CAMBIUM SCHOOL INNOVATION MODEL

A Ten-Year Guide to Sustain Innovative Dynamism in Schools

INITIATION	GROWTH	MATURING	SUSTAINING

"Form a relationship,
Foster it,
And follow through."
-- Darlene Machten, Teacher

Systems Thinking is a discipline for seeing whole.
A framework for seeing interrelationships rather than things,
patterns of change rather than static snapshots.
-- Peter Senge, Fifth Discipline (2006)

"How can you personalize teaching for teachers?"
-- Renee Ullman, Teacher

"The secret of change is to focus all of your energy,
not on fighting the old, but building the new."
-- Socrates

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EXECUTIVE SUMMARY

Creating, building, and sustaining school innovation is important and difficult work. For over twenty-five years, James Lewicki has been coaching, consulting, and leading innovation work in public education. During this time there have been waves upon waves of innovation, whether a new program, magnet school, innovative zone, or one of the thousands of public charter schools across America.

We have much to learn from this dedicated effort, and those lessons learned can help the next generation of innovative work. And, most importantly, there is a need to sustain good work into the 2nd and 3rd generation of innovators. In effect, innovate for decades.

Given the outstanding and exemplary innovative schools these last 25 years, along with the failed schools, where much is learned, there is sufficient experience to offer a school innovation model.

Cambium, the layer of new growth in a tree, comes from the Latin Cambium, meaning exchange. Innovation is always a change dynamic: a relational exchange of innovators, a systems exchange as new elements are discovered, and an outcome exchange as new results take place.

The Cambium School Innovation Model is based on logistic s-curve theory and practice related to growth models in a variety of areas. For example, Verhulst first described growth in a biological system using a logistic system in 1838. Responding to Malthus' population theory of 1798, Verhulst described a decreasing population growth rate by using a logistic equation. Logistic equations have also been used as epidemic models in the field of pathology to describe the spread of infectious disease. They have also been used to show innovation diffusion and product diffusion. For instance, Griliches in 1957 first showed that the diffusion of innovative products could be expressed using a logistic equation as seen below.

Diffusion S Curve
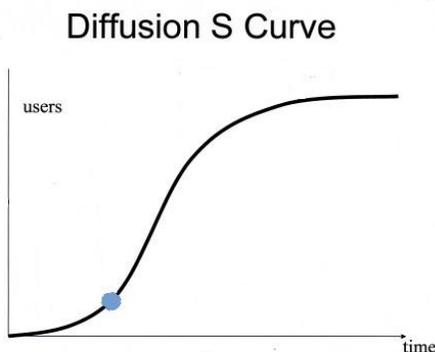
Whether Biology, Medicine, or Economics, logistic models take into account the critical factors -- over time -- that allow or disallow growth. Furthermore, these models set a 'carrying capacity', at later phases of growth, wherein the model reaches a sustainable plateau for that growth itself. This is the classic change model, the sigmoid function, or s-curve.

In the s-curve models, growth processes start slow, then hit a major growth period. Then the rate of growth slows becoming (or not becoming) a stable, mature, and sustainable system, product, or service; or, in education's case – an innovative school of high performance and culture.

Visuals help us see these models. The biological use of the s-curve often utilizes three stages: Lag Phase, Exponential Phase, and Stationary Phase. This can be seen in the following study of microbial growth in milk.[1]
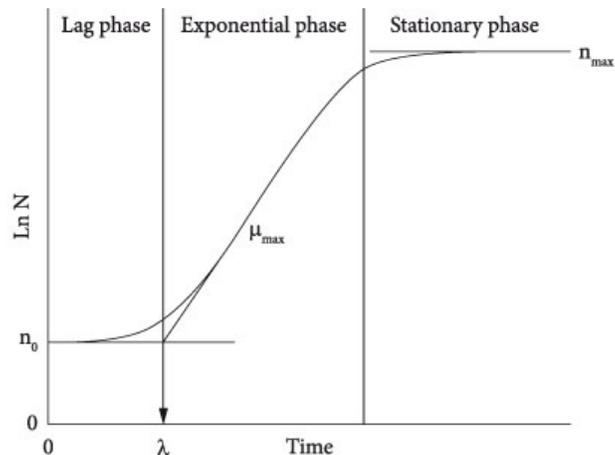

Figure 2. Procedure used for deriving the duration of the lag phase (parameter λ in Figure) (SWINNEN et al., 2004).

