support continual improvement through professional development, asking participants to consider what they believe brings the most value to a school through having a center similar to LASER. Participants worked in small groups, posting individual ideas on virtual sticky notes on a Google Jamboard, which were then sorted into themes for the following discussion. There is no differentiation between which role play or which of the two sets of participants contributed the ideas - the four themes that arose during the role plays are:

- Offer a platform for continuous growth
- Train the trainers
- Demonstration of learning by teachers and students
- Physical spaces

The themes are of course influenced by the setup of the meetings, the participants who chose to come, the particular role plays created to engender discussion, the host, and so on. While the open-ended discussion that ended the meetings may have picked up some additional insight on value that LASER brings (presented below), see also the final section, Personal Reflections, for a few thoughts on what the sessions did not cover much or at all, but are worth considering as part of the possible value LASER, or a similar program in another setting, can bring.

From the role plays

Creating a culture for continuous growth

Participants mentioned several ideas for creating a culture for continuous growth. Starting from a future faculty member's first contact with LAS, one participant suggested that the LAS culture shaped by LASER be shared with interviewees and, if there seemed to be little interest in the prospects of continuous improvement, not to bring the applicant on board.

Once at LAS, value is found in pulling in ideas from the community of teachers itself, relying on the expertise of our own faculty in a bottom up way. This culture is consistent with the tagline of the professional learning that predates LASER: *Continually becoming the professionals we*

already are. In addition to recognizing the importance of the bottoms up approach, participants mentioned learning through continuous feedback loops that inform an ever-widening circle of faculty members and emphasizing the creation of a learning community through discussion and collaboration. One group noted: “Often the best development comes from colleague interactions - observation, feedback, reflection, and discussion, particularly with colleagues outside of your immediate teaching area.”

Training the trainers

Though this particular topic was perhaps overly influenced by the setup of the second role play (see Appendix 1), the general notion of spreading professional development from one faculty member to the next has been a LASER strategy and, to the extent that professional development does spread among faculty members, a way for LASER to add value.

Participants expressed it this way: “Build the capacity of some faculty to work with the rest of the faculty.” LASER has supported this approach directly. For example, Aaron Deupree was trained in TESMC several years ago and has offered the program nearly every year since. LASER has also employed this method a bit more subtly, relying on the work of a few faculty members to spread to many, e.g. Program A participants observing non-Program A participants, resident scholars sharing their work through Laser Focus presentations, and in a very general sense, expanding over the years presentations and publications by director Paul Magnuson to an increasingly wide number of faculty members, both within and outside of LASER’s leadership circle.

Growth in this manner - attracting more and more people who opt in on their own accord, based on examples set by others - is not particularly fast. Participants acknowledged this by commenting that there is value in a train the trainer model when the school can “have patience when waiting for the impact.” It might be worthwhile to think of this approach as an attempt at shifting the culture of the school, something that is slow going but longer lasting, and which is compatible with a shared bottom up (faculty who are interested choose to get involved) and top down (requiring faculty members to complete Program A and TESMC - and to be involved in professional learning in some way each year) approach.

Demonstration of learning by teachers and students

One role play specifically asked participants to make sure that alumni/ae with deep pockets received proof that value was being added to the school, so measuring results received lots of attention for the efficacy of programs aimed at improvement for both faculty and students.

Faculty

There is value, participants agreed, in explicitly identifying the value of LASER. The professional growth of faculty should be measured, as the center is able, through applicable metrics. Easy to

report are the number of presentations, publications, workshops, and other activities. Surveys can also be effective tools. Harder to develop as demonstrations of growth are pre- and post-data comparisons, but at least one group of participants felt it important.

Students

Again, basic metrics attendance and participation offer some comparative data and, like for faculty members, surveys and quantifiable research about the impact of LASER on student growth and achievement is a goal worth shooting for.

