The Collins Institute:
How it Works

Because the Collins Institute brings a first-principles approach to education, it does not have adequate analogs in the traditional education world (save perhaps graduate-level education in the UK).

Below is a brief summary of how the Collins Institute works:

The Student's Homepage

All students at the Institute (home-based, boarding, etc.) primarily interact with the Institute's education system through a personalized homepage. This homepage lists all of the subjects in a student's present curriculum. When a student selects one of these subjects, they are lead to a page that:

- Lists the next discrete skills that must be mastered in order to progress
- Provides resources for acquiring these skills (it is up to students to choose how they interact with said resources)
- Has a link that enables students to schedule live time with a tutor
- Has a calendar booking function allowing students to schedule their next exam—a requirement to advance to the next mastery level within that subject (mastery levels center around concepts that are foundational to more advanced areas of a subject)

This interface is equivalent to an industrially schooled student's class schedule. Examples of a discrete skill to be mastered include: "Be able to calculate the area of a complex shape" and "Sell one product valued over $10 USD to at least ten strangers." Resources for acquiring skills are handpicked by domain experts and can range from YouTube videos to textbooks, audiobooks, peer-reviewed literature review, and even well-written Wikipedia articles.

As students master new skills using whatever resources and methods they like best, the next level unlocks and the subject is populated with new information. Each new mastery level tests fundamental skills from earlier levels to support knowledge retention.

Essentially, students choose which subjects they want to study, when to study them, and how. Where traditional education is like a forced march, the Institute is more like a map and compass.

Within subjects, mastery levels are not presented on a linear chain (e.g., that a subsequent mastery level unlocks every time a student completes a new mastery level). Instead, mastery levels are more like a "skill tree" or "tech

tree" in a video game. Sometimes more than one advanced mastery level will be unlocked after a more foundational mystery level is completed and sometimes multiple mastery levels need to be completed before another one unlocks.

Adaptive Learning Systems

The learning resources students encounter through the Institute's skill tree are dynamic rather than static as students can upvote content they found to be useful and add (for contention) resources of their own—either self-made notes and overviews or other materials they found useful. Our long-term vision is to financially reward students who contribute highly-rated learning materials and enable them to showcase their educational contributions on their transcripts (this provides another dimension along which a student can rank in the top 20% of any given cohort—we don't like offering a limited range of ways a student might stand out).

Think of every individual node on the tree's list of places a student might learn something of less a recommended reading list put together by a "teacher" but an interactive and organically updating trove of the best ways to potentially master a node available.

Tests and Credits

Instead of grades, students receive "credits" from tests. While test results yield credits based on performance, they are not a strict measure of academic accomplishment but rather a representation of academic health. A low passing score tied to a subject in which a student is behind yields dramatically more credits than a near-perfect score in a subject in which the student is already ahead. Essentially, the credit system exists to alert the student and faculty when a student is not "eating their broccoli" (e.g. when they are spending so much of their time of the subjects they are passionate about that they begin to fall behind in core areas of knowledge that will be important later in life).

Instead of being rewarded in subjects that come naturally through "grades" or even our credit system, students get rewarded by achieving accreditation levels and unlocking the ability to work on projects with experts in those fields (as well as other domain-specific privileges like the ability to earn money acting as a tutor).

The Institute maintains a stable of experts who have agreed to hear pitches. Once a student is a few years above their grade level in a subject, they are invited to pitch a collaborative project to one of the experts in that field. These projects can range from co-authoring peer-reviewed research papers to launching companies or non-profit initiatives. The reward to a student for subjects for which they have an intrinsic passion is always access to more of that subject and new ways of interacting with it (rather than some form of extrinsic reward).

How Proctored and Practical Tests Work

Proctored Tests

While proctored tests are considered "minor," they make up the majority of master-level tests (around 90%) and resemble the types of essay and multiple-choice exams students will encounter in college. These tests are administered either by a physically-present observer or by someone remotely monitoring the student through a few webcams placed around the student's room.

While these tests gauge competency in various subject levels, their primary role in the Institute is to help students learn how to perform well in scenarios similar to those they will face in college-level exams and during tested job interviews.

Practical Tests

Practical tests enable students to advance to new levels in subjects and are the focus of the Collins Institute experience. They involve demonstrating mastery in real-world environments.

For example, a student may need to write a fanfiction or scary story that gets a certain number of five-star reviews or upvotes online to advance to a new level in English (in the field of academic research these would be called "authentic assessments").

For each practical test, students are presented with a variety of options that enable them to undertake challenges more aligned with their passions and interests. Should a student not be particularly inspired by any given set of practical test options, they may propose an alternative that is reviewed by the Institute's administration and, if approved, added to the mix.

Forecasting and Metaculus Partnership

To provide an additional cutting edge channel for learning through real-world engagement, we have partnered with Metaculus, a community dedicated to predicting the outcome of a myriad of events, including the timing, nature, and impact of scientific and technological breakthroughs and developments.

Prediction work prompts scholars to investigate subjects from new angles, dive deep into the cutting edge, and begin to think in bets—all while learning how to think through the sweeping potential ramifications (or lack of effect) resulting from certain outcomes.

By designing new forecasting projects in addition to making predictions about various issues personally, Collins Institute scholars will sharpen these skills all while engaging with pressing issues shoulder-to-shoulder with real-world players.

Identifying Bias in the Curriculum

While The Institute's partnership with Metaculus and our practical assessments are primarily designed to benefit students and provide an additional metric upon which to compete (so students are not all ranked along a single "grade curve" which forces many to be losers), they both have an ancillary purpose: They allow us to calibrate bias and quality in our evaluations and recommended materials.