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[1] http://www.scielo.br/pdf/cta/v31n4/10.pdf (Telekin, 2011)

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USING THE S-CURVE FOR SCHOOL INNOVATION

Utilizing an s-curve model can provide a guide on how to create, build, and sustain innovation in schools. Innovation is not new for each generation of educators will innovate, improving existing conditions with new ideas and designs. What remains constant, the challenge of innovation to achieve high quality performance and culture, and then sustain it over time.

As mentioned, there is a tremendous amount of innovation being undertaken in education today. Much of it is in the hands of small groups of educators and departments pushing forward new ideas; and some of it is anchored in organizational innovation, a school, district, or even innovation zone for a city. Often, this innovation may be a redesign of a school's pedagogy, a conversion into a magnet or innovative school, or a new charter school. And it is occurring from elementary to the university level.

When a school, new or redesigned, undertakes innovation then a logistic model of growth and sustainability can be very helpful. The use of the model can provide a 'big picture' and guide school innovation over time.

The classic change model, or S-curve, demonstrates visually how innovation and growth processes start slow, and then hit a major accelerating growth period. Eventually this rate of growth slows becoming (or not becoming) a stable, mature, and sustainable school.

- **TYPICAL S-CURVE PHASES ARE FOUR:**
  - Birth, Initiation
  - Acceleration, Growth
  - Deceleration, Maturing
  - Saturation, Sustaining

- **THE CAMBIUM SCHOOL INNOVATION MODEL (CSIM) DEFINES FOUR DISTINCTIVE PERIODS OVER A TEN-YEAR PERIOD:**
  - Initiation Phase (0-3 years)
  - Growth Phase (2-5 years)
  - Maturing Phase (4-7 years)
  - Sustaining Phase (7-10 years)

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In summary, school innovation will have an initiation phase, then a period of growth and potential scaling as the innovation matures, and finally the innovation itself will locate its carrying capacity within its educational niche – leveling off into a sustainable period.

During each of these phases there are critical features that the author's prior work with innovative schools have shown to be essential indicators of success. The author has conducted a wide-ranging series of interviews with school innovators -- who have schools reaching into the second decade. These discussions have shaped, affirmed, and clarified these critical innovative features. Knowing these features and working them well, will strengthen a ten-year march to sustaining high quality performance and culture.

THE MODEL

Over ten years, CSIM demonstrates 12 areas (A to L) that are critical to success. These are stated in the grid below on the Vertical Axis.

The Horizontal Axis is a strategic coaching timeline that matches the phase of Innovation with the school leadership and coaching to support that Innovation. Using the tool allows the strategic stakeholders: board members, school leaders, faculty, staff, students, and families to focus questions and resources that have been critical to others on this innovative journey before them.

The S-curve is viewed in the coloring revealed by matching the School's Phase with the needed Strategic Coaching Development and achieving a flow - productive state.

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School

Innovative Model

Critical Feature

Phase	Critical Feature	Y	A	B	C	D	E	F	G	H	I	J	K	L
Sustaining Year 7-10	L. 2nd Generation Leadership	10	12	24	36	48	60	72	84	96	90	100	100	100
	K. Fiscal Carrying Capacity	10	11	22	33	44	55	66	77	88	90	100	100	100
	J. Culture Locked-in	10	10	20	30	40	50	60	70	80	90	100	100	100
Maturing Year 4-7	I. Maturing Systems	9	9	18	27	36	45	54	63	72	81	90	99	108
	H. Fiscal Long-term Dev.	8	8	16	24	32	40	48	54	64	72	80	88	96
	G. Culture Self-Correcting	7	7	14	21	28	35	42	49	54	63	70	77	84
Growth Year 2-5	F. Scaling to Need	6	6	12	18	24	30	36	42	48	54	60	66	72
	E. Maturing Systems	5	5	10	15	20	25	30	35	40	45	50	55	60
	D. Capacity Building	4	4	8	12	16	20	24	28	32	36	40	44	48
Initiation Year 0-3	C. First 3 Years	3	3	6	9	12	15	18	21	24	27	30	33	36
	B. Innovation Planning	2	2	4	6	8	10	12	14	16	18	20	22	24
	A. Idea/Vision Formation	1	1	2	3	4	5	6	7	8	9	10	11	12
	X		1	2	3	4	5	6	7	8	9	10	10	10

