EduSpark

Next-Generation Personalized AI-Driven Learning Platform

By Group 5

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1. Business Plan Theme

EduSpark introduces an "AI × Human" collaborative model for education, focusing on the high-stakes Hong Kong exam preparation market. The platform uses AI for scalable tasks like real-time diagnostics, personalized learning paths, and automated grading. This frees up human teachers to provide higher-value mentorship, including strategic guidance and motivational support. The goal is to deliver more accessible, data-driven, and effective personalized education.

2. Market Size

The market opportunity for EduSpark is substantial, evidenced by a large, addressable user base with a high propensity to spend on education, all within a supportive technological and policy environment. Our initial focus is on Hong Kong as a strategic launchpad.

Key Factor	Detailed Summary
Substantial & Rigid Demand	The market is built on a large base of approximately 660,000 students in 1,100 schools. This includes a high-spending segment of over 42,000 international school students. The demand for academic success is a "rigid need," fundamentally driven by intense competition for university admissions.
High Willingness to Pay	Education is a top spending priority for Hong Kong families. Government data (CPI for education) shows consistent and high expenditure, even during economic downturns, proving the market's resilience. The well-established, massive private tutoring market confirms strong commercial viability.
Favorable Policy & Technological Tailwinds	The HKSAR Government is a strong ally, having allocated HK$2 billion to digital learning and set a 2026 roadmap for AI integration into curricula. This policy push is perfectly complemented by high home internet and smartphone penetration, providing the essential infrastructure for a digital platform.

2.1 Porter's Five Forces & Value Chain Analysis

To understand our competitive position, we utilized Porter's Five Forces and Value Chain analyses. These reveal the Hong Kong AI teaching platform market offers both significant opportunities and challenges, with success depending on executing a

differentiated strategy centered on deep AI voice interaction and building strong user ecosystems.

3. Pain Points

The current educational ecosystem in Hong Kong plagued by several structural inefficiencies that EduSpark is designed to solve is listed as follows.

Pain Point	Summary
The "Black Box" of Learning	Lack of real-time insight into the student's actual understanding and learning process.
Dormant and Unactionable Data	Student data is collected but not analyzed or used for personalized support.
The "One-Size-Fits-All" Model	Standardized teaching fails to adapt to individual learning paces and styles.
Scarcity of Quality Resources	Access to personalized, high-quality tutoring is limited and expensive.
Low Intrinsic Motivation	Traditional methods of drills and passive learning fail to engage students.

4. Solutions

EduSpark's integrated platform is engineered to address the core structural inefficiencies in the current educational ecosystem through a sophisticated "AI × Human" collaborative model. It creates a dynamic, self-optimizing learning environment centered around a powerful AI Teaching Agent.

4.1 Core AI Teaching Agent

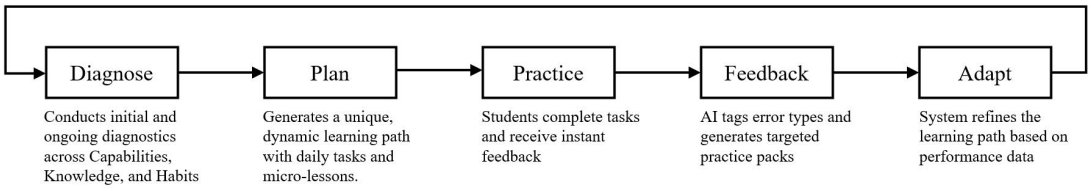
At the heart of EduSpark is a stateful, multi-modal AI Agent that serves as a personalized tutor, enabling goal-driven instructional dialogue.

Core Capability	Description
Natural Conversation & Task Execution	Dynamically performs teaching tasks (explanation, Q&A, practice) by adapting strategies based on real-time student comprehension and dialogue state.
Multi-Modal Interaction	Processes and responds using multiple input/output modes, including text, voice, and visual sketches, to enhance understanding.

Core Capability	Description
Controllability & Safety	Ensures output aligns with official curricula and maintains factual accuracy through advanced prompt engineering and grounded knowledge retrieval.

4.2 Data-Driven Personalized Learning Loop

We implement a closed-loop "Diagnose → Plan → Practice → Feedback → Adapt" system to deliver true personalization at scale.



4.3 Data & Knowledge Infrastructure

To ensure relevance and accuracy for the Hong Kong market, we have built a robust, localized data and knowledge backbone.

