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## ENTREPRENEURIAL PEDAGOGICS: START-UP EDUCATION MODELS IN ISRAEL AND CHINA

### ПІДПРИЄМНИЦЬКА ПЕДАГОГІКА: МОДЕЛІ СТАРТАП-ОСВІТИ В ІЗРАЇЛІ ТА КИТАЇ

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#### ABSTRACT

In response to the evolving demands of a knowledge-based global economy, both Israel and China have embraced entrepreneurial education as a cornerstone of national competitiveness and youth empowerment. Despite this shared strategic focus, their models of start-up education diverge significantly in philosophy, structure, and implementation.

This article **aims** to conduct a comparative analysis of Israeli and Chinese start-up education systems, identifying their respective strengths, limitations, and opportunities for mutual enrichment. The study seeks to understand how different socio-cultural and policy environments influence entrepreneurial pedagogics and educational practice. To achieve this, the research applies a multi-method qualitative approach.

У відповідь на зростаючі вимоги глобальної економіки знань як Ізраїль, так і Китай розглядають підприємницьку освіту як наріжний камінь національної конкурентоспроможності та розширення можливостей молоді. Попри спільний стратегічний акцент, їхні моделі стартап-освіти суттєво відрізняються за філософією, структурою та впровадженням.

**Метою** дослідження є порівняльний аналіз ізраїльської та китайської систем стартап-освіти, виявлення їхніх сильних сторін, обмежень і можливостей для взаємного збагачення. Дослідження прагне з'ясувати, як різні соціокультурні та політичні умови впливають на підприємницьку педагогіку та освітню практику. Для досягнення цієї мети застосовується багатометодичний якісний підхід.

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Key **methodologies** include comparative education analysis, case studies of institutions and incubators, document and policy review, as well as the author's first-hand professional experience in Israel-China technology transfer. Informal interviews with educators and policy-makers from both countries, along with SWOT elements, enrich the study's analytical depth.

**Results:** The findings reveal that Israel's model (grounded in grassroots innovation, risk-tolerant culture, and informal mentorship) is characterised by early experiential learning and decentralised structures. In contrast, China's top-down approach features institutionalised entrepreneurship education, centralised policy execution, and integration with national development goals. Both systems demonstrate effectiveness in fostering entrepreneurial mindsets and skills, but they also face distinct challenges: Israel with inclusivity and scalability, and China with fostering creativity and genuine risk-taking.

The article **concludes** by advocating for a blended pedagogical model that leverages Israel's cultural adaptability and China's strategic capacity for scale. Such a model could serve as a valuable reference for emerging economies seeking to construct resilient, inclusive, and innovation-driven educational systems. Entrepreneurial education, as demonstrated in this study, is not merely a response to labor market shifts: it is a transformative framework capable of aligning education with the aspirations of 21st-century societies.

**Keywords:** PR China, creativity, entrepreneurial pedagogics, Israel, start-up education, start-up incubators, start-up infrastructure, "startup nation".

**Методологія** дослідження базується на мультидисциплінарному підході, що охоплює порівняльний аналіз освітніх практик, кейс-стаді інституцій та стартап-інкубаторів, аналіз стратегічних документів, а також авторський досвід професійної діяльності у сфері технологічного трансферу між Ізраїлем та Китаєм. Додаткову аналітичну глибину забезпечили неформальні інтерв'ю з освітянами й підприємцями та елементи SWOT-аналізу.

**Результати** засвідчують, що ізраїльська модель (заснована на ініціативах «знизу», культурі толерантності до ризику та наставництві) характеризується раннім набуттям практичного досвіду й децентралізованими структурами. Натомість китайський підхід «згори донизу» вирізняється підприємницькою освітою, централізованим виконанням політики та інтеграцією з національними цілями розвитку. Обидві системи ефективні у формуванні підприємницького мислення й навичок, проте стикаються з різними викликами: Ізраїль – із проблемами інклюзивності та масштабності, а Китай – із розвитком креативності та готовності ризикувати.

У **висновках** обґрунтовується доцільність формування гібридної педагогічної моделі, яка б поєднала гнучкість ізраїльської освітньої культури з масштабним державним підходом Китаю. Така модель може стати ефективним орієнтиром для країн, що розвиваються, у створенні інноваційно-спроможної, інклюзивної та соціально адаптованої системи підприємницької освіти. Підприємницька освіта розглядається як інструмент трансформації сучасного освітнього простору відповідно до викликів XXI століття.

