

A Look at Teaching Styles:  
Exploring the Roots of Innovative Entrepreneurship  
in Israel and China

by

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## ***Abstract***

The main purpose of my thesis was to explore differences in patterns of innovative entrepreneurship between Israel and China, and to focus specifically on whether teaching styles in those countries play a role in fostering such patterns. I hypothesized that teaching styles in Israel encourage innovative entrepreneurship, while teaching styles in China impede innovative entrepreneurship.

My primary research consisted of a survey of former students of Israeli high schools and universities, and former students of both traditional and international Chinese high schools. Using these results, as well as secondary research, I discovered that there is indeed a significant difference in both patterns of innovative entrepreneurship and teaching styles between Israel and China. I also found that there was a measurable difference between teaching styles in high schools and universities in Israel; in China, there was a measurable difference between teaching styles in traditional and international high schools. According to my findings, there is, at the very least, a positive correlation between Israel's teaching styles, which allow for questioning, new ways of thinking, and discussion in the classroom, and the country's impressive rates of innovative entrepreneurship. Moreover, there appears to be a negative correlation between China's teaching styles, which command high levels of discipline in the classroom and demand exact repetition, and its relatively poor rate of innovative entrepreneurship. I also discovered that teaching styles within a country are not necessarily uniform; teaching styles of international high schools in China share many characteristics with institutions in Israel, and displayed characteristics that are believed to foster innovation to a higher degree than their Israeli counterparts.

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## ***Introduction***

### ***Overview***

In recent decades, innovative entrepreneurship has become an increasingly critical component of the foundation of economic development around the world; from jobs to technical progress to high standards of living, innovative entrepreneurship has provided for society in countless ways. The race to stimulate economic development with the aid of innovative entrepreneurship has thus proven to be a top priority for officials who seek to benefit their respective economies and societies as a whole. Many governments around the globe have made a conscious effort both to promote and support innovative entrepreneurship through their policies, infrastructures, and institutions—all of which are designed to make certain that creativity can emerge and that they too can boast of the next Silicon Valley within their borders.

Research does indicate that for effective adaptation of our political and economic systems to the needs of modern times, encouragement of innovative entrepreneurship is paramount. However, a crucial question remains—how does one spur innovative entrepreneurship? The task is easier said than done. For example, it is well accepted that protection of intellectual property must exist in order to encourage creativity. However, such protection must not be too stringent so as to stifle innovation. Clearly, the ideal adaptation of policies to encourage innovative entrepreneurship can be difficult to identify.

In an attempt to determine how to stimulate innovative entrepreneurship most effectively, one area of research that has been neglected in the literature to a certain degree is the role of education. Do teaching styles play a role in stimulating and sustaining—or impeding—innovative entrepreneurship? Can educators be trained to teach in certain ways proven to provide the stepping stones of economic growth? This paper aims to explore this topic further.

### ***What is Innovative Entrepreneurship?***

There are two types of entrepreneurs—the replicative entrepreneur, who creates, owns and operates businesses of more or less conventional types to sustain a growing population, and the innovative entrepreneur, who “create[s] and commercialize[s] new products, services, and business practices.”<sup>1</sup> Both types of entrepreneurship can spur economic growth.

Few resources are used to innovate in replicative entrepreneurship; the entrepreneur simply adopts what has already been invented and utilizes his comparative advantage to improve the production process. This type of entrepreneurship can improve a country’s GDP dramatically when it is in the stage of development in which it relies primarily on manufacturing. However, as the country continues to develop and begins to transition from a manufacturing-based to a services and technology-based economy, simple replication is likely insufficient to increase the country’s GDP. Rather, innovation must take place in order to increase output per person and the overall standard of living.

However, innovators need not be inventors in order to spur economic growth within a developed economy. In fact, innovation can come in a number of forms. For example, the innovative entrepreneur can develop new technologies invented by others, match existing technologies with new business models, or develop methods to improve applications of both new and existing technologies. In these ways, these entrepreneurs further the economic development of the world’s developed economies. As such, this paper will focus on the innovative entrepreneur.

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<sup>1</sup> "The Two Faces of Entrepreneurship, Part 2: Innovative Entrepreneurs Bring New Wealth to the Economy." *Knowledge@W.P. Carey*. 13 Sept. 2003. Web. <<http://knowledge.wpcarey.asu.edu/article.cfm?articleid=1299>>.

### ***Why Study Innovative Entrepreneurship?***

As alluded to above, innovative entrepreneurship can have a considerable effect on the economy of a country. At the aggregate level, it creates new jobs, increases income, and enhances the availability of capital for new investments. At the firm level, innovative entrepreneurship helps firms to produce innovative goods; these firms are more likely to continue to innovate and to implement new technologies and are thus likely to outperform their competitors by means of cost advantages and revenue generation. Finally, at the consumer level, innovation leads to new and improved goods and services and increased standards of living.

Since innovative entrepreneurship plays a monumental role in advancing a nation's economy and in increasing its standard of living, it has warranted a great deal of research in recent years. However, one area of research that has been lacking is the type of education that can spur innovative entrepreneurship and can thus contribute to the success of an economy.

### ***Synopsis of Thesis***

#### ***Hypothesis***

There is reason to believe that education can have a significant impact on the incidence of innovative entrepreneurship in a country. Since innovation, as defined above, requires the use of creativity, application of novel approaches, and willingness to deviate from the status quo, it is plausible that an education that cultivates such practices will in turn cultivate innovative entrepreneurship. This paper will focus on the economies of Israel and China, two modern day economic successes, in order to test the following hypothesis: teaching styles in Israel help to stimulate innovative entrepreneurship, while teaching styles in China impede it.

It is commonly believed, and is a key part of the hypothesis investigated here, that teaching styles in Israel allow students to challenge what is already known and guide them in confronting the unknown. By molding young minds to approach problem solving in this way, students in the classroom and eventually employees in the workplace have both the confidence and will to innovate—to develop new technologies, business models or applications—despite the fact that they may be challenging authority or disrupting the status quo. On the other hand, according to the second component of my hypothesis, Chinese teaching styles discourage these practices. It is often presumed that in China, teaching styles are modeled after Confucius, considered the greatest of all masters. To this day, the Chinese teacher is the supreme power in the classroom, and students are expected to learn what the teacher imparts verbatim. Students are not encouraged to speak their minds or to share differing opinions or approaches, as the teacher bears the knowledge and the student is expected to learn obediently. In turn, the relationship that is cultivated between teachers and students translates into the workplace, where employees do not feel equipped with the tools nor the confidence to challenge the status quo; rather, they expect to learn how to do that which their superiors have already mastered with exquisite care. This tradition, in turn, stifles the free flow of ideas and initiative necessary for innovative entrepreneurship.

This paper will investigate whether these common beliefs about teaching approaches in these two societies hold true, and if they do in fact affect the incidence of innovative entrepreneurship.



### ***Likely Conclusions***

I believe that it is likely that teaching styles in Israeli and Chinese high schools and colleges play a crucial role in shaping employer-employee relationships and thus influence the rate of innovative entrepreneurship. If so, the impact of policies currently in place could be investigated and questioned much more deeply, and policy makers could thereby be helped in designing policies that encourage innovation effectively.

### ***Exploring Israel and China***

#### ***Overview***

My interest in Israel is both personal and intellectual. As the daughter of Israelis and as an Israeli citizen myself, I have deep cultural and religious ties to Israel. On an intellectual level, I have long been fascinated with the mystery of the State of Israel: how can such a young country, one that is constantly forced to focus on defending itself from its neighbors, be so successful in the realm of entrepreneurship and innovation?

On the other hand, China is a country that continues to make headlines as one of the world's most successful emerging markets. However, as I will later indicate, there is evidence to suggest that China is not as successful in the realm of innovative entrepreneurship—especially on a relative basis—as is the State of Israel. As such, China is an ideal basis of comparison with Israel for the purposes of this study.

While there may be a number of attributing factors leading to the differences in the incidence of innovative entrepreneurship, I believe that the differences in teaching styles in Israel and China play a significant role in the observed patterns.

### ***Recent History of Israel***

In recent years, the State of Israel has been recognized for its vibrant entrepreneurial spirit. This spirit has driven much of the success of the Israeli economy, and is consequently envied by developed and developing countries around the globe. Surprisingly, the young State of Israel has been able to enjoy such recognition despite its short, yet tumultuous history.

Following the emergence of political Zionism in the late 19th century and the Balfour Declaration of 1917, the League of Nations gave Britain the “Mandate for Palestine,” granting it the authority to establish a Jewish national homeland. After World War II, the United Nations proposed the partitioning of Palestine into a Jewish state and an Arab state; however, Arab leaders rejected the partition, leading to a civil war. The Jewish community prevailed, reestablishing sovereignty over Israel—its ancient homeland—on May 14, 1948 under the leadership of David Ben Gurion. However, the very next day, the armies of Israel’s Arab neighbors (Egypt, Syria, Jordan, Iraq and Lebanon) invaded the young country, marking the beginning of the War of Independence. This war was the first of four full scale wars fought between Israel and its Arab neighbors; the Sinai War, the Six Day War, and the Yom Kippur War followed within the next 30 years.

Despite its shortcomings—namely its youth and relatively small size—Israel has triumphed over its enemies time and time again. Aside from these full scale wars, conflicts between Israelis and Palestinians are common and frequent as Israel struggles to maintain its independence to this day. Peace—though a constant goal—has yet to be attained. Nevertheless, the Israeli economy is indisputably considered a modern day success story. Israel has the highest density of technology startups worldwide, and is second only to the United States in its number of startup companies in absolute terms. Israeli startups attract more venture capital dollars per

person than any other country, and Israel has more companies listed on the NASDAQ than any other country aside from the United States. More Israeli patents are registered in the United States than those of India, Russia, and China *combined*.