Phase	Key Components	Details & Implementation
Data Acquisition & Foundation Building a Localized Knowledge Base	**Core Content**	• Integration of past HKDSE papers, marking schemes, and candidate performance reports from HKEAA • Adoption of official curriculum guides from the Education Bureau (EDB)
	Localized Learning Data	• Partnerships with schools and tutoring centers to collect anonymized homework, exam scores, essays, and error logs • Special focus on collecting Cantonese speech data and Traditional Chinese writing samples to capture local linguistic nuances
	Cognitive Misconception Data	• Aggregation of common errors from language interference • Compilation of subject-specific misconceptions identified in HKEAA reports
RAG Pipeline Ensuring Accurate & Relevant Retrieval	**Knowledge Base Construction**	• Parsing, cleaning, and semantic chunking of multi-source data • Data is vectorized and indexed in a high-performance vector database for efficient retrieval
	Hybrid Search	• Semantic Search: Matches conceptual similarity • Keyword Search: Uses BM25 for exact term matching • Metadata Filtering: Filters by grade, subject, etc.
	Re-ranking	• Semantic Search: Matches conceptual similarity • Keyword Search: Uses BM25 for exact term matching

4.4 Model Training & Alignment Pipeline

Our AI agent is meticulously trained to be an effective and reliable pedagogue. Its specific features and functions are as follows.

Technical Stage	Core Methodology	Key Features
Command Fine-Tuning (SFT)	Fine-tuning a base model with expert-curated instruction-response pairs.	• Uses models with strong Chinese capabilities • Explicitly includes Chain-of-Thought (CoT) reasoning • Teaches the model to "think step-by-step"
Preference Alignment	Optimizing model outputs using Direct Preference Optimization algorithms.	• Trains on "winner" vs "rejected" response pairs • Refines outputs to be accurate, clear, and patient • Aligns with expert teaching standards
Security & Factual Alignment	Implementing a "search-before-answer" protocol for specific queries.	• Applied to textbook and policy-related questions • Provides traceable citations in responses • Ensures verifiability and prevents misinformation

4.5 System Architecture & Deployment Strategy

- Layered System Architecture

Layer	Components & Technologies	Description
Endpoint Layer	Web App, iOS/Android Native Apps, WeChat Mini-Program, Teacher Console	Provides the user interface for students, parents, and teachers across all major platforms.
Access Layer	Login & Authentication, Parent/Teacher Permission Management, Payment Gateway, Class Management	Handles user access, security, permissions, billing, and organizational structure.
Service Layer	Teaching-Agent Services, Error-Book & Practice Services, Reporting Services, Teaching Visualization Services	Comprises the core application microservices that deliver the platform's key functionalities.
Intelligence Layer	LLM + RAG Engine, Speech TTS/ASR, Multimodal Models (VLM), Recommendation & Planning Models	The "AI brain" of the platform, responsible for all intelligent processing, interaction, and personalization.
Data Layer	Learning Data Warehouse, Content Library (Textbooks, Item Bank), Model Fine-Tuning Data, Logs & Monitoring	Centralized storage for all structured and unstructured data, including learning events, content, and model training data.
Infrastructure	K8s Container Cluster, GPU Inference Cluster, Vector Database, Feature Store, Object Storage, CDN	The underlying cloud infrastructure ensuring scalability, high performance, and reliability for all services.

- Deployment & Optimization Strategy

Strategy	Implementation	Purpose & Benefit
Cloud-Edge Synergy	**Cloud:** Core LLM/VLM inference, RAG indexing, reporting. **Edge/Device:** Lightweight TTS/ASR, offline dictionaries.	Reduces latency, enhances privacy by processing sensitive data locally, and optimizes bandwidth usage.
Model Quantization	Convert model weights from FP16 to INT8/INT4.	Drastically reduces memory footprint and inference latency with minimal performance loss.
High-Performance Inference Engines	Use of vLLM (PagedAttention) and TensorRT-LLM (NVIDIA-optimized).	Achieves high throughput and low latency for serving LLMs, especially under concurrent user loads.
Multi-Level Caching	**Prompt Caching:** Static parts of system prompts. **Result Caching:** Answers to high-frequency, deterministic questions.	Reduces redundant LLM calls, lowers operational costs, and improves response times for common queries.