**Ключові слова:** КНР, креативність, підприємницька педагогіка, Ізраїль, стартап-освіта, стартап-інкубатори, стартап-інфраструктура, «нація стартапів».

## INTRODUCTION

In recent decades, the global educational landscape has undergone a profound transformation, shaped by the rapid evolution of economies, technology, and labour markets. Traditional employment models, centred on stability, hierarchy, and predefined roles, are increasingly giving way to innovation-driven ecosystems that demand flexibility, initiative, and continuous learning. In this context, the mission of education has shifted beyond the transfer of theoretical knowledge to the development of entrepreneurial competencies such as creativity, problem-solving, risk management, and adaptability (Lyu et al., 2023). As a result, entrepreneurial pedagogics and start-up

education have gained prominence as powerful tools to prepare learners for future-oriented professions and self-driven business creation.

This article explores two contrasting models of start-up education: the Israeli and Chinese approaches. While both nations prioritise innovation, their educational philosophies and institutional structures differ markedly. These opposing frameworks (one – driven by individual initiative and experimentation, the other – by coordinated policy and mass mobilisation) provide a compelling basis for comparative analysis. Understanding their pedagogical foundations and operational mechanisms offers insights into how diverse societies prepare youth to innovate in an increasingly complex global environment.

The article **aims** to conduct a comprehensive comparative analysis of the Israeli and Chinese systems of start-up education, with a focus on understanding how each model fosters entrepreneurial skills and innovation among young people. By examining their pedagogical foundations, institutional frameworks, and cultural contexts, the study seeks to identify the unique strengths and limitations of both approaches. Furthermore, the research aspires to uncover potential areas of complementarity and synergy that could inform the development of more effective, globally adaptive models of entrepreneurial education suited to diverse educational and economic environments.

The research employs a **multi-method qualitative approach** to examine and contrast the models of start-up education in Israel and China. Given the complexity and contextual nature of educational systems and innovation ecosystems, the study integrates several complementary methodologies:

- *comparative analysis method* enables systematic identification of the strengths, limitations, and distinctive characteristics of Israeli and Chinese start-up education models. This method supports a contextual understanding of how entrepreneurial education is shaped by national priorities, cultural factors, and institutional design;
- *case study method* was used to ground the comparison in practical reality. The study includes targeted case studies of educational institutions, public initiatives, and entrepreneurial incubators in both countries;
- *document and policy review* as to state strategic development plans and academic sources published helped to understand the general framework and the aims of start-up education in each country;
- *author's personal professional experience* as a serial entrepreneur from Israel involved in technology transfer and start-up collaboration with China as well is used as distinctive methodological component of this study to provide insider perspective and reflective insights into the implementation and effectiveness of start-up education practices in both countries;
- *expert insights and informal interviews* with Chinese and Israeli educators, policy makers, and innovation ecosystem stakeholders, start-up providers and young specialists involved in start-ups while were not structured as formal empirical interviews, but also were used by the author. These informal expert insights enhance the depth of understanding of on-the-ground realities.
- *SWOT analysis elements* were applied to synthesise and interpret comparative data, identifying areas of synergy and divergence, and highlighting possible strategies for mutual learning and cross-model integration.

By utilising these scientific research methods and materials, the article has provided a comprehensive and evidence-based exploration of start-up infrastructure in Israel and China.

## RESULTS

The concept of entrepreneurial pedagogics emerged in the late 1990s and gained momentum in European educational discourse throughout the early 2000s. It marked a significant shift in pedagogical paradigms, moving beyond traditional vocational training or business education toward a more holistic and competence-based learning model. This approach emphasises real-world problem-solving, opportunity recognition, creativity, and value creation. By the 2010s, entrepreneurial pedagogics had been formalised in academic literature as a structured methodology for cultivating entrepreneurial mindsets within both general and specialised educational systems (Malywanga et al., 2020).

In parallel, the notion of start-up education began to take shape as a response to the increasing role of start-ups in national and regional economies. The term gained attention in scholarly and policy circles in the early 2010s, particularly in the aftermath of the 2008 global financial crisis, which intensified the need for innovation-driven recovery strategies. While closely related to entrepreneurship education, start-up education focuses more specifically on the instructional practices and institutional frameworks that enable learners to launch and manage new ventures (Igwe et al., 2022).