The country's development of software, communications, and life sciences technologies rivals that of the United States' Silicon Valley. Intel and Microsoft built their first international research and development facilities in Israel; IBM, Cisco Systems, and Motorola expanded into Israel as well. Berkshire Hathaway, under the leadership of Warren Buffet, looked to Israel for its first international acquisition, and in 2006 Berkshire Hathaway acquired Iscar for \$4 billion. Furthermore, Israel can lay claim to a number of technologies in use today. These include ICQ (instant messaging), firewall security software, Intel wireless computer chips, and miniature video camera capsules to examine a patient's internal organs. Furthermore, Motorola, the inventor of the cell phone, has its largest R&D facility in Israel. Lastly, much of Windows' NT operating system, voice mail technology, and VOIP technology have its roots in Israel as well.

Given its hardships in the form of a past and present of international warfare and terrorism, what has spurred the wave of innovative entrepreneurship in Israel?

### ***Israel: Population, Government, and Economy***

Today, Israel as a whole is slightly larger than the state of New Jersey and is home to roughly 7.5 million residents. Israel is the 96<sup>th</sup> largest country in the world on the basis of population size. As of 2011, 62% of its population is in the 15-64 age range and the population is estimated to grow at 1.584% per year, the 73<sup>rd</sup> fastest country worldwide.

The State of Israel operates under a parliamentary system and a representative democracy. The Israeli Defense Forces (IDF), comprised of a ground force, air force, and navy,

is considered one of the strongest and most formidable military forces in the world. Israel has historically spent a significant portion of its gross domestic product on its defense initiatives; in 2006, its government spent 7.3% of its GDP on military activities, the 6<sup>th</sup> largest military expenditure in the world. Not surprisingly, the IDF utilize a number of Israeli-developed technologies, including firearms, armored fighting vehicles, unmanned aerial vehicles, and rocketry.

Israel has established itself as a technologically advanced market economy and today is considered one of the most advanced economies in Southwest Asia and the Middle East. Though Israel has few natural resources, it aggressively developed its agricultural and industrial sectors; as of 2010, agriculture comprised 2.4% of its GDP, industry comprised 32.6% of GDP, and services comprised 65% of Israel's GDP. Exports of goods and services make up roughly 40% of Israel's GDP, which grew at about 5% per year from the years of 2004 – 2007. Its primary exports include high- technology equipment, cut diamonds, and agricultural products.

Israel reportedly spends 6.4% of its GDP on education, placing 29<sup>th</sup> in the world as of 2007. In 2004 it was determined that roughly 97.1% of the population was literate, with a school life expectancy of 15 years. In terms of purchasing power parity, Israel currently ranks 51<sup>st</sup> with roughly \$217.1 billion. Its GDP per capita is \$29,500, or 48<sup>th</sup> in the world. About 3.08 million of its total population is currently in the workforce, 82% of whom work in services.<sup>2</sup>

### ***Recent History of China***

For thousands of years, China has been one of the world's most prominent civilizations. Early on, the Chinese were governed by imperial dynasties; these dynasties gave birth to

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<sup>2</sup> "CIA - The World Factbook: Israel." *Central Intelligence Agency*. Web. <<https://www.cia.gov/library/publications/the-world-factbook/geos/is.html>>.

bureaucratic organizations, affording China an advantage of stability and order over its neighbors. Furthermore, a shared culture, the widespread Confucian state ideology, and a common written language all helped the Chinese to unite and to rise above other civilizations. However, recent history tells another tale—China has been plagued by civil instability, military setbacks, famines, and foreign occupation for much of the 19<sup>th</sup> and 20<sup>th</sup> centuries, and has only recently emerged with a flourishing economy.

The last hereditary monarchy, the Qing, ended its reign in 1911; after 6,000 years of rule by dynasties, the Kuomintang (the Chinese Nationalist Party) founded the Republic of China. However, mayhem soon ensued. After two generations of military, social, and economic hardship that resulted from disunity among the Kuomintang and the communists, the communists prevailed and Mao Zedong founded the People's Republic of China on October 1, 1949. Mao then instituted a political and economic order mimicking the Soviet example. The communists gained popularity by curbing inflation and rebuilding the nation's economy.

By 1958, however, Mao abandoned the Soviet model and instituted a new economic program, the "Great Leap Forward," to increase radically the production of industrial and agricultural goods. Despite lofty aims, the results led to extreme famine throughout the country. When Mao's authority was reduced by members of his own party who chose to implement more pragmatic economic policies, Mao retaliated with the "Great Proletarian Cultural Revolution." For the very first time, members of the Chinese Communist leadership group joined forces to oppose another leadership group. The result was a decade of social and political turmoil.

In 1977, Deng Xiaoping succeeded Mao after the former leader's death. Deng prioritized the development of a market economy, and aimed to decrease central planning and to encourage direct investment in China. In turn, output and living standards increased dramatically; though

personal autonomy expanded to a certain degree, political controls remained stringent. Despite issues such as rising inflation and urban migration, Deng's successors remained committed to establishing a market economy in China and in opening the country to foreign trade.

In recent years, the government has vowed to privatize unprofitable state-owned enterprises, to develop a "social safety network" in the form of a pension fund, and to trim government bureaucracy. With the implementation of market-based economic reforms, China has become the world's fastest growing economy and a serious contender to become the world's next superpower. However, its fast rate of economic change has yet to be matched on the political front; the Communist Party still retains authoritarian control over the people of China.

Like Israel, China too is considered a modern day economic success story. Though the country has enjoyed a significant advantage over others for thousands of years, it has only recently reemerged as an economic powerhouse. However, it cannot yet attribute its economic success to innovation and entrepreneurship. What has prevented innovative entrepreneurship from surfacing in China in past years?

### ***China: Population, Government, Economy***

The People's Republic of China is a Communist state, led by the Chinese Communist Party. It is the fourth largest country in the world by total area after Russia, Canada, and the United States. As of 2011, it is the world's most populous country with roughly 1.3 billion people. 73.6% of the population is in the 15-64 age range, with a median age of 34.9. It is expected to grow at a rate of .493% per year, ranking 152<sup>nd</sup> in the world; in fact, China is one of most quickly aging countries.

Since the late 1970s, China has transitioned from a closed, centrally planned economy to a more open, market-oriented system, as described above. In 2010, it became the world's largest exporter and the second largest economy in the world after the United States on a purchasing power parity basis with a GDP of \$9.872 trillion. Its GDP is expected to grow at a remarkable rate of 10.3%, ranking 7<sup>th</sup> in the world. However, as of 2010 its GDP per capita was \$7,400, 126<sup>th</sup> in comparison to the rest of the world. Its GDP is comprised of 9.6% agriculture, 46.8% industry, and 43.6% services. China exports more in terms of dollar value in agricultural and industrial output than the United States, and is second to the United States in terms of services produced.

China's market value of publicly traded stocks is \$8.156 trillion, or 4<sup>th</sup> in the world. 91.6% of the population is said to be literate as of 2007, with a school life expectancy of 12 years. 780 million of China's citizens are in the workforce, ranking 1<sup>st</sup> in the world, and there is a roughly equal distribution of its labor force among agriculture, industries, and services.<sup>3</sup>

### ***Comparing Israel and China: Global Competitiveness Report***

Exploring the metrics used in the Global Competitiveness Report is a useful tool in further validating my interest in focusing on the economies of Israel and China. The Global Competitiveness Report, a yearly report published by the World Economic Forum, produces competitiveness rankings based on the Global Competitiveness Index (GCI). Additionally, the report features detailed profiles for each of the economies included in the study as well as data tables which rank these economies on over 100 indicators, providing a reliable indication of the competitive landscape of those countries. The Global Competitiveness Report thus elucidates

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<sup>3</sup> "CIA - The World Factbook: China." *Central Intelligence Agency*. Web. <<https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html>>.

key factors that influence economic growth and offers policymakers an important metric against which to judge the effectiveness of current policies as well as a tool to sway future policies.

In this context, competitiveness is defined as “the set of institutions, policies, and factors that determine the level of productivity in a country.”<sup>4</sup> The level of productivity in turn determines an economy’s level of prosperity, as more competitive economies yield higher incomes and higher returns on investments for their citizens. The Global Competitiveness Index lists twelve pillars which help to determine productivity, including: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. Together these pillars help to determine the competitiveness of a given economy, as these twelve categories are often interrelated and interdependent.

Each pillar will have an impact on a given economy; however, some pillars will affect certain economies in different ways than they will others. Factor driven economies, for example, tend to compete on factor endowments, relying on the legitimacy of public and private institutions, a reliable infrastructure, a secure macro-economic environment, and a strong work force. Efficiency driven economies compete by improving production processes and the quality of goods; thus, competitiveness is determined by higher education and training, well-developed labor markets, advanced financial markets, the ability to utilize existing technologies, and a large domestic or foreign market to which to cater. Lastly, economies that are innovation driven compete by producing novel goods and by utilizing superior production processes; these economies rely on business sophistication and on innovation.

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<sup>4</sup> Schwab, Klaus. *The Global Competitiveness Report 2007–2008*. Rep. Print.



In examining the 2007 – 2008 Global Competitiveness Report,<sup>5</sup> differences between the competitive landscape of Israel and China become evident. China is labeled a transition economy, transitioning from the factor driven (stage 1) to the efficiency driven (stage 2) stage of development.<sup>6</sup> Israel, on the other hand, is classified as an innovation driven (stage 3) economy. This is determined by each country's GDP per capita, a common proxy for wages, as well as the extent to which each country is factor driven (the country's proportion of mineral goods in the total exports of goods and services is used as a proxy for the latter measure). The income threshold for a transition economy from stage 1 to stage 2 is a GDP per capita of \$2,000 to \$3,000 in U.S. dollars; the income threshold for stage 3 of development is a GDP per capita of \$17,000 in U.S dollars.