4.6 Key Feature Modules in Detail

EduSpark's functionality is built around a core of AI-powered modules designed to work in synergy with human educators.

Core Feature Area	Key Components
Human-in-the-Loop Collaboration	The platform automates data-driven tasks and practice, enabling teachers to focus on strategic guidance, mentorship, and nuanced feedback.
Personalized Teaching Core	• A 24/7 AI Tutor with long-term memory for continuous support and personalized scheduling. • Real-time Classroom Analytics to monitor engagement and provide actionable feedback. • Dynamic Visualization to generate interactive graphs and sketches for explaining complex concepts.
Advanced Learning Tools	• Multilingual Voice Interaction supporting Mandarin, English, and Cantonese. • Automated Roadmapping for generating long-term learning paths. • Intelligent Test Engine with OCR-based analysis and data-driven question prediction.

Through this integrated suite, EduSpark delivers a transparent, data-informed, and highly adaptive learning journey for every student.

5. Business

EduSpark will execute a phased rollout in Hong Kong, targeting the high-stakes DSE

exam preparation market. Our strategy integrates a targeted product launch with a multi-channel marketing plan designed to drive user acquisition and validate product-market fit within the first 12 months.

5.1 Business Models

EduSpark employs a dual-pronged business model designed for rapid cash flow generation and scalable market penetration.

Business Line	Target Customers	Core Value Proposition	Pricing Model	Key Features
B2C - Starter	Self-driven students, budget-conscious families	AI-powered foundational learning support	¥49-99/month or ¥299/year	• 9-subject diagnostics • Daily task lists • Weekly progress reports • Basic AI Q&A
B2C - Plus	Students needing writing & subjective help	Enhanced AI + human expert support	¥199-299/month or ¥1,599/year	• Essay grading • 24/48h Q&A • Error tracking • CEC frameworks • Material scaffolds
B2C - Pro	Students preparing for exams, needing comprehensive support	Small-class teaching + personalized coaching	¥499-899/month	• Weekly small-class sessions • Biweekly 1:1 reviews • Mock exam strategies • Time optimization
B2C - Sprint Camp	Students in pre-exam intensive preparation	Focused, high-intensity exam preparation	¥1,999-5,999/camp (6-10 weeks)	• 2-3 mock exams • Exam retrospectives • Special topic sessions • Stage evaluations
B2B2C	Tutoring centers, educational institutions	Classroom digitization & enhanced teaching efficiency	Licensing + 20-40% revenue share	• Class dashboards • Parent report templates • Embedded AI tools • Co-branding options
Platform & Ecosystem	Content providers, developers, schools	Scalable educational infrastructure	API calls, marketplace commissions, SaaS fees	• APIs/SDKs • Content marketplace • Hardware pre-installs • B2G pilots

5.2 Phased Product Launch & Initial Focus

- Market: Hong Kong, as a strategic launchpad.
- Target Users: Students preparing for the DSE and other high-stakes exams.

- Initial Product Offering: Focus on three core subjects to ensure depth and quality.
  ① Mathematics: Functions and Geometry.
  ② Chinese: Reading comprehension and Essay writing.
  ③ English: Reading, Writing, and Speaking.

5.3 Implementation & User Acquisition Plan

Our go-to-market strategy leverages a mix of B2B2C partnerships and direct-to-consumer channels to build credibility and achieve rapid user growth.

Channel	Strategy & Tactics	Target Outcome
Tutoring Center Partnerships (B2B2C)	Integrate EduSpark into tutors' workflows. Tutors use in-class diagnostics; parents receive branded reports with QR codes for home access.	Leverage existing trust for low-cost, high-intent user acquisition.
School-Based Pilot Programs	Offer free 4-week platform access to selected classes. Teachers receive training and tools.	Gather feedback, refine the product, and build institutional credibility.
Human Coaching Integration	Provide weekly/bi-weekly strategic coaching sessions to interpret AI insights and support motivation/habit-building.	Increase subscription value, improve retention, and justify premium pricing.
Student Ambassador Program	Recruit high-performers from partner schools to demo the platform, share progress, and drive organic peer-to-peer adoption.	Build trust and create authentic buzz within the student community.
Pop-up Booths at Education Fairs	Set up interactive booths at exam expos and school fairs. Offer on-the-spot diagnostic tests and instant reports.	Create high-engagement offline touchpoints and direct user sign-ups.