Start-up education represents a fundamental shift in educational focus: from passive acquisition of theoretical knowledge to the active development of entrepreneurial thinking, risk tolerance, resilience, and the ability to turn ideas into viable enterprises. It goes beyond business education by fostering a proactive mindset capable of navigating the uncertainty and complexity of modern labor markets. Today, start-up education is broadly defined as a pedagogical model that develops students' entrepreneurial competencies through project-based learning, interdisciplinary collaboration, and real-world practice. Core elements include training in business model design, pitching, market analysis, team dynamics, digital literacy and other skills essential for navigating start-up ecosystems (Aashish et al., 2023).

The origins of start-up education as a scientific concept and an education approach can be traced to entrepreneurship education in the late 20th century in the United States and Western Europe. Although there is no universally recognized "first user" of the term, institutions such as Babson College (USA) were early adopters, pioneering experiential entrepreneurial learning. In Europe, countries like Finland, the Netherlands, and Germany were among the first to develop national strategies that integrated start-up education into secondary and tertiary curricula (Rodrigues, 2023). The European Union has played a significant role in promoting start-up and entrepreneurship education across its member states.

Strategic policy frameworks such as the "Europe 2020 Strategy" emphasised entrepreneurship as vital to smart, sustainable, and inclusive growth. The European Commission's "Rethinking Education" (2012) called for embedding entrepreneurial education across all levels of learning. The "EntreComp Framework" (2016) positioned entrepreneurship as a transversal key competence, offering a structured model for curriculum development. The "Digital Education Action Plan" (2021–2027) further underscores the importance of digital and entrepreneurial skills for Europe's future workforce. Support mechanisms for start-up education are also embedded in major EU initiatives such as Horizon Europe and Erasmus+, which fund projects involving business

incubation, innovation hubs, and cross-sectoral entrepreneurship. Reflecting its global relevance, this educational model has also gained traction in non-European countries such as Israel and China, where distinct national strategies have emerged to support innovation-led growth through start-up education (Entrepreneurship education, 2025).

Israel is widely recognised as the “Start-Up Nation”, a term popularised by Dan Senor and Saul Singer in their book “Start-Up Nation: The Story of Israel’s Economic Miracle” (2009). This designation reflects Israel’s remarkable density of technology start-ups per capita, its robust innovation ecosystem, and a cultural ethos deeply rooted in initiative, creativity, and resilience. As a country with scarce natural resources (including limited water and arable land) Israel has relied on human capital and technological innovation as foundational pillars of national development. With over 7,000 active start-ups (Kumar, 2025) and one of the highest research and development (R&D) expenditures in the world (exceeding 4% of GDP (Mellul, 2024), Israel provides a compelling case study in the integration of entrepreneurship and education.

Israel’s globally recognised innovation ecosystem is supported by a comprehensive start-up education infrastructure that integrates formal education, non-formal education, military training, government policy, and private sector initiatives. Together, these components foster entrepreneurial thinking, skill development, and real-world experience from an early age through adulthood (Israel SCI-Tech Schools, n.d.). In Israel, entrepreneurial education begins at an early age and continues through all levels of the formal education system. In recent years, start-up thinking has been actively promoted even in kindergartens and primary schools, where children are encouraged to develop creativity, teamwork, and problem-solving skills through playful, inquiry-based learning activities. Initiatives such as “Young Entrepreneurs of Israel” and classroom programs supported by the Ministry of Education introduce basic concepts of entrepreneurship through role-play, mini-business simulations, and innovation challenges tailored for young learners.

At the secondary school level, entrepreneurship is more structured. Many schools incorporate business fundamentals, marketing, and product development into interdisciplinary coursework. Group projects often focus on identifying real-world problems and proposing innovative solutions, helping students build teamwork and critical thinking competencies. Competitions, hackathons, and student-run ventures are also common features of high school start-up education (ORT Israel, n.d.). At the university level, Israel’s top institutions (including the Technion in Haifa, Tel Aviv University, Hebrew University of Jerusalem and others) serve as hubs for innovation. They offer dedicated entrepreneurship courses, access to start-up incubators, innovation labs, and venture acceleration programs. Students are not only encouraged but actively supported in launching their own ventures during their studies, ensuring real-world experience and practical skills alongside academic learning (Drori, 2013).