In the Global Competitiveness Index for 2007 – 2008, Israel ranked #17 in the world, with a score of 5.20. China, on the other hand, ranked #34, with a score of 4.57. In total, 131 countries were included in the report, with a high score of 5.67 and a low score of 2.78. In evaluating these rankings and scores, it is important to keep each country's profile as described above in mind; though the discrepancy between the competitiveness of Israel and China does not seem colossal when taken at face value, the difference is quite large when factors such as population size and history are taken into account.

There is a clear pattern that becomes evident when looking at the GCI rankings by sub-index, the 12 pillars as they are divided into basic requirements, efficiency enhancers, and innovation and sophistication factors. Israel ranks 30<sup>th</sup> for basic requirements with a score of 5.22, 16<sup>th</sup> for efficiency enhancers with a score of 5.10, and 9<sup>th</sup> for innovation and sophistication

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<sup>5</sup> I chose to use the statistics and rankings of the 2007 – 2008 Report, which rely on metrics measured in 2007. In this way, the recent global economic crisis will not be a factor in the rankings of these respective economies. Rather, I can compare each country's "true" level of competitiveness.

<sup>6</sup> The most recent Global Competitiveness Report classifies China as an efficiency driven economy (stage 2). However, the following discussion will refer to China as an economy in transition.

factors with a score of 5.35. China, on the other hand, ranks 44<sup>th</sup> for basic requirements with a score of 4.8, 45<sup>th</sup> for efficiency enhancers with a score of 4.26, and 50<sup>th</sup> for innovation and sophistication factors with a score of 3.89. Here, the advanced status of the State of Israel as compared to China becomes clear; Israel scores most impressively on the innovation and sophistication factors, followed by efficiency enhancers and basic requirements. In contrast, China is *relatively* more advanced in terms of its basic requirements, and relatively less advanced in terms of its efficiency enhancers and innovation and sophistication factors.

The Global Competitiveness Report also breaks down the GCI rankings by individual pillar.

	<i>Israel</i>		<i>China</i>	
<i>Pillar</i>	<b>Rank</b>	<b>Score</b>	<b>Rank</b>	<b>Score</b>
<b>Institutions</b>	28	4.83	77	3.71
<b>Infrastructure</b>	28	4.81	52	3.97
<b>Macroeconomic Stability</b>	61	4.93	7	6.03
<b>Health and Primary Education</b>	11	6.32	61	5.49
<b>Higher Education and Training</b>	19	5.36	78	3.77
<b>Goods Market Efficiency</b>	25	5.00	58	4.26
<b>Labor Markets Efficiency</b>	12	5.01	55	4.40
<b>Financial Market Sophistication</b>	10	5.72	118	3.35
<b>Technological Readiness</b>	14	5.29	73	3.00
<b>Market Size</b>	44	4.21	2	6.80
<b>Business Sophistication</b>	19	5.13	57	4.18
<b>Innovation</b>	5	5.57	38	3.60

As shown in the in the table above and as explained in the report, China's competitive advantage is rooted in its domestic and foreign market size which enable its firms to enjoy

economies of scale. Furthermore, it ranks highly on the pillar of macroeconomic stability as a result of reasonable levels of government debt, high savings rates, and low inflation rates. Most notably, however, China ranks poorly on the institutions, higher education and training, and financial market sophistication pillars—three factors that can all help to explain lower instances of innovative entrepreneurship in China. For example, transparency of government policymaking, unsatisfactory investor protections, inadequate accounting standards, and unethical behavior can all impede productive entrepreneurship. Furthermore, poor enrollment in higher education can be a hindering factor in developing the talent necessary to innovate. Lastly, difficulty in attaining capital, poor regulation of security exchanges, and unreliability of banks can prevent an entrepreneur from obtaining the means to innovate.

Also shown in the table above are Israel's superior rankings. In fact, Israel is the forerunner among North African and Middle Eastern countries according to its GCI rankings. Specifically, it ranked remarkably well for innovative capacity and technological readiness. One of its competitive advantages clearly lies in its quality of primary and higher education; as such, the country benefits from a large pool of highly skilled labor. Israel ranked 3<sup>rd</sup> in the world for availability of scientists and engineers, as well as for the quality of its research institutions, both of which factor into the education pillars listed above. Undoubtedly, this pool of labor plays an instrumental role in developing innovative technologies. Furthermore, Israel's well-functioning financial market ensures that capital is available for innovation and business development.

Examination of some of the more relevant pillars for this paper makes the discrepancy between Israel and China even more apparent. Below are four GCI pillars, with a selection of the factors that are taken into account when determining each country's performance on that pillar.

		Israel		China		
		Rank	Score	Rank	Score	Mean Score
<b>Financial Market Sophistication</b>	Ease of access to loans: how easy is it to obtain a bank loan in your country with only a good business plan and no collateral? (1 – impossible; 7 – easy)	21	4.5	100	2.6	3.4
	VC availability: entrepreneurs with innovative but risky projects can generally find venture capital in your country (1 – not true; 7 – true)	5	5.2	71	3.0	3.3
	Restriction on capital flows: flow of capital into and out of your country is 1 - restricted, 7 – not restricted	25	6.0	114	3.5	4.9
	Strength of investor protection on 0-10 scale (hard data)	5	8.3	65	5.0	n/a
<b>Technological Readiness</b>	Availability of latest technology: latest technology are 1 – not widely available and used, 7 – widely available and used	4	6.4	79	3.9	4.3
	Companies in your country are 1 – not able to absorb new technology, 7 – aggressive in absorbing new technology	5	6.1	50	5.0	4.7
	Foreign direct investment in your country 1 – brings little new technology, 7 – is an important source of new technology	11	5.6	90	4.5	4.8
	Prevalence of foreign technology licensing (1 – uncommon; 7 – a common mean of acquiring new technology)	14	5.6	89	4.0	4.4
<b>Business Sophistication</b>	State of cluster development: strong and deep clusters are widespread throughout the country	28	4.3	29	4.3	3.6
	Nature of competitive advantage: competitiveness of your country's companies in international markets is primarily due to 1 – low cost or local natural resources, 7 – unique products and processes	12	5.6	80	3.3	3.7
	Production processes sophistication: use of 1 – labor intensive methods or previous generations of process technologies, or 7 – world's best and most efficient process technologies	18	5.3	81	3.3	3.8
	Willingness to delegate authority to subordinates is 1 – low, top management controls all important decisions, or 7 – high, authority is mostly delegated to business unit heads and other lower level managers	22	4.9	72	3.8	3.9

<b>Innovation</b>	Capacity for innovation: companies obtain technology 1 – exclusively from licensing or imitating foreign companies; 7 – by conducting formal research and pioneering their own new products and processes	10	5.4	34	3.8	3.4
	Quality of scientific research institutions: university laboratories, government laboratories are 1 – nonexistent, 7 – the best in their fields internationally	3	6.0	56	4.0	3.9
	Country spending on R&D: companies in your country 1 – do not spend money on R&D, 7 – spend heavily on R&D relative to international peers	7	5.5	32	3.9	3.4
	University industry research collaboration: in R&D activity, business collaboration with local universities is 1 – minimal/ nonexistent , 7 – intensive/ ongoing	8	5.2	25	4.1	3.3
	Government procurement of advanced tech products: government purchase decision for the procurement of advanced technology products are 1 – based solely on price, 7 – based on technical performance and innovativeness	7	4.8	23	4.3	3.7
	Availability of scientists and engineers	3	5.9	78	4.2	4.3
	Number of utility patents (i.e. patents for invention) granted between 1/1 and 12/31 [2006] per million population (hard data)	5	179.1 <sup>7</sup>	59	.5 <sup>8</sup>	n/a

As shown in the table above, Israel consistently ranks and scores higher than China on nearly every criterion, most often in a significant manner. Despite Israel’s youth, small size, and conflicts with its neighbors, it continuously outperforms the soon-to-be superpower that is modern day China. In fact, China scores *below average* on nearly every factor listed above—factors which are arguably necessary to breed innovation and entrepreneurship. One striking difference is in the number of patents for invention, a plausible proxy for innovative

<sup>7</sup> Absolute number; does not refer to rank

<sup>8</sup> Absolute number; does not refer to rank

entrepreneurship; Israel outperforms China by roughly 360 times, despite the fact that its population is a mere fraction of China's vast population. While there are a number of explanations for this statistic, including each country's set of intellectual property rights, it is highly probable that other factors—such as teaching styles—play a significant role as well.

Israel is well positioned to foster innovative entrepreneurship. From a financial markets standpoint, it is possible—if not relatively easy—to obtain a loan merely on the basis of a good business plan; without the need for collateral, many more new ventures are willing and able to take off. Furthermore, venture capital is generally available to fund new entrepreneurial ventures, flows of capital into and out of the country are relatively unrestricted, and investors have a strong incentive to invest as they are effectively protected. From a technological standpoint, companies in Israel are aggressive in absorbing new technology and foreigners are willing to invest in Israel and feel secured and protected enough to bring new technology into the country.<sup>9</sup> From a business sophistication standpoint, Israel competes on the basis of the uniqueness of its products and processes and utilizes only the most advanced technology to do so. In addition, Israeli superiors are willing to delegate to their subordinates; as we will later explore, such behavior may develop the entrepreneurial spirit of employees and help lead to instances of innovation as well. Finally, from an innovation standpoint, Israel is well positioned in that its companies work to develop and pioneer their own technologies and products, spend heavily on research and development, and work closely with local universities. Furthermore, the government is willing to invest in the most sophisticated technologies as well as in the education system; as a result, the quality of scientists and researchers is among the best in the world.

The facts and figures above are intended to reveal some elements leading to differences in patterns of innovative entrepreneurship in Israel and China, and to offer a number of possible

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<sup>9</sup> This is further corroborated by the facts and figures listed in the “Recent History of Israel” section.

explanations for the discrepancy. The rest of this paper is dedicated to exploring yet another explanation for the patent difference: teaching styles.