Additional suggestions to demonstrate the value of LASER for students included a mechanism to share student passions projects (something which has been in place in part through informal student demos in classrooms and the annual Expo conference, formerly Globe), making sure to hear student stories directly from students, helping students create a brag sheet (as in the newest program, Above & Beyond), and supporting the halo effect that sharing internal successes can have for the school far beyond its own students (i.e. branding, marketing, and student recruitment).

Physical spaces

A less common but perhaps important theme is that of physical spaces.

Participants mentioned that creating attractive physical spaces tend to “start conversations and draw people in,” referring to both teachers and students. They thought that physical spaces add value both for pedagogy and for the admissions department, presumably when giving tours of the school. Beau Site (former hack school and middle school, Kaizen, and the Edge Chalet are examples of physical spaces designed by LASER.

Open discussion to end the meetings

Much of the open discussion referred to the small group individual conversations, meaning the themes presented above were underscored a final time.

Activities that bring value to LASER, which appeared in all three of survey data, role plays, and in the final general discussion include:

- **resident scholars;** with a proposal process, stipends, reporting mechanisms like Laser Focus, international presentations, and publishing, and the internal PR due to sharing the effects of projects (e.g. standards based grading as a resident scholar project in a single math class leading to grading reform for the entire school); and
- **visiting scholars;** and
- **professional learning.**

Value-adding LASER activities that were not included in the surveys nor emphasized during the role play activities, but which were mentioned during the discussion, include ad hoc support for faculty members and creating a good reputation (and brand) for the school.

Ad hoc support for faculty members

LASER brings value by supporting individual faculty members in a variety of endeavors. These include:

- connecting faculty members with external educators and organizations (networking);
- assisting faculty members working on MA and PhD programs;
- providing financial support for initiatives (e.g. the garden, individual faculty passion projects); and
- serving as a receptive “incubator” for ideas.

Good reputation for the school

To the extent that LASER helps the school brand itself as a school which builds teacher efficacy, the professional development focus of LASER can help attract teachers, help retain teachers, and help shape the brand of the school. This is separate from the fact that good teaching translates into better learning outcomes (which of course is also a manner in which LASER professional development programs deliver value).

Regarding the contribution of LASER to the school brand, one participant felt that the research center might bring more value with a name that makes the focus of the center’s efforts immediately clear, citing the name of a center similar to LASER called The Center for Transformational Teaching and Learning.

Emphasize, Deemphasize, and Introduce

Finally, participants on the second evening were asked to consider the value of LASER activities in terms of which activities should be emphasized, which ones deemphasized or dropped, and if there were additional activities that would prove valuable for the school that LASER should consider starting.

LASER activities to emphasize

In keeping with earlier comments, participants were once again very sure that the resident scholar program adds value, including the sharing of ideas through Laser Focus talks, presentations, and publishing, as does professional learning (associated with Wednesday

mornings since 2014). One former resident scholar shared that his resident scholar project was "the best PD that I've done in 35 years."

A culture which supports ongoing teacher exploration through action research projects - and the support through flexibility for projects pitched as the school year unfolds - were also deemed to bring value to the school.

This internal culture is further supported by visiting scholars, who bring "vibrancy to the school and opportunities beyond the classroom," in the words of one participant. As the LASER website suggests:

> "The goal of our Visiting Scholars program is for LAS faculty and academics from around the world to rub shoulders so that we all may feel the excitement of new ideas coming to life and the commitment to lifelong learning." (LASER webpage)

Participants also mentioned value stemming from using LASER as a recruitment tool, to further connections with local conferences (e.g. Swiss Learning and SGIS), and to further connections with local organizations (e.g. entrepreneurs and universities).

Activities to deemphasize

While there were few specifics, some participants felt that LASER was spread too thin. Limiting the number of activities could bring greater focus, and therefore greater value, to a smaller set of activities.

As a general rule, participants noted that LASER activities should have strong connections to the LAS mission and the visions guiding LAS, e.g. the three pillars and perhaps accreditation. One participant felt that LASER could benefit from focusing on two or three themes in a given year, connected to overall school priorities, with an effort to include the whole school. Another participant countered, however, that the wide flexibility of LASER to accommodate teacher interests and motivation was one of its strengths. LASER brings value, in other words, because of the willingness to support a variety of projects in whatever form they come in, letting faculty put forward their ideas without having to justify them.