Non-formal education in Israel also plays a vital and strategic role in cultivating entrepreneurial mindsets and skills from a young age. National youth movements such as “HaNoar HaOved VeHaLomed” (“The Working and Studying Youth”) and Bnei Akiva (“Children of Akiva”) install values of leadership, responsibility, social initiative, and teamwork through experiential learning, volunteerism, and peer-led activities (Innovation nation, 2025). Pre-military academies (Mechinot), such as Mechinat Beit Yatir and Ein Prat, offer intensive personal development programs that emphasize civic responsibility, critical thinking, community involvement, and self-discipline: traits essential for future entrepreneurs (Israel Defense Forces, 2025). A distinctive pillar of

Israel's entrepreneurial pipeline is the Israel Defense Forces (IDF) which units that can be seen as practical innovation hubs where young soldiers, often in their early twenties, are tasked with solving complex, real-time security and technological challenges. They lead teams, develop cutting-edge solutions and manage projects: skills directly transferable to the start-up world. Many successful Israeli start-ups (including Waze, Check Point and NSO Group) started and innovated by veterans of IDF (Giving Soldiers, 2017). This ecosystem is further strengthened by the private sector through programs like MassChallenge Israel, venture capital networks and incubators, which offer mentorship, funding, and access to global markets. Together, these non-formal and informal structures form a powerful engine for start-up education in Israel.

Besides the formal and informal education efforts mentioned above, the Israeli start-up education is much supported by the social-state ecosystem that encourages innovation and entrepreneurship from multiple angles. Through the years the country built-up a special type of social-business-state relationship, that combines cultural values, institutional support, infrastructure, and international partnerships to create an environment where start-up education thrives. This ecosystem as its key components sees:

- *Israel's entrepreneurial culture* that is fundamentally interwoven with the national identity as well as shaped by historical necessity, socio-political resilience and a forward-looking strategic vision. Confronted with limited natural resources and ongoing regional complexities, Israeli society has cultivated a pragmatic and solution-oriented ethos that prioritises innovation, adaptability, and proactive initiative. Risk-taking is institutionally and socially accepted, while failure is generally perceived as a constructive element of the entrepreneurial learning process. Informal communication norms support open dialogue and cross-disciplinary collaboration. Compulsory military service (thanks to high technological level of Israeli military forces) contributes significantly to the early development of leadership and technical competencies among young individuals. This cultural and institutional foundation, reinforced by a strong collective sense of responsibility and national purpose, has transformed entrepreneurship from a solely economic endeavour into a core element of Israel's societal paradigm. Today, the country is characterised by a high concentration of high-quality start-ups and experienced serial entrepreneurs. Numerous technology clusters and innovation hubs across the nation facilitate early exposure to cutting-edge ideas and serve as practical platforms for student engagement in authentic entrepreneurial initiatives (Efrat et al., 2020);
- *educated human resources* that constitute a foundational pillar of Israel's start-up ecosystem. The nation is distinguished by a highly qualified workforce, characterised by a strong emphasis on science, engineering, and technology education beginning in primary school and extending through higher education. Moreover, significant waves of immigration (particularly from the former Soviet Union in the early to mid-1990s) have substantially enriched Israel's human capital. These immigrants often arrived with advanced academic qualifications, professional expertise, scientific credentials, and a strong motivation to apply their skills in a new socio-economic environment that offered opportunities previously unavailable to them (Kandel, Segev et al., 2023). The synergy between academic excellence, practical experience, and early exposure to responsibility continues to sustain Israel's dynamic entrepreneurial environment, shaping future generations with similar aspirations and capacities.
- *strong and dynamic cooperation among academia, government, industry, the defence sector, and global innovation hubs*. This multi-sectoral synergy enables the

seamless flow of knowledge, resources, and talent, creating an environment conducive to innovation and entrepreneurship. Academic institutions (such as the Weizmann Institute and the Technion) play a central role by conducting advanced research, promoting interdisciplinary and project-based learning, and supporting student-led ventures. The government complements this by offering strategic funding mechanisms and supportive policies. Industry and multinational corporations contribute market-driven insights and scalability, while the defence sector provides cutting-edge technological expertise and fosters a culture of problem-solving and initiative. Global partnerships, particularly with innovation centres like Silicon Valley, further strengthen this network by introducing international perspectives and collaborative opportunities. Together, these interconnected actors create a robust and inclusive ecosystem that accelerates innovation, supports commercialisation, and aligns start-up education with real-world challenges, making entrepreneurship accessible and effective for a broad spectrum of learners (Startup Nation Central, 2023).