### ***Related Research***<sup>10</sup>

Before exploring my research for the purposes of this study, it is helpful to examine several studies relevant to this paper. These studies span topics such as culture, teaching styles, work values, and entrepreneurship, and will further help to profile Israel and China.

### ***Model of Dimensions of National Culture***

Geert Hofstede, a Dutch social psychologist known for his studies of the cultures of nations, defined culture as “the collective programming of the mind distinguishing the members of one group or category of people from another.”<sup>11</sup> His research suggests that national cultures vary as a result of unconscious values, or “broad preferences for one state of affairs over others,”<sup>12</sup> held by a majority of the population. Such values remain consistent over time and display extraordinary historical continuity as they are adopted by members of each nation during childhood; thus, changing a nation’s values is a process that can take many generations to complete.

Hofstede’s research divides distinguishing values of nations into four groups: power distance, uncertainty avoidance, individualism, and masculinity. In his most recent study of nations in 2010, Hofstede listed the relative scores for 76 countries worldwide, including both

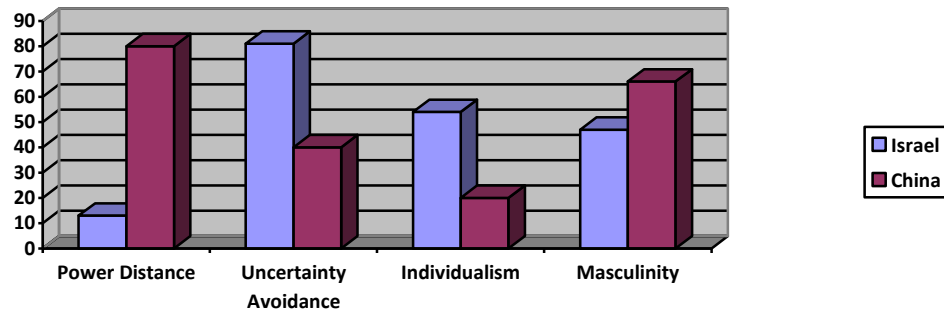
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<sup>10</sup> The synopsis of related research included in this section outlines just a sample of studies on which I based my hypothesis and conclusions. For additional related research, please see the appendix.

<sup>11</sup> "Geert Hofstede | Culture." *Geert Hofstede*. Web. <<http://www.geerthofstede.nl/culture.aspx>>.

<sup>12</sup> *Ibid*.

China and Israel. The following chart depicts each country's score on each of the four dimensions.



Hofstede's first dimension, power distance (PDI), refers to the "extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally."<sup>13</sup> China was associated with a very high score of 80, while Israel was granted a very low score of 13 in this index. In fact, only Austria was given a score (11) lower than that of Israel. Among the four dimensions in Hofstede's study, the difference between the PDI of China and Israel is most pronounced. Given China's history of centralized government in contrast to Israel's democracy, this difference seems plausible. Furthermore, the difference in power both accepted and expected in China is a very credible explanation for the relative lack of innovative entrepreneurship in the country; if students are always expected to defer to teachers and subordinates are always expected to defer to superiors in the workplace, the former may never be afforded the opportunity to voice conflicting opinions nor to share innovative solutions. In Israel, on the other hand, where less powerful members of society do not accept nor expect such an unequal distribution of power, students and employees may feel more empowered to push

<sup>13</sup> Hofstede, Geert, and Gert J. Hofstede. "Dimensions of National Cultures." *Geert Hofstede*. Web. <<http://www.geerthofstede.nl/culture/dimensions-of-national-cultures.aspx>>.



boundaries and to challenge authority, thus leading to higher instances of innovation and entrepreneurship.

The second dimension, uncertainty avoidance (UAI), denotes “to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations,”<sup>14</sup> including those that are new, different, or unexpected. Countries with cultures that tend to avoid such uncertainty do so by means of laws, rules, and security measures; on the other hand, cultures that embrace such uncertainty are more accepting of opinions different from the norm and have as few regulations as possible. While Israel scores relatively high on this index with a score of 81, China scores relatively low with a score of 40. The relative scores of China and Israel on the UAI are quite surprising. A possible explanation for Israel’s high score on this scale is the fact that it is a relatively new country; in its recent history, it has looked to lay down rules and regulations in order to establish order. Alternatively, given Israel’s lack of stability in its relationships with its neighbors as well as its constant fear of terrorism, the country may avoid uncertainty in order to protect the security of its people. On the other hand, despite China’s centralized government, China’s score is indeed reflective of its history; China was historically “governed by men rather than by laws,”<sup>15</sup> which could possibly explain its relatively low score on the UAI.

The third dimension, individualism, measures the “degree to which individuals are integrated into groups.”<sup>16</sup> Individualistic cultures expect members of societies to care only for themselves and for their immediate families, while we find deep-seated ties between members of society (often to extended family members) in collectivistic cultures. China received a score of 20 on this index, denoting that it has a highly collectivistic culture, while Israel was granted a

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<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

score of 54, indicating its relatively high position on the individualism scale. Once again, this pronounced difference between the cultures of China and Israel can be utilized to explain in-part the differences between differing levels of innovative entrepreneurship. An environment in which each individual is expected to look out for his or her own welfare undoubtedly breeds more competition, and arguably more novel products and/or ideas; as one tries to outsmart his neighbor, he pushes himself to do better and to triumph over what has been already conceived of in the past. On the other hand, a country whose culture emphasizes the importance of looking out for the welfare of others possibly breeds less of the motivation and drive necessary for innovative entrepreneurship.

The final dimension, masculinity, refers to the level of masculine traits found within a society; these qualities include “assertiveness, materialism/material success, self-centeredness, power, strength, and individual achievements.”<sup>17</sup> China proved to be a more masculine culture with a score of 66, while Israel scored lower on this index with a score of 47. China’s high level of masculinity seems plausible given the culture’s history of assigning traditional roles to men, the patriarchs of the family. In contrast, women in Israel sometimes fill traditionally male roles; for example, women serve in the military alongside their male counterparts. However, it is worth noting that Israel did not receive a low score on this scale, but rather received an average rating; the country has satisfactory levels of the masculine attributes that are arguably necessary for innovative entrepreneurship—such as assertiveness and need for individual achievements—despite the fact that it did not score as high on this index.

Clearly, the scores that China and Israel earned in Hofstede’s model of dimensions of national culture can play an important role in assessing the relevant differences of each country’s respective cultures. However, it is important to note that these four indexes take into account a

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<sup>17</sup>Ibid.

number of different factors (some of which may be unrelated to this paper), thus unjustly skewing some of the scores away from what was expected and away from the hypotheses of this paper.

### ***Cultural Differences in Teaching and Learning***

Hofstede defined the relationship between student and teacher as an archetypal role pair in society. He notes that the family, school, job, and community are “four fundamental institutions, present in some way in virtually all human societies.”<sup>18</sup> Role patterns within these four institutions relate to one another; for instance, relationships between parents and children in a society relate to those between teachers and students and, later, between superiors and subordinates in the workplace. These patterns, according to Hofstede, are the product of the culture within a society.

Hofstede’s academic paper, “Cultural Differences in Teaching and Learning” explores some of the differences in student-teacher relationships among different cultures. One fundamental difference is the variability of the social positions of teachers and students within a society. For example, in the case of Chinese culture, one noteworthy distinguishing factor is the fact that teaching is the most esteemed profession of the Confucian tradition; however, it can be argued that it is not so in Western cultures. Another significant difference can manifest itself in the variation among cognitive abilities. According to Hofstede, cognitive development can be linked to the demands of the particular environment, as an individual develops skills that help him to achieve what is important to him and what he has the opportunity to do regularly. For

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<sup>18</sup> Hofstede, Geert. "Cultural Differences in Teaching and Learning." *International Journal of Intercultural Relations* 10 (1986): 301-20. Print.

instance, the nature of the script in China helps Chinese children to cultivate pattern recognition skills and necessitates a system of memorization by repetition in Chinese culture.

Last, and perhaps most important, differences in role expectations between teacher and student affect the process of teaching (more so than the content). These differences are rooted in differences between the expectations of archetypal roles between teacher and student, as guided by differences in cultures. Hofstede relies on the four dimensions described earlier (individualism, power distance, uncertainty avoidance and masculinity) to characterize differences in teacher-student and student-student interactions. More specifically, the differences resulting from the individualism and power distance dimensions as they relate to Israel and China can prove very useful in describing differences between teaching styles within the two countries, and ultimately, in resulting innovative entrepreneurship patterns.

As shown in the table below, there are a number of differences in teacher-student relationships between collectivistic and individualistic cultures.