Y

Proficiency Timeline
Leadership/Coaching

	A	B	C	D	E	F	G	H	I	J	K	L

INITIATION PHASE (0-3 YEARS)

INITIATION			

A: IDEA/VISION FORMATION

Vision Sessions
School Visits
Idea Workshops
Faculty Research
Stakeholder Forming

Vision Sessions
- Membership
    - Are the participants a core team?
    - Is it a diverse team with a variety of personal backgrounds and intellectual origins? Do you know why they are here?
    - If the team is not diverse, has it inoculated itself against groupthink?
- Leadership
    - Does a skilled person facilitate the session(s)?
    - Is leadership distributive or pushing through a singular vision?
    - How well is active listening being served?
    - Is the session open to a variety of outcomes?
- Construct
    - Is this a replication visioning that is asking for its local version?
    - Is this an original vision in substance?
- Why?
    - Has the session moved through the 5 levels of why?
    - What are the essential questions, thesis statement, and 10-second blurb?
    - Does a visual, acronym, or the name of the school 'feel right'?

School Visits
- Why do these?
- Is it facilitated? By who?
- How free are students (and teachers) to interact with the visitors?
- What team is going? Is it diverse enough in terms of background, teaching capacity, and visioning efforts?
- How will the team debrief/share what they experienced and the relevant insights?
- Was there an unexpected critical insight?
- Was there something that makes you question or fundamentally want to reshape some aspect of your school at this early stage of visioning?
- Is the team asking facility questions? What is a facility challenge you observe? What would you change if you had a magic 'facility wand'?

Idea Workshops
- Are we creating divergent conversations with a group trust level and an individual trust level? Will this encourage ideas being shared and listening to them well?
- Is there an opportunity for the group to prioritize several ideas and do a deep dive coming up with a gem or two?
- Is the idea generation protocol varied to reflect a range of intellectual styles; didactic, visual, dramatic, situational, etc.?
- How are these ideas being shared with all stakeholders?
- Is there an opportunity to have multiple visioning workshops work apart – then come together -- and see if divergent sessions create any common denominators?

Faculty Research
- What areas of research expertise do the faculty already bring to the table?
- How is this best shared as a 'touchstone'? (Briefly)
- Is the research taking into account different ways to look at the issue? Or different data and summarizations?
- Is it possible to do a collective 'case study' on an aspect of the project? (All team members in one sitting dig in, discuss, and analyze)
- Teaming research like teaming performance has a synergy of its own.
- Can a 'white paper' be produced?
- Can a Ted talk be developed?
- What happened to the initial question set after research? Did research time and effort change this initial question set? Did it produce new questions? Which ones?

Stakeholder Forming

- How are the invitees and initial gatherings designed? Do you start with a smaller group of 3-5 and then build it to 6-10 and eventually 11-20 strategic stakeholders? Or do you have an 'open house' type of event that begins with 11-20 and then start to select this original group down to a core group? Then take this core group and establish the scope of stake holding work. Then go back out and build that group?
- One process is a building from a core group forward; the other process is an invite/selection process. Both work and they are different – decide which.
- What are the events that are designed FOR stakeholders?
- What is done with information gathered at these events? How is it disseminated? Used? Discarded?
- Is the problem solving, conflict resolution, and communication for stakeholders the same as what is used by Faculty and Board?
- What is being done to assure stakeholder's intrinsic reward for their efforts and time?