Another participant suggested using current problems as a starting point. While not a specific activity to deemphasize, this too could serve as a general manner in which to bring greater focus to LASER activities.

There was some discussion about whether LASER's role was to go beyond LAS. Certainly this has been a goal since its inception. Extending beyond LAS doesn't need to remain a goal merely because it has been one, however. Focusing internally would certainly serve to limit the number of activities. So, too, would focusing just on academics, rather than academics and residential life, a process that is already underway with the movement of Alpine Institute out of LASER and into the activities office.

Activities to introduce

There weren't many suggestions for the addition of programs.

One participant suggested bringing in local entrepreneurs and start up companies from our region, an idea that fits well with choosing activities in line with LAS vision, and one external participant suggested more globally that LASER consider analyzing elements of school programming that LASER has not yet been looking at.

Discussion

So where does that leave us?

LASER is unique. LASER has survived where sister programs (e.g. Centre for Inspiring Minds of ACS, London) have not. LASER adds value in a number of ways, from the support of an individual (e.g. a graduate student or a residential scholar) to the support of school wide programming (e.g. program development, professional development, and accreditation). LASER works locally with a single teacher on a particular lesson in the classroom and LASER networks with the world (e.g. visiting scholars, presentations, publications).

Some find that the "shadow of LASER," as one participant put it, is too long. Others find the ability and willingness of LASER to support a variety of programs a central strength.

While the discussions were fast-paced and focused, they did not cover all the current facets - and future possibilities - for LASER. One participant mentioned after the session that we had hardly talked about student programming. Indeed this report has only briefly mentioned Student Scholars, although they have been a LASER focus for years (and appear on the website), the new Above & Beyond initiative that supports student passion projects, and the addition of CAS this school year. And the discussion did not touch on the amazing history and growth of the Alpine Institute and Citizen Science led by John Harlin for years, since that program was recently moved out of LASER into the activities office and will not play a direct role in future LASER programming.

A newly energized LASER can go many directions. Residential scholars and the professional learning program are rated very high in terms of value. Visiting scholars are perhaps a close second and hinge to some degree on decisions regarding the degree to which LASER is internally or externally focused, or indeed if it is both, leveraging the results of the program's internal focus on external entities, including future faculty members, future LAS families, and perhaps even the future LAS brand.

Finally, it should be mentioned that LASER is also disruptive, in the sense that it challenges the status quo through its support of initiatives that create new spaces (e.g. Kaizen, Edge Chalet, the Beau Site Garden, and Da Vinci Lab), new foci for teaching and learning (e.g. teacher and

student agency, agile in education, middle school, Edge) and new processes (e.g. professional learning programs, observation tools, faculty self-appraisal), to say nothing of programs LASER introduced that now feel to most faculty like they have always existed (resident scholars, visiting scholars, professional learning programs). Disruption comes at a cost and needs constant both supporters and cheerleading to survive. Perhaps we will discover that these blue sky sessions have also served that purpose.

Next Steps

The day to day work of LASER continues. We just finished this week what must have been the 15th cohort of Program A (professional learning communities). Tomorrow a former Edge entrepreneur is getting real world experience in the local bakery, starting at 6 a.m., thanks to Above & Beyond. Next week a student is leading Hour of Code after school, an extension of her CAS project, which is also supported by Above & Beyond, and which was originally introduced, as mentioned above, by a 10th grade student who now as an adult sits on an LAS board. We are waiting for word of the publication of our second refereed chapter on agile in education, to join other refereed publications and dozens of blogs and other articles about work at LAS (see Appendix 5 for a sampling). We have presentations in the next week in India, in the next month in Switzerland, and in the years to come, hopefully, across the world.

It just remains for the school itself to decide the degree to which the set of programs that together make LASER are supported, communicated, and grown.