- *easy and diversified access to funding*, which plays a critical role in nurturing innovation from idea to market. Early-stage ventures benefit from a robust financial ecosystem that includes venture capital firms, angel investors, corporate investment arms, private equity, and numerous accelerators and incubators many with international backing. This wide range of funding sources provides real opportunities for entrepreneurs, including students, to turn innovative concepts into viable businesses. The Israel Innovation Authority (IIA) serves as a central pillar in this infrastructure by offering non-dilutive funding, R&D incentives, incubator programs, and human capital investments. These mechanisms reduce entrepreneurial risk, promote experimentation, and support start-ups across key phases such as ideation, prototyping, and scaling (Crawford, 2020). The availability of funding at each stage ensures that promising ideas are not abandoned due to financial constraints.
- *robust socio-economic infrastructure* that provides essential institutional support that enables innovation to thrive. A reliable legal system ensures the enforcement of contracts and the protection of intellectual property (IP), boosting investor confidence and safeguarding technological development. The country's advanced banking and financial sectors offer specialised instruments for early-stage financing, venture capital, and equity investments, allowing entrepreneurs to access capital at critical stages. Regulatory frameworks are designed to be innovation-oriented, simplifying business formation and minimising compliance obstacles. In addition, government-backed initiatives such as tax incentives, public funding schemes, and transparent administrative procedures further enhance the entrepreneurial environment. This integrated infrastructure not only reduces entry barriers for start-ups but also fosters their sustainable growth and strengthens their global competitiveness (Meiti, 2019).

Start-up education in Israel is also increasingly recognised as a powerful tool for empowering rural youth and young people from marginalised communities, offering them pathways to self-realisation, economic mobility, and social inclusion. Given Israel's diverse population (including youth from peripheral towns, Arab and Druze communities, Ultra-Orthodox sectors, and immigrant families) there is a strong national push to ensure equitable access to innovation and entrepreneurship education. The Israel Innovation Authority and the Ministry of Education support numerous programs targeting underserved youth.

For example, the “Startup Seeds” program brings introductory entrepreneurship education to high schools in the Negev and Galilee, regions traditionally underserved in terms of economic opportunities. These include workshops, innovation challenges, and exposure to local tech start-ups (ORT Israel, n.d.). Nonprofits such as “Unistream” and “Kav Mashve” work directly with marginalized youth. “Unistream” builds entrepreneurship hubs in disadvantaged towns and runs annual entrepreneurship bootcamps and national competitions.

Many participants go on to open small businesses or pursue tech careers. “Kav Mashve” promotes employment and business skills among Arab youth and organises career prep workshops and business idea mentoring. Israeli tech companies like “Intel”, “Google Israel” and “Bank Hapoalim” sponsor hackathons, masterclasses, and mentorship programs for rural schools and youth villages. Projects like “Tech-Career” (for Ethiopian-Israeli youth) and “Tsofen” (for Arab-Israeli engineers) provide intensive innovation training, coding skills, and start-up ideation labs in the summer or as after-school programs (Israel Defense Forces, 2025).

Israel’s start-up education infrastructure extends far beyond traditional classrooms. It is a multi-layered, interconnected system that integrates formal education, civic engagement, military service, and a robust support ecosystem. Within schools and universities, students are introduced to entrepreneurship through project-based learning, innovation hubs, and interdisciplinary programs. Outside the formal education system, pre-military academies, youth movements, and elite army units cultivate leadership, creativity, and problem-solving skills.

This foundation is reinforced by a supportive ecosystem that includes government grants, tax incentives, incubators, accelerators, and mentorship networks. Together, these elements create an environment where innovation is nurtured across educational, legal, social and economic sectors (Efrat et al., 2020). This holistic approach has earned Israel its global reputation as the “Start-Up Nation” and continues to drive the country’s technological advancement and economic resilience.

