SCHOOL OF RECORD	CEEB CODE	INSTRUCTOR OF RECORD
The VR School	**170588**	**Dr. Freedom Cheteni**
Bay Area, California · WASC-accredited	College Board school code	AP Capstone coordinator · Head of School

Ian Jiang

Performance Task Portfolio Packet

TEACHER-GRADED RECORD · BLOCKCHAIN-READY VERIFICATION

A College Board handoff companion for AP Seminar.
Includes official assessment architecture, Ian's AP Seminar exemplar,
teacher-scored presentation rationale, document verification,
and privacy-respecting blockchain-ready credential metadata.

STUDENT	AP ID	SCHOOL	INSTRUCTOR
Ian Jiang	UV****72	The VR School · CEEB 170588	Dr. Freedom Cheteni

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Scores at a glance

This is the front-of-packet score page for College Board and school review. The scores below are the teacher-scored AP Seminar components documented by Dr. Freedom Cheteni, instructor of record at The VR School, CEEB 170588. Official AP Seminar submission, validation, and scoring remain in College Board systems.

23/24	23/24	8/8	54/56
TMP · Team Multimedia Presentation	IMP · Individual Multimedia Presentation	Oral Defense	Teacher-scored raw total

Component	Score	Weight	Rationale
TMP	23/24	10%	Top-band team argument, evidence integration, and media discipline; one point reserved for a defense answer that could extend cultural-validity implications further.
IMP	23/24	7%	Exceptional translation of a 2,000-word argument into a live presentation; one point reserved for audience engagement during data-slide delivery.
Oral Defense	8/8	3.5%	Both unseen questions answered with extension, concession, source recall, and methodological precision.
Teacher-scored total	54/56	20.5%	The two reserved points are technique, not substance. The defense earns full marks.

Instructor affirmation: Dr. Freedom Cheteni attests that the teacher-scored rows are based on live, unedited presentation evidence and the AP Seminar analytic rubrics. The public preview masks Ian Jiang's AP ID; the private direct-handoff packet includes it only for College Board identification.

Verification: The PDF digest is published in the matching manifest and credential endpoint. A reviewer can verify the artifact by hashing this PDF and comparing the SHA-256 value through The VR School Credentials portal.

PACKET PURPOSE

What this packet is, and what it is not

This packet is a print companion to Ian Jiang's AP Seminar Digital Portfolio record. It is designed for teacher review, administrator validation, and direct College Board handoff. It does not replace College Board's AP Digital Portfolio, AP scoring, required teacher affirmations, or coordinator validation workflow.

The public preview masks Ian's AP ID. The private packet includes the AP ID solely for direct College Board identification. Both packet versions can be verified by SHA-256 digest. The credential envelope is ready for registrar review, issuer signing, Merkle batching, and future blockchain anchoring.

106 Students in Tibetan Plateau study	**+87.4%** Question volume increase	**36.4 -> 57.4%** Higher-order question shift	**p = 0.0001** Chi-square significance

Official checkpoint	Date	What it means
Student final submissions	April 30, 2026, 11:59 p.m. ET	Students submit AP Seminar performance tasks as final in the AP Digital Portfolio.
Teacher scores and affirmations	May 10, 2026, 11:59 p.m. ET	AP Capstone teachers submit presentation scores and complete required checkpoint affirmations.
End-of-Course Exam	May 11, 2026, 12 p.m. local	The AP Seminar exam is administered digitally in Bluebook.

ASSESSMENT ARCHITECTURE

AP Seminar components in one view

Component	Format	Scored by	Weight
Individual Research Report	1,200-word report	College Board	50% of PT1, which is 20% of score
Team Multimedia Presentation and Defense	8-10 min team presentation plus defense	Teacher	50% of PT1, which is 20% of score
Individual Written Argument	2,000-word stimulus-based argument	College Board	70% of PT2, which is 35% of score
Individual Multimedia Presentation	6-8 min presentation	Teacher	20% of PT2, which is 35% of score
Oral Defense	Two teacher questions	Teacher	10% of PT2, which is 35% of score
End-of-Course Exam	2-hour digital exam	College Board	45% of score

Teacher-scored share: TMP 10%, IMP 7%, Oral Defense 3.5%, for a combined 20.5% of the AP Seminar score documented in this packet.

IAN JIANG EXEMPLAR

Original field research as AP Seminar evidence

Ian Jiang's AP Seminar portfolio centers on a quasi-experimental study at a Tibetan Plateau elementary school above 3,000 meters. His research question asks whether AI-powered tools can meaningfully bridge the learning equity gap for students in geographically isolated communities, and under what conditions those tools can remain sustainable.