Paul Magnuson
December 3, 2021

Appendix 1 - Blue Sky Thinking meeting agenda

LASER Blue Sky Thinking
Nov 29 and 30 - 90 minutes

Goal *- decide what parts of a research dept for PD to emphasize, what parts to let go, and whether there is anything we haven't thought of that a research dept for PD isn't doing that it should.*

Preparation - to review, if you like

LASER overview for blue sky thinking
Responses to survey
LAS vision (3 pillars)

GETTING STARTED - SPECIFICALLY ABOUT LAS (5 minutes)

- Name one way that you are confident that LASER adds or has added value to your experience at LAS.

ROLE PLAY 1 - NOT LAS (15-20 minutes)

In groups (Google Meeters with host, 2 other groups) -

Imagine this school - a group of Harry Potteresque buildings house a K-12 program, surrounded by fields and forests. Inside and outside are eager students, who are taught by excited and caring teachers, who in turn are led by a group of seasoned veterans with a deep commitment to continual improvement through experimentation and dialogue.

A group of alums with deep pockets has donated a sizable amount of money for the first year of a Center that will support the school's enthusiasm for continuous improvement.

The group will happily match their gift every subsequent school year - with one condition: A single annual report must leave the donors with no doubt whatsoever that the activities the school has chosen to pursue are creating value for the school.

PROCEDURE

You are role-playing faculty members at the end of the first year of this new Center. For this meeting, you've agreed to write bullets (on sticky notes on a Jamboard) with the Center's activities of the last year that you are sure demonstrate the Center's value. For each bullet, write what EVIDENCE you have regarding its value.

Jamboard. See sheet 1

ROLE PLAY 2 - NOT LAS (15-20 minutes)

Imagine this organization - A philanthropist couple has financed an immense (in the future) network of schools across the world. One flagship school per continent is already up and running as a proof-of-concept of some very forward thinking and successful approaches to education. So forward thinking, in fact, that the philanthropist couple has determined that the director for professional development for each of these schools must come together and determine what in-house professional development is going to look like at each future site. Their goal: 100 new sites per continent … which means PD has got to be handled on site, with the school's own resource and with the faculty's own expertise.

Thankfully, this particular philanthropist couple is leaving the details to the experts. "We don't want to go all Bill and Melinda," one of them was heard to say at a recent gathering. "Look where it got them."

PROCEDURE

Your group is role playing a meeting of PD directors creating in-house PD that will work across a large number of schools. You are at the first meeting and you've agreed to have a good discussion, secure in the knowledge that your benefactors value divergent thinking, crazy ideas, and moon shots. That's how they made their money, after all … Take notes on the Jamboard (sheet 2).

Jamboard - see sheet 2

DISCUSSION - SPECIFICALLY LAS (in the remaining time)

What should LASER emphasize, de-emphasize, or add in the next 1-5 years?
Reminder - LAS vision (3 pillars)

Jamboard - see sheet 3 (Paul to take notes on the Jamboard)

Thank you for coming - You will receive this follow up survey soon: Follow up survey

Appendix 2 - LASER Overview shared before the Blue Sky Sessions

LASER blue sky - November 2021

Thanks for your interest and involvement in thinking about LASER 2.0.

Current State of LASER	Website LASER goal in a word: Self-regulation LASER goal in a few words: Supporting teacher and student agency to create a culture of curiosity and learning, in which we all share ownership, *to continually become the professionals we already are.*

Blue sky goal: *Short, focused white paper on the value of a research center for a school.*

Guiding Questions		
Guiding Questions	*In what ways can you imagine that a research/professional development center or "mini-university" brings value to an international school?* *In what ways has LASER brought value to LAS in the past?* *In what ways can LASER bring value to LAS in the coming years?* *How well does LASER align with the LAS vision? with NEASC ACE?*	
LASER history		
2009-2013	Professional learning (original development or Program A, B, classroom observations and development of classroom observation tools), early LASER studies (Samsung, iPads, SmartBoards)	
2013-2019	Resident scholars, visiting scholars, addition of Alpine Institute, increasing number of workshops and conferences, increasing number of publications, development of middle school	
	2015-2020	Outreach through conference sessions, ECIS special interest groups at a peak.
	2017-2020	First (2018) of three peer-reviewed book chapters written under LASER, training outside groups at LAS, presenting and consulting for outside groups (e.g. Russian, Taiwan, Turkey, US)
	2019-2020	19 visiting scholars visit before March 2020, first year of Edge