The concept of start-up education in China emerged in professional and policy discourse in the early 2010s, closely following global shifts in innovation-led development and entrepreneurship promotion. The turning point came in 2015, when Premier Li Keqiang introduced the national policy of “Mass Entrepreneurship and Innovation” and marked a strategic shift towards the structural innovation. He placed entrepreneurship education at the center of China’s modernisation agenda and economic transformation for the period of “New Normal Context” (a period of slowing economic growth), emphasising the importance of “young people turning ideas into businesses” and declaring that innovation is the “new engine of China’s development” (Xiao, 2024). The State Council and Ministry of Science and Technology also emphasise entrepreneurship as a pillar in their innovation strategies, with key references in Five-Year Plans and national speeches.

Since 2015, the formal education system has rapidly integrated start-up education into universities and vocational colleges. The Ministry of Education issued several key policy documents, including “Opinions on Strengthening Innovation and Entrepreneurship Education in Higher Education Institutions” (2015) and “Action Plan for Innovation and Entrepreneurship Education in Universities” (2016–2020, extended till 2027) which both mandated the integration of entrepreneurship training across disciplines and promoted the development of entrepreneurship curricula, incubators on campus and collaborations with local enterprises.

More than 2,000 universities now run innovation and entrepreneurship centres, and “Innovation and Entrepreneurship Education” has become a required course in many institutions (Xu, 2021). Start 2015 Ministry of Education of China has mandated the integration of “Innovation and Entrepreneurship Education” (IEE) into the national curriculum across a wide spectrum of disciplines. It is now offered as both a compulsory general course and, increasingly, as an independent major or concentration in many universities and vocational colleges of the country. IEE courses are open to all students, regardless of their major or academic background. No prior entrepreneurial experience is required. Students from fields as diverse as engineering, business, agriculture, arts, and medicine can enroll in IEE courses.

For specialised programs (such as a major in “Innovation and Entrepreneurship”), standard entrance criteria apply. Key modules of IEE as a specialisation and major typically include such courses, as Foundations of Entrepreneurship, Business Model Design, Innovation Thinking and Creativity, Project Management, Financial Planning and Venture Capital, Legal Environment of Start-ups, Pitching and Communication Skills, Digital Entrepreneurship Tools and Case Studies of Chinese and Global Startups. Course delivery involves lectures, business simulations, hackathons, incubator visits, and mentorship programs. Universities often collaborate with local enterprises, innovation hubs, and alumni entrepreneurs to provide real-life projects and internships.

Students are assessed through group projects, start-up pitches, business plans, and participation in national competitions such as the “Internet+ Innovation and Entrepreneurship Competition”. Many institutions issue certificates of completion and provide preferential access to incubator space, start-up funding, and patent application support for high-performing students (Zhou et al., 2024).

For now, many institutions have developed dedicated platforms for hands-on learning and specialising in IEE. For instance:

- Tsinghua University’s x-lab integrates academic courses with practical incubation support. Students co-develop projects with mentors from industry and academia.
- Zhejiang University runs a “3-in-1” model: combining curriculum-based education, extracurricular competitions, and enterprise-based training.
- Beijing University of Posts and Telecommunications offers a dual-degree model allowing students to major in IEE alongside another discipline, such as computer science.
- in vocational institutions, such as Shenzhen Polytechnic, the IEE program includes modules on small business management tailored to the local economic ecosystem and SME environment (Shao, Miao, et al., 2024).

In recent years, the People’s Republic of China has established an extensive and strategically integrated network of start-up hubs to stimulate innovation, promote entrepreneurship, and accelerate the commercialisation of scientific and technological achievements. These hubs are commonly referred to as “Innovation Parks”, “Science and Technology Incubators”, or “Maker Spaces” and function as structured platforms that are supposed to provide essential support to early-stage enterprises. Their primary mission is seen by the government of PR China to foster the growth of innovative businesses by facilitating access to resources such as seed funding, shared infrastructure, mentorship, university-industry linkages, and government policy support.

The development and operation of these hubs are typically financed through multi-level government subsidies, research grants, and tax incentives, reflecting China’s

commitment to innovation-led economic transformation (Yang, 2025). In some cases, hubs are situated in state-owned properties, allowing them to offer rent-free or low-cost office space to start-ups.

Each hub is subject to performance-based expectations, including the annual incubation of a designated number of start-up firms (typically 10–15), the organization of entrepreneurial training programs and competitions, and tangible contributions to intellectual property development and commercialisation as well as attracting high-ranked and well-known specialists from abroad to be introduced to the Chinese Universities, research groups and others. Outstanding hubs may receive national accreditation through programs such as the “Torch Program”, administered by the Ministry of Science and Technology, which confers official recognition and opens access to additional state funding and prestige within China’s innovation ecosystem (The Startup Ecosystem, 2025).