**TABLE 3**

**Differences in Teacher/Student and Student/Student Interaction  
Related to the Individualism versus Collectivism Dimension**

COLLECTIVIST SOCIETIES	INDIVIDUALIST SOCIETIES
<ul style="list-style-type: none"> <li>• positive association in society with whatever is rooted in tradition<sup>1</sup></li> <li>• the young should learn; adults cannot accept student role<sup>2</sup></li> <li>• students expect to learn how to do</li> <li>• individual students will only speak up in class when called upon personally by the teacher</li> <li>• individuals will only speak up in small groups<sup>3</sup></li> <li>• large classes split socially into smaller, cohesive subgroups based on particularist criteria (e.g. ethnic affiliation)</li> <li>• formal harmony in learning situations should be maintained at all times (T-groups are taboo)<sup>4</sup></li> <li>• neither the teacher nor any student should ever be made to lose face</li> <li>• education is a way of gaining prestige in one's social environment and of joining a higher status group ("a ticket to a ride")</li> <li>• diploma certificates are important and displayed on walls</li> <li>• acquiring certificates, even through illegal means (cheating, corruption) is more important than acquiring competence</li> <li>• teachers are expected to give preferential treatment to some students (e.g. based on ethnic affiliation or on recommendation by an influential person)</li> </ul>	<ul style="list-style-type: none"> <li>• positive association in society with whatever is "new"</li> <li>• one is never too old to learn; "permanent education"</li> <li>• students expect to learn how to learn</li> <li>• individual students will speak up in class in response to a general invitation by the teacher</li> <li>• individuals will speak up in large groups</li> <li>• subgroupings in class vary from one situation to the next based on universalist criteria (e.g. the task "at hand")</li> <li>• confrontation in learning situations can be salutary; conflicts can be brought into the open</li> <li>• face-consciousness is weak</li> <li>• education is a way of improving one's economic worth and self-respect based on ability and competence</li> <li>• diploma certificates have little symbolic value</li> <li>• acquiring competence is more important than acquiring certificates</li> <li>• teachers are expected to be strictly impartial</li> </ul>

As previously mentioned, there is a pronounced difference between Israel and China on Hofstede's individualism scale; while Israel is highly individualistic, China is strongly collectivistic. Not surprisingly, many of the characteristics of collectivist societies listed above can be said to stifle innovation—or at the very least, can be said not to encourage innovation. Teaching styles in collectivist cultures such as China value “what is rooted in tradition,” and dictate that “the young should only learn from others.” If tradition is so highly valued, it would follow that innovative entrepreneurship—which breaks with tradition and challenges what is already known—is to be shunned, or is questionable at best; furthermore, the young are not expected to add to the discussion in the classroom but rather to listen and absorb what is being taught. This notion of passive learning is reinforced by the fact that students in collectivistic cultures will only “speak up in class when called upon personally by the teacher” and “only...in small groups.” In other words, if a student cannot propose a novel idea or a better solution unless specifically asked to do so by his teacher, the free-flow of ideas that is often necessary to the creative process that spurs entrepreneurship is undoubtedly restrained.

On the other hand, many of the teaching styles found in individualistic societies such as Israel help to breed innovation. As shown above, there is a “positive association in society with whatever is ‘new’.” Students in these cultures are expected to “learn how to learn,” instead of merely learning “how to do,” suggesting that these students are instructed in the process of learning itself and do not rely *solely* on the knowledge and guidance of the teacher. Individuals in cultures such as Israel's are encouraged to speak up in class, and before large groups; in fact, “confrontation in learning situations can be salutary...[and] conflicts can be brought into the open.” Challenging what is being taught and what is already known is a fundamental step in the process of innovation; it is therefore no surprise that societies that encourage out of the box

thinking and the opportunity to voice contrary opinions also exhibit higher levels of innovative entrepreneurship.

Among Hofstede's four dimensions, the difference between Israel and China's relative ranking on the power distance dimension was most prominent; China is a large power distance society, while Israel is a small power distance society. It is clear from the table below that small power distance societies possess characteristics that encourage innovation, while societies with large power distances have traits that can suppress innovation.

**TABLE 4**  
**Differences in Teacher/Student and Student/Student Interaction**  
**Related to the Power Distance Dimension**

SMALL POWER DISTANCE SOCIETIES	LARGE POWER DISTANCE SOCIETIES
<ul style="list-style-type: none"> <li>• stress on impersonal "truth" which can in principle be obtained from any competent person</li> <li>• a teacher should respect the independence of his/her students</li> <li>• student-centered education (premium on initiative)</li> <li>• teacher expects students to initiate communication</li> <li>• teacher expects students to find their own paths</li> <li>• students may speak up spontaneously in class</li> <li>• students allowed to contradict or criticize teacher</li> <li>• effectiveness of learning related to amount of two-way communication in class<sup>3</sup></li> <li>• outside class, teachers are treated as equals</li> <li>• in teacher/student conflicts, parents are expected to side with the student</li> <li>• younger teachers are more liked than older teachers</li> </ul>	<ul style="list-style-type: none"> <li>• stress on personal "wisdom" which is transferred in the relationship with a particular teacher (guru)</li> <li>• a teacher merits the respect of his/her students<sup>1</sup></li> <li>• teacher-centered education (premium on order)</li> <li>• students expect teacher to initiate communication</li> <li>• students expect teacher to outline paths to follow</li> <li>• students speak up in class only when invited by the teacher</li> <li>• teacher is never contradicted nor publicly criticized<sup>2</sup></li> <li>• effectiveness of learning related to excellence of the teacher</li> <li>• respect for teachers is also shown outside class</li> <li>• in teacher/student conflicts, parents are expected to side with the teacher</li> <li>• older teachers are more respected than younger teachers</li> </ul>

For example, in small power distance societies such as Israel, teachers "expect students to find their own paths," and students are "allowed to contradict or criticize the teacher." Teachers who encourage their students to challenge them help breed a sense of openness and creativity in the classroom in which students are not afraid to voice their own opinions or offer pioneering ways of thinking. In fact, "effectiveness of learning [is] related to [the] amount of two-way communication in class," suggesting that small power distance societies emphasize the

importance of dialogue in the learning process. In that way, these societies can “stress... impersonal ‘truth’ which, in principle, can be obtained from any competent person.” In other words, students can learn from one another and do not have to rely solely on the information provided by the teacher. Once again, this reinforces a sense of unrestricted dialogue which can help to promote the birth of new ideas and solutions without fear of repercussions.

On the other hand, large power distance societies such as China “stress...personal ‘wisdom’ which is transferred in the relationship with a particular teacher.” Only the teacher in a Chinese classroom possesses the knowledge, deterring students from speaking their minds or from conversing freely with one another, certainly stifling potential ingenuity. This phenomenon is only strengthened by the fact that “students expect [the] teacher to outline paths to follow,” the “teacher is never contradicted nor publicly criticized,” and “the effectiveness of learning [is] related to the excellence of the teacher.” When students are trained solely to listen, memorize, and regurgitate what is already known, and when they are prevented from speaking their minds and are discouraged from bringing new ideas to light, their teachers are preventing necessary tools for innovation from flourishing. It is therefore no surprise that there are relatively fewer instances of innovative entrepreneurship in countries such as China as compared to countries such as Israel.

As noted by Hofstede, these relationships translate from one archetypal role pair to another. Students who are trained a certain way in the classroom will undoubtedly perform a certain way in the workplace, corresponding to their past relationships with their superiors—their teachers. It would then follow that students from collectivistic and large power distance societies will exhibit less innovation in the workplace than their counterparts from individualistic and

small power distance societies. In fact, this is the exact pattern that can be observed between Israel and China.

## ***Primary Research***

### ***Introduction***

I conducted primary research in the form of a questionnaire in order to test my hypothesis. I administered the questionnaire to individuals who attended high school in Israel and others who attended high school in China. A number of the Israeli respondents attended university in Israel as well, and the resulting data allowed for a comparison of teaching styles in high schools and universities in Israel.

As expected, I received a relatively low response rate, as is typical for these types of studies. Given the small sample size, there is no guarantee that these findings are representative of Israeli and Chinese society, respectively. However, despite the fact that I was not able to attain an overwhelming number of responses, the aggregate statistics that I obtained are clearly suggestive; if I were to attain similar results with a more significant response rate, a number of noteworthy conclusions could have been drawn.

### ***Questionnaire***

The questionnaire (shown below) asked a total of 26 questions.

- Four basic questions for identification purposes;
- Four questions to classify the type of high school that the individual attended;
- Six questions to quantify the attributes of teaching styles in that high school, measured on a scale of 1 – 7 (1 being the least and 7 being the most);



- Four questions to classify the type of university that the individual attended;
- Six questions to quantify the attributes of teaching styles in that university, measured on a scale of 1 – 7 (1 being the least and 7 being the most);
- Two open-ended questions designed to bring traditional views of Israeli and Chinese teachers to light.

### *Questionnaire*

#### *All Respondents:*

1. What is your name?
2. What is your age?
3. What is your gender? (Male or Female)
4. What is your origin?
5. In what country did you attend high school?
6. Did you attend high school in your home country?
  - a. If not, why not?
7. Did you attend a public school or a private school?
8. In what year did you graduate high school?
9. How would you rate your teachers on the following scales? (1 being the least, 7 being the most)
  - a. Commanding discipline in the classroom
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  - b. Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  - c. Demanding exact repetition of what was taught
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  - d. Encouraging new ways of thinking in order to solve questions
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  - e. Encouraging discussion in the classroom
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---
  - f. Openness to receiving feedback
 

1	2	3	4	5	6	7
---	---	---	---	---	---	---

*If applicable, answer these questions:  
(If not, skip to question #15)*

10. In what country did you attend university?
11. Did you attend university in your home country?
- If not, why not?
12. Did you attend a public school or a private school?
13. In what year did you graduate university?
14. How would you rate your teachers on the following scales? (1 being the least, 7 being the most)
- Commanding discipline in the classroom  
1      2      3      4      5      6      7
  - Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)  
1      2      3      4      5      6      7
  - Demanding exact repetition of what was taught  
1      2      3      4      5      6      7
  - Encouraging new ways of thinking in order to solve questions  
1      2      3      4      5      6      7
  - Encouraging discussion in the classroom  
1      2      3      4      5      6      7
  - Openness to receiving feedback  
1      2      3      4      5      6      7

*All Respondents:*

15. What adjectives come to mind when you think of Chinese teachers?
16. What adjectives come to mind when you think of Israeli teachers?

***Respondents***

The data below include responses from 23 Israeli participants (14 male, 9 female) and 25 Chinese participants (14 male, 11 female). The mean and median ages of Israeli participants were 30.3 and 29, respectively; the mean and median ages of Chinese respondents were 20.4 and 20, respectively. Though there is a relatively large discrepancy in age between the two groups of participants, all of the individuals surveyed are members of Generation Y, conventionally thought of as being born between 1979 and 1994. Thus, generational differences in perceptions

of teaching styles as well as expectations in the classroom should not factor into the results of the survey.