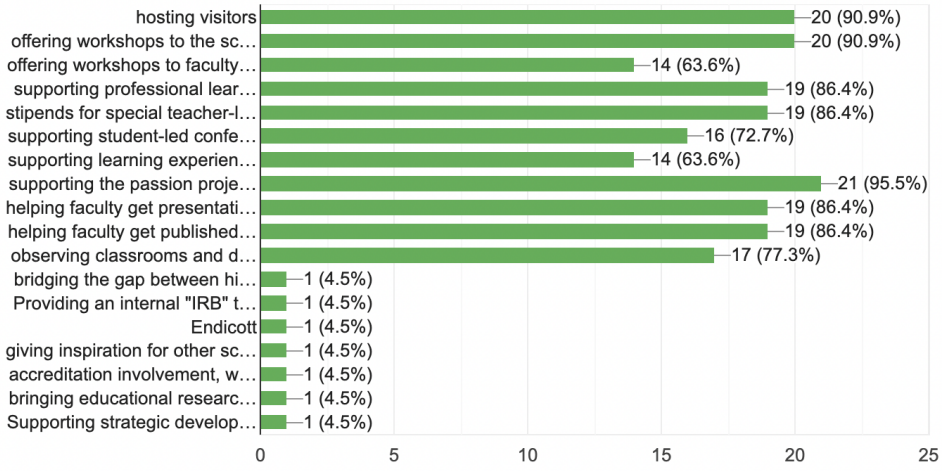
March 2020-	**COVID**
Fall 2021	Addition of CAS, new leadership for the Alpine Institute
Today	**LASER 2.0**

Appendix 3 - Full survey results

Open-ended responses are not included.

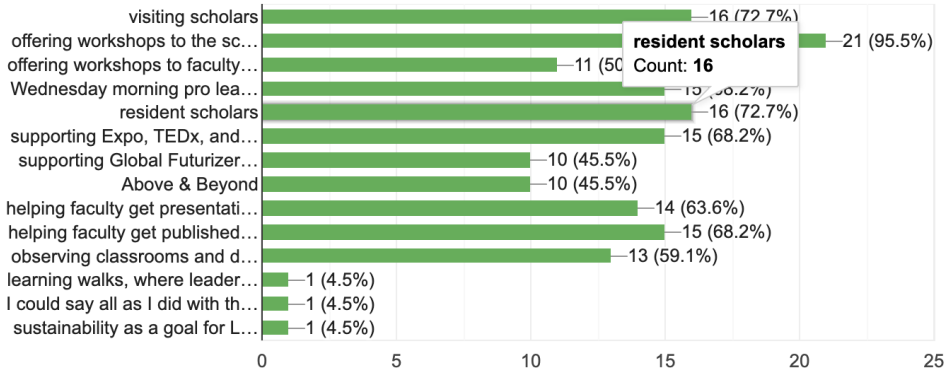
Mark all items associated with a research center that you believe are very likely to bring value TO ANY SCHOOL.

22 responses



Mark all items associated with a research center that you believe are very likely to bring value TO LAS IN PARTICULAR.

22 responses



Appendix 4 - Success Stories

During the Blue Sky sessions, it was mentioned how difficult it is to show progress in areas of culture shift and professional development, and that one reasonable way to present evidence is through success stories.

I have included success stories for different aspects of LASER here. I hope that they serve to motivate - and to remind others who have been involved with LASER of their own success stories with students, colleagues, visitors, organizations, and themselves.