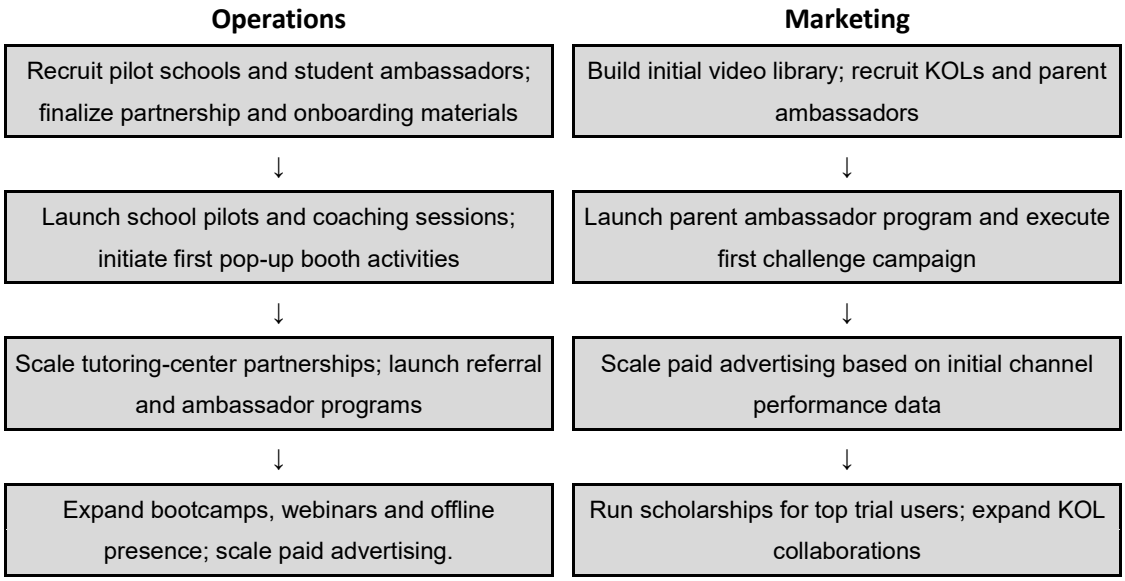
5.4 Marketing & Digital Growth Strategy

Our marketing is designed to reach students and parents on their preferred platforms with compelling, value-driven content.

Channel	Strategy & Tactics	Target Audience
Short-Form Video Content	Produce 15-30 second videos for Instagram/YouTube Shorts addressing specific DSE pain points (e.g., "The geometry trap 80% fall into"). CTA: "Test your weak spots for free."	Students (15-18 yrs)
KOL & Tutor Co-branding	Collaborate with credible local DSE tutors or high-scoring alumni to share authentic platform experiences and demo key features.	Students & Parents

Channel	Strategy & Tactics	Target Audience
Parent Ambassador Program	Engage motivated parents to share their child's progress, host info sessions, and refer other families in exchange for incentives.	Parents
Challenge Campaigns & Gamification	Launch time-bound campaigns (e.g., "7-Day Challenge") with prizes for completion. Implement in-app "progress leaderboards" for gamified motivation.	Students
Performance Marketing	Run targeted paid ads featuring testimonials and data visuals, funneling users to a free diagnostic and report.	Students & Parents

Year 1 Plan



6. Team Background

The founding team is composed of individuals with complementary expertise in technology, data science, pedagogy, and business operations, providing a solid foundation for executing this vision.

Role	Name	Key Background & Experience
Chief Executive Officer (CEO)	Fang Zhijian	Strong analytical foundation with a degree in Information and Computational Science from Chongqing University.
Chief Technology Officer (CTO)	Li Junyi	Holds a degree in Artificial Intelligence from Beijing Institute of Technology with relevant internship experience.
Chief Product Officer	Xing Ziqian	Bachelor's in Data Science and Big Data Technology from

Role	Name	Key Background & Experience
(CPO)		Nankai University; former Data Product Manager at INTSIG Ltd.
Director of Instruction and Content	Zhang Jiqi	Pedagogical anchor; graduate of Xiamen University's Department of Mathematics with two years of teaching experience.
Director of Growth and Operations	Guo Yun	Background in Data Science and Statistics from Nankai University with relevant internship experience.