Of Israeli participants, 21 attended high school in Israel (12 male, 9 female); 20 attended public high schools and 1 attended a private high school. A total of 19 respondents (11 male, 8 female) attended university in Israel as well, of which 12 attended public universities and 7 attended private universities.

Of Chinese participants, all 25 attended high school in China; 12 attended public high schools and 13 attended private high schools. 12 of the 13 participants who attended private high schools in China attended international schools. 2 of the Chinese respondents attended university in China as well; however, given the insignificance of the sample size of Chinese university students, I have not included data on teaching styles in Chinese universities in my analysis.

### ***Analysis: Israel***

The table below represents a summary of data from Israeli respondents. The numerical responses represent a mathematical mean<sup>19</sup> of responses. For all metrics aside from age and year of graduation, a scale from 1 – 7 was used to represent the range of responses from “the least” to the “the most,” respectively.

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<sup>19</sup> I chose to rely on the mean of respondents’ results as opposed to the median. While the median is often used since it excludes extreme results that can skew the statistic, I found the mean to be a more meaningful statistic in this scenario; given that the scale (from 1 – 7) on which respondents measured their responses was relatively narrow, slight differences in decimal points could potentially have a significant impact on the comparison of average responses. In contrast, the median can only produce whole numbers, thus potentially concealing small but noteworthy differences in responses among differing groups.

*Israel: High Schools vs. Universities*

<b>Metric</b>	<b>High School in Israel</b>	<b>University in Israel</b>
<b>Age</b>	28.7	30.4
<b>Year of Graduation</b>	1999	2006
<b>Commanding discipline in the classroom</b>	4.4	4.6
<b>Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)</b>	5.4	5.5
<b>Demanding exact repetition of what was taught</b>	4.7	4.7
<b>Encouraging new ways of thinking in order to solve questions</b>	4.2	5.5
<b>Encouraging discussion in the classroom</b>	5.0	5.1
<b>Openness to receiving feedback</b>	3.6	4.0

In analyzing the data from the Israeli respondents who attended high school in Israel, a number of observations are worth noting. If it is assumed that any responses in the “4” range are neutral territory, only three metrics showed either relatively positive or relatively negative results: “allowing students to question what was taught,” “encouraging discussion in the classroom,” and “openness to receiving feedback.” Based on the numerical responses, students in Israeli high schools felt that they were permitted to challenge what was said in the classroom and to discuss differing ideas or theories in order to arrive at conclusions. However, these students did not believe that their teachers were very receptive to receiving feedback.

On the other hand, Israeli respondents who attended university in Israel responded in a slightly different manner. These students also believed that their teachers allowed them to question what was taught and encouraged discussion in the classroom, but further believed that their teachers encouraged new approaches to problem solving as well. Furthermore, they scored their teachers neutrally on the basis of openness to receiving feedback.

Thus, in both Israeli high schools and universities, there seems to be a sense of freedom in voicing opinions and in coming up with new and better solutions to problems. The difference between Israeli high schools and universities is most pronounced on the line item of “encouraging new ways of thinking in order to solve questions.” However, these results are not surprising as it is universally accepted that a high school education provides students with a foundation, teaching students *how to learn* as well as the very basics on which to build in the future; university, on the other hand, is traditionally thought of as an opportunity for students to expand their knowledge base, leave their comfort zone, and come up with new ways of thinking about issues.

*Israel: Male vs. Female (in High School)*

<b>Metric</b>	<b>Male (High School)</b>	<b>Female (High School)</b>
<b>Commanding discipline in the classroom</b>	4.6	4.2
<b>Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)</b>	5.3	5.7
<b>Demanding exact repetition of what was taught</b>	4.7	4.7
<b>Encouraging new ways of thinking in order to solve questions</b>	4.3	4.1
<b>Encouraging discussion in the classroom</b>	4.8	5.1
<b>Openness to receiving feedback</b>	3.8	3.4

In analyzing the data above, I looked to see if there were any measurable differences in observations between males and females. In high school, results among males and females were roughly equivalent across all metrics. However, small differences were observed; for example, males perceived their teachers to command more discipline in the classroom and to encourage new ways of thinking in order to solve questions, more so than their female counterparts.

Females, on the other hand, perceived their teachers to allow more questioning of what was taught and to encourage more discussion in the classroom. This may be due to a number of factors, including wording of the questionnaire as well as the fact that men and women simply perceive actions of others differently, thus impacting the way they would rate their teachers.

*Israel: Male vs. Female (in University)*

<b>Metric</b>	<b>Male (University)</b>	<b>Female (University)</b>
<b>Commanding discipline in the classroom</b>	4.3	5.1
<b>Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)</b>	5.5	5.6
<b>Demanding exact repetition of what was taught</b>	4.5	5.0
<b>Encouraging new ways of thinking in order to solve questions</b>	5.0	6.1
<b>Encouraging discussion in the classroom</b>	5.1	5.0
<b>Openness to receiving feedback</b>	4.3	3.6

However, as with the gender-neutral analysis, there is a more prominent difference in the responses among males and females on the university level. Females who attended university in Israel felt that their teachers demanded more discipline in the classroom and encouraged new ways of thinking in order to solve questions, more so than their male counterparts did. However, they also felt that their teachers demanded more repetition of what was taught. These data are surprising given the fact that they scored their teachers relatively highly on the metric of allowing to question what was taught *and* demanding repetition. It would seem that students who believed that their teachers allowed them to challenge the teacher would not feel that their teachers demanded exact repetition of what was taught; for example, if a student felt that he was

able to share differing opinions in class, it would logically follow that he would not feel as though he was expected to simply memorize the teacher's opinion.

It is also worthwhile to note the differences between males in high school and in college, and similarly between females in high school and in college. Both sexes felt that college invited more new ideas and approaches. Males believed that they were encouraged to go-about finding solutions to problems in different ways in college much more so than they did in high school. As stated above, given the universal role that a high school education plays in an individual's schooling, this result is not surprising. Furthermore, males believed that their teachers were more open to receiving feedback at the university level.

Females also believed that their teachers encouraged new ways of going about solutions to problems, more so in university than in high school; in fact, the difference between the longitudinal data is even more striking with the females as compared to the males. Females felt that their teachers commanded more discipline in the classroom, but did not note a difference on the metric of openness to feedback. Once again, a possible explanation for these phenomena may be the questionnaire's use of particular wording as well as differences in perceptions of actions between males and females.

*Israel: Public University vs. Private University*

<b>Metric</b>	<b>Public University</b>	<b>Private University</b>
<b>Commanding discipline in the classroom</b>	4.8	4.4
<b>Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)</b>	5.6	5.4
<b>Demanding exact repetition of what was taught</b>	4.4	5.3
<b>Encouraging new ways of thinking in order to solve questions</b>	5.4	5.6
<b>Encouraging discussion in the classroom</b>	4.8	5.4
<b>Openness to receiving feedback</b>	4.2	3.7

There are observed differences between the responses of individuals who attended public and private universities in Israel. Public institutions demanded less repetition and regurgitation in the classroom, and their teachers were more open to feedback. Private institutions, on the other hand, encouraged more discussion in the classroom. These results may be due to the differences in teacher quality and selection processes across different types of institutions.

*Analysis: China*

It is important to note that some of the analysis that was done above cannot be replicated for China, given that the majority of Chinese respondents did not attend university in China. Thus, only high schools in China will be analyzed for the purposes of this study. As observed with Israeli institutions, it is possible that universities in China would score higher or lower on some of the metrics outlined.



*China: High School*

<b>Metric</b>	<b>High School in China</b>
<b>Age</b>	20.4
<b>Year of Graduation</b>	2008
<b>Commanding discipline in the classroom</b>	5.2
<b>Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)</b>	5.6
<b>Demanding exact repetition of what was taught</b>	4.6
<b>Encouraging new ways of thinking in order to solve questions</b>	4.8
<b>Encouraging discussion in the classroom</b>	4.7
<b>Openness to receiving feedback</b>	5.1

Three of the six metrics lie outside of the neutral range of 4, including “commanding discipline in the classroom,” “allowing students to question what was taught,” and “openness to receiving feedback”—all of which are skewed toward the higher end of the spectrum of choices. However, given that the demographics of the Chinese participant pool was split nearly equally between students who attended traditional schools and international schools, it is imperative to see where the differences lie between the two group’s results.

*China: Traditional / Non – International High Schools vs. International High Schools*

<b>Metric</b>	<b>Non-International</b>	<b>International</b>
<b>Commanding discipline in the classroom</b>	5.8	4.5
<b>Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)</b>	5.4	5.8
<b>Demanding exact repetition of what was taught</b>	5.5	3.7
<b>Encouraging new ways of thinking in order to solve questions</b>	4.1	5.6
<b>Encouraging discussion in the classroom</b>	3.5	6.1
<b>Openness to receiving feedback</b>	4.2	6.0

International schools in China are usually adapted toward perceived family preferences of the children of expatriates and offer American, Australian, or British educations, while non-international high schools are commonly thought of as traditional, Chinese high schools. As shown above, there is a striking difference between the responses of students who attended non-international as opposed to international schools. Students of traditional Chinese high schools felt that their teachers demanded a higher degree of discipline in the classroom than their counterparts in Chinese international schools, and also felt that their teachers required more exact repetition of what was taught. Their teachers were less open to receiving feedback and encouraged relatively little discussion in the classroom.

Conversely, students of international high schools felt that they were able to give their teachers feedback, and that they were encouraged to discuss material in the classroom, go about problem solving in new ways, and question what was taught. Perhaps most important, they did not feel that they were expected merely to repeat what the teacher taught, but rather to utilize the aforementioned freedoms to come to their own conclusions. Differences between these two types of institutions clearly play an important role in fostering a specific type of learning environment; as such, there is a patent difference between a traditional Chinese education and an international high school education.