B: INNOVATION PLANNING

> School and Pedagogical Design
> Curriculum Touchstones
> Faculty Team Forming
> Board Team Forming
> Facility Preparation & Design
> Skill Development
> School Protocols
> 60-Day Start up Plan
> 1st year Anchor/Targets

School and Pedagogical Design

- Is there a replication school design or is this an original school design?
- How does this design meet the needs of the students and families?
- Is there a range of fundamental questions that still need to be addressed?
- What is the role of the student?
- What is the role of the teacher?
- What is the relational capacity between the two that results in significant learning?

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- What are the pedagogical features that will necessitate and drive facility design?
- What are the pedagogical features that necessitate a certain school location?
- Is there a community or neighborhood where this school needs to be located?

Curriculum Touchstones
- How would you explain the school and pedagogy in less than five minutes? 1 minute? Tagline: 15 seconds?
- What are four examples of learning that exemplify how the school will meet core standards, elective standards, and leadership & communication skills?
    - Create visual overview of these four examples.

Faculty Team Forming
- What is the hiring process?
- Will early hires be involved in later hires?
- Are you allocating enough time for faculty to get to know each other in four essential and significant ways?
    - As Learners
    - As Teachers
    - As People
    - As Leaders
- Are you implementing PD time during the first 30, 60, and 90 days of each year?
- Set staff meeting times for school year and discuss agenda, facilitation, and communication of these meetings during the year.

Board Team Forming
- What is the interviewing process?
- Will early board members be involved in selecting later board members?
- Are you allocating enough time for board to get to know each other?
    - As Learners
    - As Leaders
    - As People
- Plan Board meeting schedule for 1st year
- Set Committee scope and selection of members.

Facility Preparation & Design
- Are teachers involved in facility preparation?
- During school visits was a facility/design wish list developed? Is it now being interfaced with this current facility design process?
- Have you moved a student's daily schedule through the facility? What are the design gaps that need to be addressed?
- Are the 'commons' adequate for gathering, presentations, and celebrations?

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- Can you circle students in a classroom and not have to move furniture?
- How does the entrance area help brand the school's vision and mission and serve as the gateway to the learning inside?

Skill Development
- What is the skill sets needed to implement the school?
- What are the initial goals, secondary goals, and mastery goals for each skill set?
- How will those skills be developed and in what timeframe?

School Protocols
- What are the discipline protocols?
- What are the safety protocols?
- What are the health protocols?
- What are the communication protocols?
- What are the emergency protocols?

60-Day Start up Plan
- Do you have a comprehensive 60-day start up plan?

1st year Anchor/Targets
- Have you mapped the first year visually? Have you placed critical anchor points along this timeline? The anchor points will build time to review what is working well, what is not working well, and the needed recommendation of changes?
- What are your Power Targets to ensure a strong culture? Social and Collaborative.

C: FIRST THREE YEARS

Culture Formation
Student Engagement
Student Achievement
Student Growth
Community Connections
Facility and Fiscal Base Secured
Continuous Improvement

Culture Formation
- What are the 3-5 major touchstones of culture formation?

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- How will each of them be embedded into the life of the school?
- Explain how these touchstones will activate the vision and mission?
- Are they all realistic in the 1ˢᵗ year? How? Why? Do you all agree?

Student Engagement
- What are the 3-5 major touchstones of student engagement?
- How will each of them embedded into the life of the school?
- Explain how these touchstones will activate the vision and mission?
- Are they all realistic in the 1ˢᵗ year? How? Why? Do you all agree?

Student Achievement
- Is the UIP process dynamic with many stakeholders involved? Does it realistically engage students to build achievement?

Student Growth
- Is the UIP process dynamic with many stakeholders involved? Does it realistically engage students to sustain growth?

Community Connections
- Have you developed 3 substantial community partners that bring a distinctive capacity for learning to the program?
- Did you have a team of faculty meet with the community partner's team to learn about each other and how the partnership will invigorate learning?
- How will student learning be connected through an ongoing partner relationship?
- Have you build and had a 'walk-through of the first three learning experiences?
- Are you embedding a partnership debrief after each experience?

Facility and Fiscal Base Secured
- Does the facility meet the essential needs of the program?
- Have you developed a 1ˢᵗ year 'punch list'?
- Do you have 30 days of cash on hand?
- Is your income at 90% and expenses at 100% for first year?
- Will you have a fund balance equal to 10% of budget at end of year?