7. Target Seed Capital Allocation

The initial seed funding will be strategically allocated across four key areas to achieve product-market fit and establish a sustainable growth engine. The budget is allocated as follows:

Budget Area	Allocation	Detailed Use of Funds	Expected Outcome
Product & R&D	40-45%	• Study Agent development • Essay/Material grading systems • Report 2.0 dashboard • Compliance modules	• Enhanced conversion/retention • Reduced delivery cost • Improved platform capabilities
Pedagogy & Delivery	25-30%	• Item bank development • Rubric building • Coach bootcamps • Teacher training	• SLA compliance • Higher satisfaction rates • Expanded service coverage
Content & Channels	20-25%	• Short video/live content • KOL co-branding • Regional events • Digital marketing	• Low-CAC user acquisition • City playbook validation • Brand building
Compliance & Customer Service	5-10%	• Privacy/security systems • Audit mechanisms • Support operations • Quality assurance	• Reduced risks & refunds • Enhanced reputation • Better user experience

8. Execution Plans

Our go-to-market and expansion strategy is phased and metric-driven.

Phase	Timeline	Focus Areas	Key Targets
Phase 1: Launch & Validation	0-12 Months	• MVP with 3 core subjects • Tutoring center partnerships • City playbook development	• 100+ tutoring partners • ≥50% renewal rate • ≥8% trial-to-paid conversion

Phase	Timeline	Focus Areas	Key Targets
Phase 2: Expansion & Replication	12-24 Months	• Full 9-subject coverage • Regional expansion • Operational efficiency	• 6-8 city replication • ≥60% gross margin • ≥45 NPS
Phase 3: Platformization	24+ Months	• API/SDK development • Content marketplace • Ecosystem development	• Platform pilots • New revenue streams • School partnerships

And here are the first 3 years financial forecast.

Financial Metrics (HKD M)	Year 1	Year 2	Year 3
Total Revenue	1.5	6.0	9.0
Total Expenditure	3.0	6.0	8.5
Net Profit	-1.5	0.0	+0.5

9. Summary

EduSpark aims to disrupt the education market with its "AI × Human" model, which combines an AI teaching agent with strategic human mentorship. Through subscription and partnership models, it offers a personalized, data-driven learning solution, initially targeting the high-demand Hong Kong exam preparation market to set a new educational standard.

10. Disclaimer

This section is a disclaimer stating that the business plan contains forward-looking statements about the company's expectations, plans, and projections. It warns readers that these statements are uncertain and actual results may differ, advising them not to rely solely on this information. The company also notes it is not obligated to update these statements in the future.

Appendix

Chart1. Student Enrolment in Day School by Type/Sector,2014-2024

1.3 2014年至2024年日校學生人數 － 按學校類別統計
Student Enrolment in Day Schools by Type/Sector, 2014-2024

學校類別 Type/Sector			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
幼稚園[1] Kindergarten[1]	本地	Local	166 755	171 935	170 410	167 032	159 895	160 006	152 287	143 597	132 646	125 098	114 465
	非本地	Non-local	9 642	13 463	13 622	14 115	14 507	14 291	12 648	12 359	11 030	10 997	10 961
	合計	All	**176 397**	**185 398**	**184 032**	**181 147**	**174 402**	**174 297**	**164 935**	**155 956**	**143 676**	**136 095**	**125 426**
小學 Primary	官立	Government	21 131	21 466	22 000	22 618	23 159	23 043	22 393	21 084	19 750	18 846	17 996
	資助	Aided	245 022	251 540	260 482	270 839	278 732	278 030	270 930	258 571	246 900	238 829	232 309
	直接資助計劃[2]	DSS[2]	14 839	15 120	15 326	15 590	15 759	15 935	15 918	15 744	15 544	15 803	16 031
	國際	International	20 193	20 439	21 093	21 912	22 720	23 156	22 783	22 933	22 143	22 610	22 784
	其他私立[2]	Other Private[2]	28 115	28 993	30 107	31 090	32 095	33 064	32 233	30 662	29 214	29 476	30 327
	合計	All	**329 300**	**337 558**	**349 008**	**362 049**	**372 465**	**373 228**	**364 257**	**348 994**	**333 551**	**325 564**	**319 447**
中學 Secondary	官立	Government	23 540	22 260	21 360	21 013	20 574	20 551	20 467	19 910	19 071	18 882	19 061
	資助	Aided	277 105	258 899	245 956	238 971	233 630	234 319	235 991	233 724	230 407	233 896	241 182
	按位津貼	Caput	1 465	1 366	1 293	1 258	1 221	1 256	1 215	1 224	1 232	1 337	1 365
	直接資助計劃[2]	DSS[2]	48 268	47 232	46 356	45 863	45 601	46 049	45 586	44 636	43 892	45 870	48 276
	國際	International	16 442	16 530	16 664	16 956	17 478	17 977	18 232	18 561	18 483	19 464	20 797
	其他私立[2, 3]	Other Private[2, 3]	6 311	6 322	6 523	6 743	6 994	7 242	7 520	7 872	8 077	9 025	9 926
	合計	All	**373 131**	**352 609**	**338 152**	**330 804**	**325 498**	**327 394**	**329 011**	**325 927**	**321 162**	**328 474**	**340 607**
特殊教育[4] Special Education[4]	本地/資助	Local/Aided	7 643	7 703	7 682	7 826	7 939	8 201	8 223	8 311	8 389	8 747	8 951
	國際[5]	International[5]	113	136	158	168	186	137	128	155	144	138	161
	其他私立	Other Private	4	8	3	8	5	6	5	5	6	7	6
	合計	All	**7 760**	**7 847**	**7 843**	**8 002**	**8 130**	**8 344**	**8 356**	**8 471**	**8 539**	**8 892**	**9 118**