If students who are good at predicting political outcomes are not highly correlated with students who score high in evaluations addressing politics-related subjects, that is a sign that political bias has crept into our teaching. In the same breath, if a student who is good at writing stories online that are regularly shared and read among peers are getting poor writing evaluation scores, this implies there is something our writing tests are not capturing or teaching the other students.

Breadth, Focus, & Memory Decay

The traditional education system only rewards students for remembering the highest percentage amount about a particular subject. By giving students multiple metrics upon which to compete, the Institute allows students to focus on breadth of knowledge. So long as a student has demonstrated a minimum level of mastery of a particular skill in our skill tree, they can move on to more advanced skills without any long term consequences.

All nodes (discrete skills) on a student's skill tree are assigned a color, ranging from green, a near perfect score, to red, a just passing score. This color degrades over time forcing a student to come back to old subjects faster if they had a lower score in those subjects when they were last evaluated. Each student's skill tree features periodic "mile marker tests" which test a broad range of knowledge in a subject and reset the color of all the nodes before that mile marker on the skill tree.

This system was developed using research on spaced repetition in learning and is designed to optimize long-term recall of material learned while also mentally rewarding students for learning more rather than learning perfectly the first time.

Student Touchpoints

Guides

Students have weekly meetings with a proctor (closest to a homeroom teacher), whose primary responsibility is to help the student develop into a mentally healthy adult while navigating the trials of adolescence with a focus on the student's social development as well as stoking the fires of their ambitions.

While students are connected to a variety of domain experts, fellow students, and others throughout their journey, their proctor is the only mandatory touchpoint. This policy ensures that no student falls through the cracks of a system that can be much more demanding and engrossing than traditional school.

Domain Experts

The Institute maintains a stable of domain experts who have agreed to receive student pitches. Students who advance a few years above their grade level in a subject are given the opportunity to propose a collaborative project to one of the experts in that field—or embark on a real-world venture of their own. These projects and ventures (which also serve as practical tests) can range from authoring or co-authoring peer-reviewed research, starting a business, running for office, securing paying consulting clients, creating a non-profit, executing a charity fundraiser, and securing a research grant.

Tutors

Students at the Institute may choose to learn however they like. For example, should a student learn most efficiently from lectures, the best lecturers in the world have recorded their lectures on a broad array of subjects and we make these available for free through our platform (through partnerships with other organizations).

Most students nevertheless require one-on-one tutoring as part of their learning process. The Institute offers a network of student and professional tutors that students may choose to book through their homepage. Tutors are rewarded based on student rankings and demand, as students will not waste time with tutors who do not provide them with value.

Socialization

While the industrial school system does "socialize" children, it does so in a structured, controlled environment that fails to provide individuals with tools to find and make friends after entering the "real world" as adults. Fueled by a belief that social and emotional competency are as important to a student's long-term success as math or science, the Institute features multiple learning tracks dedicated to these skills. These subjects include: Sales, Social Skills, and Life Strategy (which prepares students to productively date, maintain a friend network, build a strong social reputation, etc.). Collins Institute students engaged in socialization-focused education are evaluated based on real-world social accomplishments such as being elected to positions within local organizations or building personal friend networks.

Each student's primary liaison—their proctor—is trained in psychology and behavioral therapy. Institute proctors are more focused on students' social and emotional health than students' academic health (which is recorded automatically).

Home School vs. Boarding School

The legacy school system conflates education with child care and student oversight. While both education and supervision are needed, they should be thought of as distinct offerings.

The Institute may be accessed through four distinct pathways, each of which is associated with a different form of child care/supervision:

- **The At-Home Model:** The student accesses the platform from home and their family is responsible for their supervision (however, the Institute engages with parents more than a typical homeschooling program).
- **The Adaptive Boarding Model:** The student travels with a group of other boarders, experiencing unique environments both domestically and internationally (having a traveling group in low-cost areas like developing countries is less expensive than having a static campus and better for student development). Students can leave this program and work from home whenever they like and vice versa without falling behind, as the same education platform is used regardless of setting. This means that a student can spend 90% of the year boarding or 10% depending on what works for that family.
- **The Corporate Model:** The Institute partners with corporations to offer its education platform as an add-on to the organization's child care benefits.
- **The Public School Alternative:** As an alternative to traditional public school, the Institute will offer its education services through local community centers to top performing students.

The first of the two models listed will launch long before the second two.

College Transition: University of Austin at Texas (UATX) Partnership

A founding motivation behind the Collins Institute was to create a school system with graduates capable of participating at a high level in the economy without a college degree (especially given the increasing costs and lowering utility of said degrees). For students who do want to attend a traditional college, we believe we can do more than merely ensure graduates are prepared for university studies by dramatically reducing the cost of college and facilitating a smoother transition into college life.

To that end, we have organized a partnership with the University of Austin at Texas (UATX). This partnership will allow our students to obtain their first two years of college credits while still with the Institute. For students who also express interest in preparing for independent life (on college campuses or elsewhere), we also offer a "gap year" program in which senior students live for six months to one year independently with the school's ongoing coaching and support.

Long-Term Goals

In the United States, individuals seen to be incapable of taking care of themselves or judged as a threat to others are either jailed or functionally institutionalized.

We essentially do the same to virtually all our children, mixing students who could handle more autonomy with those who require the authoritarian structure and constant supervision of the industrial education system. The Institute aims to create an alternative for the best and brightest across all districts and in all countries, utilizing existing community organizations and efficiently-run itinerant boarding cohorts as less expensive alternatives to public schools. While we never expect this model to be a fit for all students, we do expect it to work well for the top 20%-60%.

In addition to equipping students to foster their own genius and become highly impactful adults, we aim to make top-tier education accessible and affordable to all those capable of benefiting from it.