Besart C.: Introducing Coding to LAS

Besart, as a 10th grader, lobbied LASER to start a coding club. Paul sponsored the club, After School Program (ASP). The following year LASER sponsored Hack School in the Beau Réveil as afternoon activities. The following year coding was taught as middle school class. Eventually coding became a course on the Savoy campus. In 2022-2023 coding will be introduced at the Belle Époque campus as well.

Dea L.: Computer programming

Dea is interested in computer programming. She led an afternoon activity in coding on the Savoy campus, working with another student to develop a business-to-business platform to enable Edge-inspired student businesses to collaborate with the LAS accounting office. That project was put on hold. Dea then offered Hour of Code (which Besart inaugurated at LAS) to LAS students, faculty members, and children of faculty members. We are now planning a field trip to the CHILI lab at EPFL. She was recruited to LAS by Besart.

Fangmming Z.: Artist

Fangming excelled in art in middle school. Paul recruited her to illustrate a children’s book, The Industrious Sloth, when she was in ninth grade. The book was published in Summer 2021, a few years after she had moved back to China to finish high school.

Se Won K.: Pastry Chef in the Making

In the first year of Edge, Se Won, as a 10th grader, created a business catering dinners, baking, and selling food. She continued as an 11th grader, receiving support in the +1 program supported by LASER and University Admissions, which when she was a 12th grader became Above & Beyond. As a 12th grader she continued to explore baking and cooking, meeting with retired Endicott Professor and Master Chef Brendan Cronin and shadowing a local patissiére in Leysin. She discontinued the IB in pursuit of her passion, is planning on a summer program in

Las Vegas at one of the top three culinary schools in the world, and has applied to La Roche, also a top-three culinary school, for her university degree.

Oliver H.: Small business startups

Oliver began a business in middle school as part of the Project Innovate class. He bought American snacks and resold them in individual packages. In grade 10, in the first year of Edge, he restarted his business with some friends. Now in grade 12, he switched his business focus to developing a new ski jacket with the company Dope. Eventually he had to switch to creating a self-designed hoodie with the local sports store Hefti. Collaborating with two friends and receiving support from Above & Beyond, Homer has successfully spearheaded the creation of 400 versions of the sweatshirt.

Ria S.: Exploring the future

Ria is interested in many things. One of them is medicine. As a tenth grader she wanted to learn more about medicine. LASER paid for an online course for her. Later she shadowed employees at the local clinic. She is also learning Spanish. LASER made an arrangement with St. Olaf College to have university students tutor world languages. Ria signed up during the spring semester … and continued through the summer. As a junior, Ria needed assistance to be involved with a math competition. Through Above & Beyond she was granted permission to stay on campus after finals long enough to enable participation. She is now searching for a summer internship in a medical lab. LASER has contacted local organizations to assist her.

Vanisha Gorasia: Reform of the LAS assessment system

Vanisha, as a resident scholar and MA student, piloted standard based grading in a grade 10 math class. Parallel work in the middle school and a text informing her work, coupled with a recommendation from Beth Skelton, visiting scholar, led to LAS inviting Ken O'Connor to work with LAS teachers on school reform. The final push of an outside expert on campus led LAS to introduce standards based grading across the entire school.

Özge Hacifazlioglu: Co-author, co-presenter, and colleague of many

Ken O'Connor not only spoke to faculty, but also to a group of educators from Kazan, Russia. Following the presentation the leader of the Russian group invited Ken and Paul Magnuson to a conference at the University of Kazan. Paul attended, presenting LASER, and met Özge at two conference events. Paul arranged for Özge to come to LAS as a visiting scholar. Subsequently Özge visited LAS twice and Paul visited Özge three times, presenting twice in Antalya, and once in Gaziantep. Özge's connection with ISATT led to additional visiting scholars from Turkish universities and ENKA school of Istanbul. Özge and Paul presented at conferences together in Turkey and Switzerland and co-authored two papers about LASER activities.