The Chinese government expected these hubs to create jobs, help students and young entrepreneurs, boost innovation, and modernise the economy (Tan, 2018). However, many hubs haven’t reached these goals. Problems include low-quality start-ups, over-dependence on subsidies, weak industry links, lack of experienced mentors and very much formalised approach to start-ups as a creative and business activity (mainly the start-up young people in China are better have a special IEE education certificate rather than really want and can make some inventions).

Still, there are success stories. Zhongguancun in Beijing is home to companies like Baidu and Lenovo and is often called “China’s Silicon Valley”. Shenzhen’s Nanshan Zone focuses on AI and electronics with strong links to manufacturing. Hangzhou’s “Dream Town”, backed by Alibaba, supports e-commerce and cloud-based businesses (Marrs, 2025). These examples show how effective hubs can be when they are well-connected, well-funded, strategically located and organised by public-private companies according to the American/Israeli model where the real start-up mind people make real things.

The Israeli and Chinese models of start-up education and entrepreneurial development reflect fundamentally different approaches to both the concept of start-ups and the institutionalisation of start-up education within the framework of entrepreneurial pedagogics. These differences are rooted in each country’s socio-economic history, policy environment, and cultural context. In Israel, the start-up model has evolved organically over several decades, becoming an integral part of the national worldview and economic resilience strategy: a necessity-driven evolution shaped by limited natural resources, high-tech innovation, and grassroots entrepreneurial culture.

Conversely, China adopted the start-up education concept more recently, primarily in the 2010s, through a top-down process that aligns with national economic modernisation goals and innovation-driven development strategies. In this case, the model has been largely imported and adapted into local systems, still undergoing significant refinement and localisation.

Despite these contrasting trajectories (evolutionary in Israel and more revolutionary in China) both models share a common objective: to stimulate economic and social development through innovation and technology. They aim to cultivate entrepreneurial mindsets, promote youth involvement in start-up ecosystems, and bridge education with real-world enterprise. Table 1 illustrates the author’s comparative evaluation of these two models using a SWOD (Strengths, Weaknesses, Opportunities, and Dangers) analysis, highlighting their respective benefits and limitations.

**Table 1**

*Comparative evaluation of Israeli and Chinese start-up education models*

Aspect	Israeli Model	Chinese Model
<b>Strengths</b>	<ul style="list-style-type: none"> <li>– strong innovation culture and entrepreneurial mindset integrated into national identity.</li> <li>– high level of public-private cooperation (universities, IDF, accelerators).</li> <li>– informal and decentralised ecosystem promoting creativity and initiative.</li> <li>– easy access to early-stage funding and global networks.</li> </ul>	<ul style="list-style-type: none"> <li>– strong government support and policy frameworks.</li> <li>– scalable infrastructure through innovation parks and state-funded incubators.</li> <li>– integration with national economic strategies.</li> <li>– broad inclusion through formal education reforms and entrepreneurship curricula.</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>– unequal access to resources; often entered around elite institutions (e.g., IDF units, top universities);</li> <li>– relatively small domestic market;</li> <li>– high dependence on informal networks, which can exclude peripheral populations.</li> </ul>	<ul style="list-style-type: none"> <li>– Over-centralized and bureaucratic implementation may stifle local creativity.</li> <li>– emphasis on compliance over innovation in some regions.</li> <li>– variable quality and autonomy of education initiatives across provinces.</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>– expansion of start-up education to rural and marginalised communities.</li> <li>– strengthening international collaboration (e.g., EU, Asia);</li> <li>– further integration of start-up education with environmental and social impact goals.</li> </ul>	<ul style="list-style-type: none"> <li>– growing emphasis on innovation in national policy supports broader adoption.</li> <li>– development of hybrid models combining local context with global entrepreneurial standards.</li> <li>– expanding global partnerships and overseas incubators (particularly through BRI sources).</li> </ul>
<b>Difficulties</b>	<ul style="list-style-type: none"> <li>– regional instability may affect long-term investment.</li> <li>– talent drain to larger markets (e.g., U.S.).</li> <li>– saturation in high-tech sectors.</li> </ul>	<ul style="list-style-type: none"> <li>– risk of “innovation formalism”, where entrepreneurship is taught but not truly practiced.</li> <li>– pressure on students due to rigid academic pathways and exam-driven system.</li> <li>– limited tolerance for failure may hinder risk-taking culture.</li> </ul>

The Israeli start-up education model offers a range of strengths that distinguish it from the more centralised and policy-driven Chinese approach. Among its key advantages is its strong cultural integration of entrepreneurial values.