Chart2. Competitive Analysis——Porter's Five Forces

Force Category	Description	Threat Level / Level of Ability
Threat from Potential Entrants	**• Entry Barriers:** · Building a mature platform requires substantial R&D investment. · Although direct-to-consumer (D2C) channels like app stores are open, establishing B2B channels to schools requires a strong sales force, proven success cases, and alignment with education policies, creating a significant hurdle. · Compliance with data privacy and curriculum regulations is also mandatory. **• Entry Motivation:** · The large, profitable Hong Kong market with its high willingness to pay is highly attractive. · The generalization of AI large model technology also enables established EdTech companies from other regions to enter with their existing technological capabilities. **• Conclusion:** · While technical barriers are diminishing, the challenges of building brand	**Moderately High**

	trust, acquiring user data, and establishing school partnerships remain significant. · The lucrative market continues to attract new entrants, particularly well-funded regional leaders, maintaining persistent competitive pressure.	
Supplier Bargaining Power	• **Core Technology Suppliers:** · Dependence on third-party large language models (e.g., OpenAI) grants these providers significant bargaining power and creates high switching costs. • **Content & Infrastructure Providers:** · Content creators and course designers are numerous and differentiated, giving the platform moderate bargaining power. · Large cloud service providers (e.g., AWS, Azure) are powerful, but high market competition allows for negotiation. • **Talent:** · Top AI engineers and education product managers are scarce resources with high bargaining power. • **Conclusion:** · Reliance on core AI technology suppliers poses a major risk. · Mitigation strategies include developing proprietary data and algorithm optimization capabilities to reduce dependence on key suppliers.	**Moderate**
Buyer's Bargaining Power	• **Buyer Concentration:** · In the B2C market, individual households are fragmented and have weak power, but collectively they determine platform success. · In the B2B market, buyers (schools, education bureaus) are highly concentrated and possess extremely high bargaining power, demanding price reductions and customizations. • **Switching Costs & Product Differentiation:** · Initial switching costs are low, allowing students to easily switch between competitors (e.g., Snapask, KooBits). · While products have distinct focuses, no platform has achieved dominance in AI-powered two-way voice interaction, leaving buyers to compare options. • **Price Sensitivity:** · Despite high education expenditure, families still pursue cost-effectiveness, making price a key decision factor for similar functionalities. • **Conclusion:** · Buyers possess strong bargaining power. · Platforms must reduce price sensitivity by delivering unique value (e.g., superior AI voice interaction, measurable outcomes) and retain B2C users through data-driven engagement while providing deep service for B2B clients.	**High**
Threat of Substitutes	• **Traditional Tutoring Centers:** · Offer proven, exam-focused alternatives with the authority and live	**High**