Nicola and Tom Cosgrove: Developing professional academic curricula vitae

Nic and Tom were hired for the first year of the middle school. They experimented with agile in education, leading eventually to presentations, blogs, articles, and book chapters about kanban, agile, and other topics. Both Nic and Tom became members of the LASER steering group and key players in Edge, professional development, and accreditation, so much so that they are both sought after veterans for NEASC visiting teams. Both have networked extensively with educators around the world.

Ben Jackson: Teacher licensure and MEd

Ben started at LAS in the activity office, but wanted to teach science. He did his student teaching in middle school, while enrolled in an online program. LASER paid for his cooperating teacher to do the required training at Ben's university in order to mentor him. The second year he had a few classes of his own and the third year he was hired full time in the science department. He also completed his MA, free of charge, through the LAS arrangement with Endicott.

Taipei city government: Student recruitment

Steve Ott proposed programming with Taipei and Taichung city governments which led to two LASER trips to Taiwan with presentations on innovative teaching and learning at the university and at high schools for high school teachers. Before COVID struck in March 2020, forty students from Taipei were registered for LAS Summer. While the students never did attend, because of COVID, the ability to export professional development as part of the LAS brand was clear.

Innovative teaching and learning: Agile in education

Starting with the experimental DIY Language course, Paul and colleagues began considering agile as a useful metaphor and framework for education. Eventually a number of faculty trained in scrum and agile, receiving certification, visiting eduScrum founder Willy Wijnands, hosting visiting scholars working with agility, publishing a Spotlight magazine on agility, and working with Scrum Alliance of Colorado for a week to create the first scrum master training for education. LASER faculty are recognized as leaders in this new field. Paul with former colleague Bill Tihen host and other colleagues manage the Agile Research Consortium for Schools, Nic and Paul have websites for their particular take on agile in education, and LASER members Nic, Paul, Tom, and Andie Flett have all written and presented on the agile mindset in education.

Spaces and programming: The Beau Site Community Garden

Economics teacher Hugh Kelly began creating a garden on the Beau Site hill several seven or eight years ago. He trained himself, exploring for example *Hügelkultur*. He began offering "makeup gardening" for students who had missed activities. Gardening became an activity in its own right. The middle school offered garden class as an elective. Hugh was joined by other

members of LASER and the science department, and then teachers Stephanie Ameri, Rachael Passant-Coy, and Ben Jackson. After Hugh's departure, Dan Patton led the efforts during academic years and summners, teaming with additional faculty. Clifford Weldon and Chris Leonard built a chicken coop. Rachael organized students to feed them and collect eggs. Programming, e.g. the hedgehog project, grew. And a beautiful space was made for faculty, staff, and students to enjoy with pizza ovens, picnic tables, and a park for children.

Space and Programming: Reimagined classrooms and workrooms

LASER created hack school in the Beau Réveil, followed by the middle school space. When the counseling room became free in the Savoy Building, LASER created the Kaizen Research Lounge as a space for teachers, students, families, and visiting scholars. When the Vermont Math Chalet became free LASER create multipurpose workspaces, classrooms, music rooms, and offices for visiting scholars. When two faculty members worked did Program A on the physical space of learning (a suggested focus topic since 2011), LASER proposed remodeling a BEC classroom together with one of the faculty members. The space around us matters.

Appendix 5 - Publications describing LASER's vision

In-House Professional Learning, 2021 (value of a program like LASER)

Creating Offices of Educational Research in International Schools, 2019 (page 33)

Communities of Practice with Visiting Scholars, 2021 (research on visiting scholar program)

Spotlight, Residential and Visiting Scholars, 2017 (overview of these two programs)

Ecosystems for Innovation, 2020 (metaphor of the growth of Beau Site Garden and other projects)

Professional Development: Reflections on an Interview with Darcy Bakkegard, 2021 (the culture LASER aspires to)

Agency: Reflections on an Interview with Jennifer Groff, 2021 (teacher agency through action research cycles), 2021

Agency: Reflections on an Interview with Andreas Schleicher, 2021 (OECD thoughts on progressive education and curriculum, etc.)

Schools of the Future, 2020 (reflections based on a World Economic Forum report)