In Israel, entrepreneurship is not merely an educational track, but a socially endorsed mindset supported by a national ethos of innovation, independence, and resilience. This cultural foundation allows the Israeli model to foster genuine risk-taking, creativity, and rapid iteration, essential for success in volatile innovation environments. Another strength lies in the multi-layered ecosystem of support, combining formal education, non-formal civic institutions, military training, and private-sector initiatives. This structure ensures that entrepreneurial thinking is developed early and reinforced through practical experience, interdisciplinary collaboration, and real-world problem-solving.

The availability of early-stage funding, mentorship, and access to global networks further enables young entrepreneurs to move quickly from idea to implementation. However, the Israeli model also faces challenges. One notable disadvantage is its reliance on informal networks and elite units such as the IDF's technology divisions, which may unintentionally marginalise individuals outside these circles (Startup Nation Central, 2023). This creates inequities in access to start-up opportunities, particularly among underrepresented populations or those in peripheral regions.

In comparison, the Chinese model's top-down design allows for scale, uniformity, and rapid policy deployment, potentially offering broader access to entrepreneurial education through structured programs. However, it often lacks the organic innovation culture and flexibility (Wang & Ma, 2022) that characterise the Israeli ecosystem.

While the Israeli model encourages autonomy and fast adaptation, the Chinese approach emphasises compliance, planning, and alignment with state priorities, which can slow down disruptive innovation. Thus, while the Israeli model excels in fostering authentic entrepreneurial spirit and agility, it may benefit from adopting some elements of China's broader inclusion mechanisms (Yu, 2022). Conversely, China could enhance its model by cultivating a more decentralised, risk-tolerant educational and innovation culture.

## **DISCUSSION**

The models of start-up education in Israel and China offer two distinct paradigms shaped by differing socio-cultural, economic, and policy contexts. While both countries actively promote entrepreneurship as a pathway to national development and individual empowerment, the philosophical foundations and implementation mechanisms of their respective systems diverge significantly.

Israel's approach is characterised by a bottom-up, initiative-driven ethos deeply embedded in the national worldview. The Israeli model emphasises risk-taking, failure as a learning tool, and decentralised innovation ecosystems. Conversely, the Chinese model is predominantly top-down and policy-led. The concept of "Innovation and Entrepreneurship Education" was formally introduced in 2015 and since then, it has been institutionalised in universities and vocational institutions across the country.

Chinese entrepreneurship education often takes the form of structured academic programs, focusing on theoretical knowledge and systematic planning. These divergent approaches reflect deeper cultural attitudes: in Israel, entrepreneurship is a natural extension of national identity and resilience; in China, it is a strategically cultivated tool for economic modernisation. Together, these models offer valuable insights into how start-up education can be tailored to national strengths, institutional cultures, and long-term development goals.

## CONCLUSIONS

Start-up education has become an integral component of modern education systems aiming to prepare individuals for the challenges and opportunities of a knowledge-based economy. While it has emerged relatively recently in academic and policy vocabulary, its importance continues to grow. It reflects a paradigm shift toward proactive, self-driven, and collaborative learning and stands at the intersection of education, innovation, and economic development.

The comparison of Israeli and Chinese start-up education models reveals how diverse socio-political environments can shape entrepreneurial pedagogics in distinct yet complementary ways. Together, these models highlight different pathways to cultivating entrepreneurial capacity in youth. The Israeli system excels in fostering entrepreneurial spirit through cultural and institutional decentralisation, while the Chinese model demonstrates how policy-driven strategies can mobilise resources and infrastructure on a vast scale.

A hybrid model (drawing on Israel's creativity and adaptability and China's strategic reach and institutional support) can offer a compelling vision for emerging economies. Such a blended approach could better address local needs while promoting global entrepreneurial competencies. Ultimately, effective start-up education must balance local authenticity with structure and innovation with inclusion to equip future generations for meaningful participation in knowledge-driven economies.

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## CONFLICTS OF INTEREST

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