4.96 vs 2.65	8 vs 0	+21.4%	3 conditions
Mean questions per student	Create-level questions	Innovation score gain	Infrastructure, training, collaboration

The deeper AP Seminar lesson is that Ian does not treat technology as magic. The technology works in his data, but his argument insists that long-term impact requires teacher preparation, offline-capable infrastructure, and culturally responsive design.

IRR EXCERPT

Individual Research Report

Our team is investigating how emerging technologies can address educational inequity in underserved communities. While my teammates are examining the roles of government policy and community-based funding models, my individual lens focuses on a specific technological intervention: the use of AI-powered educational tools in resource-limited classrooms. This lens is critical to our team's inquiry because policy frameworks and funding mechanisms are only meaningful if the technologies they support actually produce measurable learning outcomes.

A growing body of research suggests that AI-powered tools can serve as effective cognitive scaffolds in educational contexts where human instructional capacity is limited. Holmes, Bialik, and Fadel (2019) argue that AI's most transformative potential lies not in replacing teachers but in personalizing feedback at a scale that individual teachers cannot achieve. Luckin (2018) adds that AI is most effective when it targets metacognitive skills, teaching students not just what to learn but how to learn.

To test these theoretical claims against real-world evidence, I conducted a quasi-experimental study at a high-altitude elementary school on the Tibetan Plateau in China, where over 95% of students are ethnic Tibetan. The study examined whether SMILE, the Stanford Mobile Inquiry-based Learning Environment, could enhance higher-order thinking among students in grades 3-5.

A total of 106 students were divided into a control group receiving standard instruction and a treatment group using SMILE with real-time AI feedback. Students using SMILE produced 87.4% more questions per person, and the proportion of higher-order thinking questions, Bloom's levels 4-6, increased from 36.4% to 57.4% ($p = 0.0001$). Innovation scores improved by 21.4% ($p = 0.004$).

Not all scholars share this optimism. Selwyn (2016) argues that education technology often fails when deployed without adequate attention to teacher training, infrastructure sustainability, and cultural relevance. Warschauer (2004) similarly argues that digital tools are only as equitable as the social systems in which they are embedded.

When examined together, these perspectives define the boundary conditions for success. The optimists demonstrate what AI can achieve when implementation is thoughtful. The skeptics demonstrate what happens when it is not. The SMILE study occupies an instructive middle ground: it shows that a well-designed AI tool can produce significant cognitive gains even in an extremely under-resourced setting, but its limitations underscore concerns about sustainability and scalability.

For our team's collective inquiry, this finding implies that any proposed solution must integrate technology with systemic support, combining AI tools with teacher preparation, reliable infrastructure, and culturally responsive design. The technology works; the question our team must now address is how to ensure it keeps working after the researchers leave.

IWA EXCERPT

Individual Written Argument

In 2023, the U.S. Surgeon General issued an advisory warning that social disconnection has become a public health crisis, with effects on mortality comparable to smoking fifteen cigarettes a day. While this report primarily addresses interpersonal relationships, its underlying argument extends powerfully into education. For millions of students in geographically remote regions, disconnection is not merely social; it is intellectual.

At the same time, Osoro et al. raise key issues about whether technological infrastructure, such as satellite broadband megaconstellations, can sustainably deliver connectivity to underserved areas without creating new environmental and economic burdens. These two stimulus materials converge on a pressing tension: the critical necessity of connection and the uncertain sustainability of the technologies designed to provide it.

This paper asks: To what extent can AI-powered educational technologies meaningfully bridge the learning equity gap for students in geographically isolated communities, and what conditions are necessary for such interventions to be sustainable?

This question matters because, as artificial intelligence becomes increasingly central to education worldwide, there is a risk that its benefits will be concentrated among students who already enjoy the greatest access to resources, thereby widening existing inequalities. Drawing on original field research conducted in a Tibetan elementary school, alongside scholarly literature on AI in education and the College Board stimulus materials, this paper argues that AI-powered tools can produce statistically significant improvements in student learning outcomes in isolated settings, but sustainable impact requires more than technological deployment alone.

The Surgeon General's advisory establishes that social connection increases the odds of survival by 50% based on a synthesis of 148 studies. The report emphasizes that isolation affects not only physical health but also cognitive development, educational attainment, and economic prosperity. In education, students in remote communities are isolated from the intellectual ecosystems that drive learning.