*China: Male vs. Female*

<b>Metric</b>	<b>Male</b>	<b>Female</b>
<b>Commanding discipline in the classroom</b>	5.0	5.5
<b>Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)</b>	5.9	5.1
<b>Demanding exact repetition of what was taught</b>	5.4	3.6
<b>Encouraging new ways of thinking in order to solve questions</b>	4.7	4.9
<b>Encouraging discussion in the classroom</b>	4.6	4.9
<b>Openness to receiving feedback</b>	4.9	5.3

There are a number of observations worth noting in this comparison as well. Females reported a higher sense of discipline in the classroom, as well as more freedom to give their teachers feedback. On the other hand, males felt that their teachers allowed them to question what was taught, though they felt as though their teachers demanded exact repetition of what was taught more than their female counterparts did.

However, comparison between genders aside, females felt that they were allowed to question what was taught, were not expected merely to repeat what was taught in order to master the material, and could provide their teachers with feedback—characteristics of international schools mentioned above. Males, on other hand, felt that their teachers commanded a great deal of discipline in the classroom, and demanded exact repetition of what was taught—characteristics of traditional schools outlined above. The exhibited difference between male and females could thus lie between differences in the ways that males and females perceive certain actions, as was suggested with the Israeli respondents, or could lie in the characteristics of the Chinese respondents themselves. The majority of female respondents attended international schools (7 out of 11), while the majority of male respondents attended traditional, local schools

(9 out of 14). It is thus plausible to assume that while the males' responses might skew towards non-international school findings, the females' responses would skew towards international school findings.

***Analysis: Israel vs. China***

With a clearer picture of the participants in the questionnaire, the next step is to analyze the results of Chinese and Israeli counterparts against one another. Below is a table representing the mean results for Israeli students and Chinese students.

<b>Metric</b>	<b>Israel (High School)</b>	<b>Israel (University)</b>	<b>China (Traditional/ Non- International High School)</b>	<b>China (International High School)</b>
<b>Commanding discipline in the classroom</b>	4.4	4.6	5.8	4.5
<b>Allowing students to question what was taught (facts, theories, formulas, solutions, lesson plans etc)</b>	5.4	5.5	5.4	5.8
<b>Demanding exact repetition of what was taught</b>	4.7	4.7	5.5	3.7
<b>Encouraging new ways of thinking in order to solve questions</b>	4.2	5.5	4.1	5.6
<b>Encouraging discussion in the classroom</b>	5.0	5.1	3.5	6.1
<b>Openness to receiving feedback</b>	3.6	4.0	4.2	6.0

Analysis of the preceding table yields some very interesting conclusions. On the first metric of “encouraging discipline in the classroom,” traditional Chinese high schools scored the

highest by a significant amount, which was in line with my hypothesis. After all, if teachers in Chinese high schools are commanding more discipline in the classroom, it would follow that their students do not feel as open to challenging or contradicting the teacher, but rather accept and expect to learn what the teacher shared without voicing contrary opinions.

On the second metric of “allowing students to question what was taught,” all four categories had relatively equal responses, with international schools in China accruing the highest aggregate score. Given that all four types of institutions responded relatively equally on this metric, my hypothesis was not proven here.

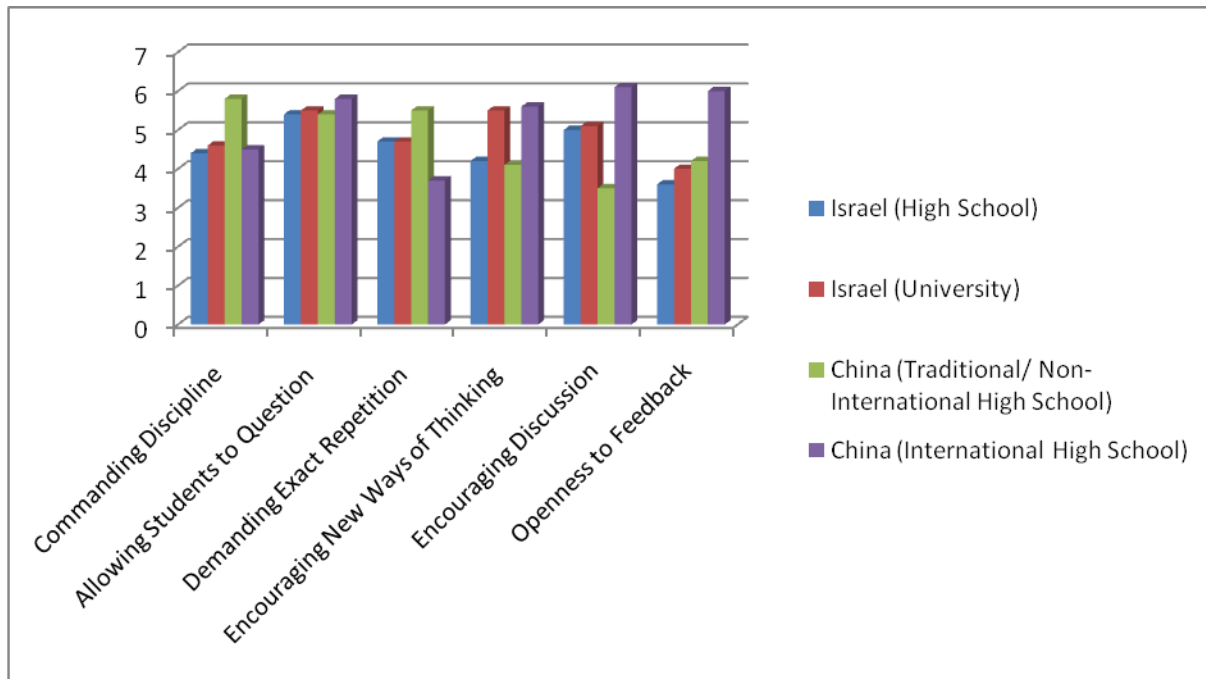
On the third metric of “demanding exact repetition of what was taught,” traditional Chinese high schools scored the highest, while international schools in China scored the lowest, suggesting that there is far more repetition and regurgitation required of high school students in traditional Chinese schools than in other schools in China or in Israel. Though my hypothesis was proven in the sense that Chinese high schools scored the highest on this metric, I did not expect Chinese international schools to outperform Israeli schools on this metric.

On the fourth metric of “encouraging new ways of thinking in order to solve questions,” Israeli universities and international Chinese high schools scored the highest by a significant amount, the former of which verified my hypothesis.

On the fifth metric of “encouraging discussion in the classroom,” traditional Chinese high schools scored significantly lower than their counterparts in China and Israel which is also in accordance with my hypothesis. Of the four, Chinese international schools scored the highest, which is contrary to what I had expected.

Lastly, on the sixth metric of “openness to receiving feedback,” international Chinese schools scored the highest and Israeli high schools scored the lowest, which was not in line with my hypothesis.

Below is a graphical representation of the above data.



### ***Analysis: Adjectives***

Another integral part of the questionnaire is the last section, in which respondents were asked to list adjectives that came to mind to describe both Israeli and Chinese teachers. Though it is difficult to observe patterns when analyzing fill-in responses, there are noteworthy observations to be made.

The following table lists some of the representative responses of Israeli respondents.

<b>Chinese Teachers</b>	<b>Israeli Teachers</b>
Strict, persistent, tough	Loose, creative, open, too open
Strict, closed minded	Interactive discussions, openness to new ideas (in some cases)
Methodic, strict, close minded	Impatient, direct
Strict, square	Open minded, flexible
Strict, repetitive	Enthusiastic, aggressive
Traditional, an educator and not “just a teacher”	Personal, result/grade driven, grey
Conformist, rigid	Creative
Discipline	Passionate, personal, talkative
Commanding, repetitive, detail oriented	High school teachers stick to the books while in college [they] try to make you think differently
Disciplined, target oriented, harsh, methodological	Couldn't find another job
Stubborn, tough	Out of the box way of thinking
Discipline, rigidity, stringent, precise, monotonous	Dynamic, open minded, flexible, mathematical

Almost every Israeli respondent listed adjectives for both Israeli and Chinese teachers. Many Israelis believed that Chinese teachers are “strict”, “rigid,” “close-minded,” “repetitive,” and “methodological.” On the flip side, Israelis believed that Israeli teachers are “creative,” “open-minded,” “passionate,” and encourage “out of the box thinking”. The questionnaire results support the notion that teachers in China are highly respected, whereas teachers in Israel do not command the same respect within society. These findings are in line with my hypothesis.

The following table lists some of the representative responses of Chinese respondents who attended traditional Chinese high schools.

<b>Chinese Teachers</b>	<b>Israeli Teachers</b>
Confucius	Smart and patient
Smart, disciplined	Nationalist, serious
Academic	
Strict and scary	
Conventional	
Strict	
Stern, hard-to-please, focus on repetition, disciplines students all the time, obsessed with test scores, don't like to be challenged by students	
Strict, respectable, full of knowledge	

The responses of participants who attended traditional high schools in China are similar to those of Israeli students in that both groups believed that Chinese teachers were strict and disciplined. Other noteworthy responses of Chinese respondents included: “Confucius”, “full of knowledge,” “conventional,” and “don’t like to be challenged by students.” This further validates the notion that teachers in China are more than just teachers, but rather educators or intellectuals following the path of Confucius.

While almost all respondents who attended traditional Chinese high schools listed adjectives for Chinese teachers, almost none of these students listed adjectives for Israeli teachers. Instead, respondents left that question blank, responded with “N/A,” or wrote something to the effect of “I do not know since I never had one.” Though it is likely that most of the Israeli respondents did not have Chinese teachers, these respondents had no qualms in



describing Chinese teachers. There are three possible explanations for this observed pattern. First, the Chinese teaching style and the model of Confucius are better known worldwide than that of an Israeli teacher. Second, this phenomenon could actually be further validation of my hypothesis; Israelis are unafraid to answer what they do not know and to give their opinion, while the Chinese are hesitant to answer if they have yet to learn the answer or to confront the question in the past. Lastly, the wording of other questions of the questionnaire might have influenced the fill-in responses of the respondents.