	environment of human mentors, which AI cannot fully replicate. • **Real-time Live Q&A Platforms:** · Provide a 'humanized' approach to flexibility, tackling complex or poorly articulated problems that AI currently struggles with. • **Online Learning Resource Platforms:** · Offer vast amounts of low-cost or free materials, posing a fundamental threat to self-disciplined students. • **Conclusion:** · The threat of substitutes is significant. EduSpark must clearly differentiate: emphasizing personalization and cost-efficiency vs. tutoring centers; highlighting real-time responsiveness and systematic approach vs. live Q&A; and focusing on interactivity and guidance vs. resource platforms.	
Degree of Competition Among Existing Competitors	• **Number and Strength:** · The market features 'fierce competition' with established players like Snapask and KooBits dominating their niches. EduSpark enters by differentiating through 'deep AI voice interaction'. • **Industry Growth & Product Differentiation:** · The market is in a growth phase due to supportive government policy, but competitors will fiercely compete for early quality users and school partners. While differentiation is currently evident, there is a risk of homogenization as competitors enhance their AI capabilities. • **Exit Barriers:** · The asset-light internet industry has relatively low exit barriers, though accumulated user data, brand value, and school contracts constitute certain exit costs. • **Conclusion:** · Competition is intense but the landscape remains fluid. · Success hinges on the speed of executing a differentiated positioning and building ecosystem barriers. · The first mover to transform core strengths into hard-to-replicate user engagement and learning outcomes will win.	**High**

• **Final Industry Attractiveness Judgment:**

The Hong Kong AI teaching platform market is a 'high opportunity, high challenge' sector. Its appeal stems from massive inelastic demand, strong payment capacity, and a favorable policy environment before monopolistic players emerge. The challenges include intense pressure from substitutes and existing competitors, and the relatively weak bargaining position against both buyers and core suppliers. Success requires the ability to execute a differentiation strategy, quickly prove irreplaceable value, and build solid user and industry barriers.

Chart3. Value Chain Analysis

Primary Activities	**Content Development & Curriculum Design**	**Activity:** Developing teaching materials based on the Hong Kong DSE syllabus, designing interactive dialogue scripts, creating multimedia resources, and building adaptive assessment question banks. **Value Creation:** Deep curriculum alignment is a prerequisite for market entry. Well-designed voice interaction scripts are the core of our 'deep teaching interaction' differentiation. Self-developed, structured knowledge graphs constitute a difficult-to-copy content barrier.
	Technology Platform & AI Algorithm Development	**Activity:** Platform development, integration/optimization of speech recognition and synthesis, training of NLP dialogue engines, and development of personalized recommendation algorithms. **Value Creation:** The fluency of "two-way voice interaction" is our core differentiation. Personalized algorithms directly address the "lack of personalization" pain point. Automation reduces reliance on human labor, enabling a favorable future cost structure.
	User Acquisition & Marketing	**Activity:** Digital marketing, KOL collaborations, education exhibitions, and B2B sales team expansion. **Value Creation:** Leveraging government initiatives (e.g., Quality Education Fund) to penetrate school systems via B2B channels. Marketing highlights the cost-effectiveness of "AI personalization" to attract results-oriented families. Building early trust through trials and case studies.
	User Service & Operations	**Activity:** Customer service, technical support, generation of learning progress reports, and community management. **Value Creation:** Regular progress reports significantly increase switching costs. A human-AI dual-track support system handles complex issues beyond AI's capabilities, enhancing satisfaction. The service system is a frontline channel for collecting user feedback to drive product iteration.
Support Activities	**Enterprise Infrastructure & Strategic Management**	**Activity:** Overall management, financing, strategic planning, and quality management. **Value Creation:** Sound financing supports high R&D and market expansion against strong competitors. Consistent strategic focus on 'deep AI voice interaction' as the core differentiator is crucial to avoid ambiguous positioning.
	Human	**Activity:**

Resources Management	Recruiting, motivating, and retaining key talent. **Value Creation:** Securing composite talent that understands both education and AI technology is critical. Fostering a culture of innovation is fundamental to maintaining technological leadership.
Technology Development & Data Assets	**Activity:** R&D on underlying technologies and data asset management. **Value Creation:** Accumulated voice interaction and learning data become core assets, creating a flywheel effect where the AI becomes smarter with use, building a high competitive barrier. Developing proprietary models reduces dependence on external suppliers.
Procurement	**Activity:** Sourcing external services and resources. **Value Creation:** Strategic selection of cloud and AI API providers, managing costs and risks through a multi-cloud strategy. Partnering with experts and publishers enriches content and accelerates development.

Graph1. Teaching Agent Core Interaction Workflow