Continuous Improvement (CI)
- Is there a comfort level to make mistakes?
- Is there a process to reflect and learn from experiences?
- Is CI built into a variety of school and management protocols?
- Is there time for CI diagnosis and problem-solving sessions?

GROWTH PHASE (2-5 YEARS)

INITIATION　　GROWTH

D: CAPACITY BUILDING

Faculty and Staff
Board and Committees
Community Partners and Stakeholders

Faculty and Staff
- Does the faculty have Personal Learning Plans that are collaborative in terms of support, coaching, and mentoring?
- Is there an established hiring process that is inclusive and asks for new candidates to interact and teach with students as part of the process?
- Is there an annual retreat away from school where faculty can first rest and relax, second reflect on the year, and third -- set central goals, targets, and processes for the upcoming year?

Board and Committees
- Does the board and committees have Personal Learning Plans that are collaborative in terms of support, coaching, and mentoring?
- Is there an established selection process that is inclusive and asks for new board candidates to interact with student leadership as part of the process?
- Is there an annual retreat away from school where the board and committees can first rest and relax, second reflect on the year, and third -- set central goals, targets, and processes for the upcoming year?

Community Partners and Stakeholders
- Has there been a meeting of the School Board and Community Partner Board?
- Are there at least 5 Stakeholder driven events during the calendar year?

- Is there a stakeholder-led town hall for students and parents? Is that information disseminated to the proper places for assimilation and action as needed?

E: MATURING SYSTEM

School Review/QTR Tuning
5 yr. Strategic Plan adopted
Trainer of Trainers Capacity

School Review/QTR Tuning
- Is there an annual school review conducted by outside experts for fidelity to the vision and mission?
- Are there systems in place to fine-tune the school's operations, curriculum, personnel, and fiscal areas?
- Are there performance reviews around collaborative capacity? In effect, how well teams are executing and collaborating.

5 yr. Strategic Plan adopted
- Has a 5-year strategic plan been adopted by the board?
- Was the process fair and inclusive?
- Are there at least twice a year check-ins on the strategic plan and monthly updates to the community as areas unfold?
- Is the plan driven by the many agendas that unfold each week? Or is it unrelated?

Trainer of Trainers Capacity
- Have selected faculty and staff moved into an expertise role?
- Are they certified and acknowledged by peers in the field?
- Is this now a brand and/or revenue source for the school?
- Is this now reducing professional development external costs and time pressures?
- Have faculty, staff, or students published about the school's learning?

F: SCALING TO NEED

Fiscal Backup and Worst Case
Leadership Efficacy Established
Facility Design and Expansion
Fiscal Backup and Worst Case

Fiscal Backup and Worst Case
- Do you have cash reserves beyond 45 days?
- Could you sustain a 20% drop in enrollment?
- Have you maximized your donor capacity?
- Do you have means to capitalize new investments if highly needed?
- Are you developing those relationships for a 'rainy day'?

Leadership Efficacy Established
- Is the strategic leadership of the school working well and receiving resources to accomplish the school's goals?
- Is the leadership capacity engaged in the region and state? Are you connecting to other schools that are in a variety of stages of implementation?
- Are relationships with state and federal leaders developing well?
- Is the leadership team listening well and observing **for effect**?

Facility Design and Expansion
- Is there a short-term facility plan to address early issues?
- Have the expansion needs been identified, verified, and not short-term needs?
- Are school visits continuing to see a variety of facility and design pieces that have been shown to work for others?

MATURING PHASE (4-7 YEARS)

INITIATION	GROWTH	MATURING	

G: MATURING SYSTEMS

School Review/QTR Tuning
10 yr. Strategic Plan adopted
Trainer of Trainers Capacity

School Review/QTR Tuning
- Is there an annual school review conducted by outside experts for fidelity to the vision and mission?
- Are there systems in place to fine-tune the school's operations, curriculum, personnel, and fiscal areas?
- Are there performance reviews around collaborative capacity? In effect, how well teams are executing and collaborating.