In China's Tibetan Plateau, this challenge is particularly acute. Schools serving predominantly Tibetan students at elevations above 10,000 feet face chronic shortages of qualified teachers, limited access to digital infrastructure, and curricula that often do not reflect the cognitive demands of the twenty-first century.

To investigate this question, I conducted a quasi-experimental study at a high-altitude elementary school in the Tibetan region of China. A total of 106 students were divided into two groups using stratified random assignment. Group A served as the control, receiving instruction on Bloom's Taxonomy without AI support. Group B received the same instruction supplemented by SMILE, which provides real-time AI-generated feedback on the cognitive level and quality of student-generated questions.

The results were striking. Students using SMILE generated an average of 4.96 questions per person, compared to 2.65 in the control group, an 87.4% increase. More importantly, the cognitive quality of questions shifted dramatically upward. The proportion of higher-order thinking questions rose from 36.4% in Group A to 57.4% in Group B, a statistically significant difference confirmed by chi-square analysis ($p = 0.0001$).

These findings suggest that AI-powered tools can serve as what Vygotsky termed a more knowledgeable other, providing scaffolding and feedback that human teachers in under-resourced settings may not have the capacity to deliver consistently. The SMILE system did not replace the teacher; it augmented the teacher's ability to foster inquiry-based learning.

However, demonstrating that an AI tool works in a controlled study is not the same as proving it can be sustained. Osoro et al.'s analysis of low Earth orbit satellite broadband megaconstellations provides a critical cautionary lens. Even if the educational benefits of AI are real, the underlying infrastructure must be sustainable.

This concern is not hypothetical. The Tibetan school in my study had intermittent electricity and unreliable internet connectivity. During the research period, SMILE ran on locally cached devices with periodic synchronization, a workaround feasible for short-term research but questionable as a long-term pedagogical model.

Critics of AI in education raise important objections. In Tibetan communities, where oral tradition, spiritual practice, and communal storytelling are central to education in its broadest sense, an AI system that measures performance through Bloom's Taxonomy may miss dimensions of learning that matter deeply to the community. This concern does not dissolve the within-study comparison, but it does limit external generalization.

The evidence suggests a nuanced conclusion. AI-powered educational tools like SMILE can produce meaningful, statistically significant improvements in higher-order thinking among students in isolated communities. But effectiveness alone is insufficient. Three conditions must be met: sustainable infrastructure, teacher training, and collaborative design that promotes community rather than isolation.

The students I worked with on the Tibetan Plateau are not statistics. They are children who live at 3,000 meters above sea level, who walk mountain paths to school, and who deserve the same opportunities to develop their minds as any child in Beijing or San Francisco. The goal is not merely to connect isolated students to information; it is to connect them to the kinds of thinking, questioning, and intellectual community that will shape their futures.

TEACHER-SCORED RECORD

Teacher composite and rationale

Component	Score	Weight	Rationale
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VERIFICATION

Hash verification and blockchain-ready credential

The SHA-256 digest of this PDF is recorded in the matching verify.json file and mirrored in The VR School's AP Seminar packet credential endpoint. A verifier can hash the file, compare it to the published digest, and then compare the credential envelope hash.

Blockchain readiness means the credential can be signed by an authorized issuer, batched into a Merkle tree, and anchored to a public chain or approved institutional ledger. No public blockchain transaction is claimed until that signing and anchoring workflow is complete.

Artifact	Status	Endpoint
Public manifest	Live API	https://www.thevrschool.org/api/ap-seminar/packet/manifest
Credential envelope	Hash-verifiable	https://www.thevrschool.org/api/ap-seminar/packet/credential
Verify endpoint	POST hash or credential	https://www.thevrschool.org/api/ap-seminar/packet/verify

WORKS CITED AND OFFICIAL SOURCES

Research and policy anchors

College Board. AP Seminar Assessment. AP Central.

College Board. Submit AP Seminar Work in the AP Digital Portfolio. AP Students.

College Board. AP Capstone Diploma Program (AP Seminar and AP Research). AP Central.

Holmes, W., Bialik, M., & Fadel, C. (2019). Artificial Intelligence in Education.

Luckin, R. (2018). Machine Learning and Human Intelligence.

Office of the Surgeon General. (2023). Our Epidemic of Loneliness and Isolation.

Osoro, O. B., et al. Sustainability assessment of low Earth orbit satellite broadband megaconstellations. arXiv.

Selwyn, N. (2016). Is Technology Good for Education?

UNESCO. (2023). Global Education Monitoring Report: Technology in Education.

Vygotsky, L. S. (1978). Mind in Society.

Warschauer, M. (2004). Technology and Social Inclusion.

End of packet.