10 yr. Strategic Plan adopted
- Has a 10-year strategic plan been adopted by the board?
- Was the process fair and inclusive?
- Are there at least twice a year check-ins on the strategic plan and monthly updates to the community as areas unfold?
- Is the plan driven by the many agendas that unfold each week? Or is it unrelated?

Trainer of Trainers Capacity
- Have selected faculty and staff moved into a regional and/or national expertise role?
- Are they certified and acknowledged by peers in the field?
- Is this now a brand and/or revenue source for the school?
- Is this BOTH reducing PD costs and generating school revenue?
- Have faculty, staff, or students continued to publish?

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H: CULTURE OF SELF-CORRECTING

Conflict Resolution Mature
Stakeholder Authentic Access
Achievement/Growth/Joy

Conflict Resolution (CR) is Mature
- Buy-in? Have the issues and topics subject to the CR process been agreed upon?
- IS CR skills and competence training embedded in the PD plan?
- Have all legal, procedural, appeal, and documentation processes be developed and agreed upon?
- Does the existing conflict resolution program work well enough to move through conflict in a healthy manner to the individuals involved and school itself?
- Is the capacity to implement this program growing deeper into the ranks of educators and students and volunteers?

Stakeholder Authentic Access
- Is there real-time access to the life of the school for stakeholders?
- Are stakeholder contributions authentic to the vision/mission and matter?

Achievement/Growth/Joy
(Note: Remember that joy drives curiosity, passion, and commitment, which drive growth. And growth – when it is maximized, coached, targeted, and applied -- will result in achievement.)
- Do the students and faculty, overall, enjoy what they do every day?
- Do the students and faculty express a variety of indicators that point to growth?
- Can the students and faculty discuss achievement and show evidence?

I: FISCAL LONG-TERM DEVELOPMENT

Endowment/Scholarship Building
Market Fluctuations Buffered
Finance Committee Mature

Endowment/Scholarship Building
- Are these two efforts managed well?
- Is there a 'big dream' target and associated fund development efforts?
- Has each group reached out beyond the school's circle of influence?
- How is preferred vendors part of this effort?

Market Fluctuations Buffered
- Have the critical market variables been identified?
- Has a SWOT been undertaken in terms of market competition?
- Have at least 3 potential downside scenarios been gamed?

Finance Committee Mature
- Does the FC have 5-7 members?
- Are legal, operations, investment, and comptroller capacities present?
- Are 3 fiscal retreats conducted, where board members and faculty may attend, to share and discuss programmatic and strategic issues?

SUSTAINING PHASE (7-10 YEARS)

INITIATION > GROWTH > MATURING > SUSTAINING

J: CULTURE & ACADEMICS LOCKED IN

Teacher-Student Relational Quotient @ 90%
Academic Achievement and Growth in sync

Teacher-Student Relational Quotient @ 90%
- Is the relational quotient above 90%
- Do sub-scores reveal unusual strength and/or weakness?

Academic Achievement and Growth in sync
- Is there a balance between these two pillars of learning?
- Is the academic 'catch-up trajectory' in favor of the students?
- Is there exceptional growth that points to a curriculum area?
- Is there weak growth that points to a curriculum area?

K: FISCAL CARRYING CAPACITY

Endowments and Scholarships A+
Fund Balance and Designated Funds 10 yr.

Endowments and Scholarships A+
- Is there solid investment portfolio of this effort?
- Is Alumni feedback on scholarships ongoing?

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Fund Balance and Designated Funds 10 yr.
- Is the Fund Balance a realistic balance of continued organizational caution combined with innovative activation of the vision?
- Are the designated funds meeting their associated requirements?

L: SECOND GENERATION PERSONNEL

New School Leader
New Faculty
New Board

New School Leaders 50% to 100%
- Have at least 50% of the School Leaders left and founding leaders replaced them and perform well?

New Faculty 40% to 60%
- Have at least 40% of the faculty left and new faculty been hired and perform well?

New Board 50% to 100%
- Has at least 50% of the Board left and new board members hired and perform well?

(Note: Schools are living and breathing – thus when at 'carrying capacity' they will oscillate (bounce back and forth) continually, rather than a straight line. Sustainability can continue to experience growth spurts and new innovations with its long trajectory.)