The following table lists some of the representative responses of Chinese respondents who attended international Chinese high schools.

<b>Chinese Teachers</b>	<b>Israeli Teachers</b>
Nice, different, not understanding	Slow-paced, friendly
Harsh, mean, inflexible	Smart, strict
Strict, repetition, memorizing	Religious, disciplined
Nice, Traditional, Brilliant, Strict, Helpful	Religious conflicts in school
Strict	
Serious, commanding, fast-paced, impersonal	
Strict, formulaic	
Demanding, stubborn, inflexible, strict	
Depending on the age, the older teachers sought more respect and discipline, and the younger sought more interactive ways to connect with students. In my personal opinion younger teachers were easier to connect with and were more open minded. I believe I learned more from my younger teachers. They were more approachable as well.	
Strict, tough, firm	

Though more of these respondents responded to the question regarding adjectives describing Israeli teachers than their counterparts in traditional high schools, even the majority of these participants did not respond to this question. The hypotheses seeking to explain this phenomenon may hold true here, as well.

When asked about Chinese teachers, these respondents responded like their counterparts in Chinese schools. Given that these students attended international schools, there is a strong possibility that their teachers were international themselves, and did not possess the characteristics that they attributed to Chinese teachers. Thus, in answering these questions they might have been referring to traditional Chinese teachers as opposed to their own instructors.

### *Conclusions*

From all of the research presented until this point, it seems as though some elements of my hypothesis were successfully proven while others were not. According to my primary and secondary research, teaching styles in Israel and China certainly possess a number of the commonly believed characteristics outlined earlier. Though my study did not and could not have proven causality between these teaching styles and patterns of innovative entrepreneurship, my findings clearly suggest that there is at the very least a correlation between these teaching styles and roots of innovation.

Those results that were contrary to my hypothesis may be due to a number of factors. First, there is the possibility that my hypothesis simply does not hold true. Second, there is a chance that Israelis and Chinese students respond to the questionnaire differently as a result of inherent differences in each country's culture. For example, if it is true that Israeli teaching styles do not encourage rote memorization, Israeli respondents might have scored their teachers higher

than I would have expected on the metric of “demanding exact repetition” if they experienced even a little bit of memorization and regurgitation in the classroom. Conversely, if Chinese students are accustomed to that very style of teaching, they may not have scored their teachers very highly on that metric if the teacher swayed from that path in even the slightest way by introducing more cutting-edge teaching methodologies.

It is often true that one discovers the most interesting findings when he sets out to explore one topic, and instead stumbles upon another. Though I set out to explore the differences in Israeli and Chinese schools, I inadvertently discovered the differences between traditional and international Chinese high schools through my research. Indeed, the differences are striking and in some instances proved to be more significant than my original comparison. Of course, this may also be due to the fact that students in international schools are comparing their experiences to their peers in traditional schools (who are in close proximity), which may be skewing the data to a certain degree. Nevertheless, the discovery is worthwhile and warrants further research.

### ***Room for Improvement / Further Research***

A similar study on a much larger scale would be beneficial to categorically validate or disprove my hypothesis. In addition, a broader demographic sample would have to be targeted; since my study relied on friends and family members and consequently their friends and family, there is reason to believe that only a small slice of the demographic of each of China and Israel was reached. This too might have influenced the ways in which the respondents answered the questions, as many participants in the survey might have attended the same schools and/or attended schools in similar regions. Further research should thus target more diversity in income levels, geographical locations, and institutions to eliminate this bias in the future.

Furthermore, a similar study might be designed more effectively and worded more accurately. There is reason to believe that vague wording might have confused respondents to some degree, or that certain phrases might have inadvertently influenced the respondents' answers. Given that the respondents of this study were international, the language barrier might have influenced the way in which some respondents understood the questions, as well as subtleties between questions.

Further research might also be conducted within China by examining traditional and international high schools in more depth. Given the striking differences between teaching styles in the two types of high schools, it would be interesting to explore whether growing popularity of international schools may impact the future of innovative entrepreneurship in China. Another area that could be explored is the discrepancy between older teachers and younger teachers; there is reason to believe that teachers from different generations teach differently, and each teaching style may affect innovative entrepreneurship in a different way.

## ***Conclusion***

Innovative entrepreneurship is evidently an integral part of a country's development and economic health. Given the findings of this study, there is reason to believe that there is a correlation between teaching styles and innovative entrepreneurship; this correlation may be based on the fact that role pairs within a society influence one another, as Hofstede indicated. If teaching styles in a country are influencing the ways in which graduates are entering the workforce and performing on the job, their role in fostering or impeding innovative entrepreneurship becomes not only clear, but a fundamental issue to be addressed. From the study conducted for the purposes of this thesis, it seems that encouraging discussion in the

classroom, allowing students to think in new ways, *not* demanding simple repetition of what was taught, and *not* commanding too much discipline (so as to seem authoritarian in the classroom) are paramount to fostering an educational environment which is conducive to encouraging innovative entrepreneurship. As such, enacting policies and reforms to include such practices in the classroom should be a priority for government leaders around the world.

## Appendix: Additional Related Research

### *Impact of Culture on Human Resource Management Practices: A 10-Country Comparison*

Another study relevant to this paper is a ten country comparison measuring the impact of culture on human resource management (HRM) practices. Culture in this study is defined as “common patterns of beliefs, assumptions, values, and norms of behavior of human groups.” Nearly 2,000 employees (including 175 from China and 88 from Israel) from ten countries were surveyed using a 57-item questionnaire, assessing managerial perceptions of socio-cultural elements, internal work culture, and HRM practices. It was assumed that “the socio-cultural environment refers to managerial perceptions of shared values among people with respect to how a society is structured and how it functions,” whereas internal work culture denotes “shared managerial beliefs and assumptions about employee nature and behavior.” The table below summarizes the study’s findings.

TABLE 2  
Standardised Country Scores on Study Variables, ANCOVA Results, and Variance Estimated

	<i>Canada</i>	<i>USA</i>	<i>Romania</i>	<i>Germany</i>	<i>Israel</i>	<i>Russia</i>	<i>Turkey</i>	<i>China</i>	<i>Pakistan</i>	<i>India</i>	<i>F (9,1994)</i>	<i>Omega Square</i>
<i>Socio-cultural Dimensions</i>												
Paternalism	97	112	101	79	65	105	129	123	118	137	83.01	0.27
Power Distance	96	110	82	99	70	116	111	117	112	123	36.38	0.14
Loyalty Towards Community	105	111	109	117	86	132	130	125	122	127	25.31	0.1
Fatalism	62	52	58	45	55	92	56	51	51	95	46.32	0.02
<i>Internal Work Culture</i>												
Malleability	149	147	155	145	164	147	141	143	141	127	9.45	0.04
Proactivity	124	113	102	131	128	144	90	76	86	99	54.13	0.22
Obligation Towards Others	106	119	106	110	82	124	97	124	135	125	27.89	0.13
Responsibility Seeking	138	133	139	152	161	132	133	106	127	131	22.02	0.1
Participation	159	143	172	148	106	174	133	151	141	139	48.69	0.14
<i>HRM Practices</i>												
Job Enrichment	129	120	138	139	160	105	124	136	128	112	34.85	0.14
Supervision	133	136	128	123	124	126	141	133	138	128	9.32	0.04
Reward Allocation	102	103	103	117	141	101	113	93	98	100	7.26	0.03

Figures are means multiplied by 100, following first individual-level and then country-level standardisation. All *F* values are significant at  $p < .001$  level.

In line with Hofstede’s findings discussed earlier, it was hypothesized that managers from China would score among the highest on the perception of power distance, while managers from Israel would score the lowest of the ten countries included in the study on this dimension.

This hypothesis was confirmed as Israel scored a 70 on the dimension of power distance, the lowest of all ten countries, while China scored a 117, second only to India on this scale.<sup>20</sup>

Since managers in Israel perceive that there is less of a power distance between the superiors and subordinates of society than Chinese managers do, it is likely that the former are basing their perceptions on similar relationships in the classroom or workplace. If power distances between student and teacher and employee and employer are among the smallest in the world, this would help to explain why students and employees in Israel are more willing to “think outside of the box,” question what has been accepted as true, and to innovate. Such notions may be stifled in China, where managers may be basing their perceptions of society on the wide power disparities present between students and teachers and employees and employers.

The second socio-cultural dimension tested was paternalism, which denotes “a dyadic and hierarchical relationship between a superior and his or her subordinates, and a role differentiation in the relationship.” The superior in such a relationship offers advice and support in exchange for allegiance and reverence. Paternalism is one of the most prominent features of Asian cultures, since the patriarchal relationships within the family unit have historically been valued among Asian nations; over time, such familial relationships were translated into the workplace to include relationships based on seniority and gender. However, paternalism does not have the same connotation in the Western world, where it is associated with authoritarianism. As a result, it was hypothesized that managers from China would score higher on their perceptions of paternalism as compared to managers from Israel. Not surprisingly, Israel scored a 65 on this dimension while China scored a 123.

Managers who believe that their society is paternalistic and possesses a high degree of power distance would most likely perceive their employees as being more reactive than

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<sup>20</sup> Figures listed represent means multiplied by 100

proactive, the latter being defined as “whether employees take personal initiative to achieve their job objectives or simply react to external demands.” Not surprisingly, Israel scored a 128 on the proactivity scale, one of the highest scores, while China scored a 76, which was the lowest of the ten countries surveyed. If Chinese managers expect that their subordinates simply fulfill their demands, they have certainly not fostered an environment in the Chinese workplace that promotes out-of-the-box thinking or innovation. In contrast, Israeli managers who expect their subordinates to be proactive are likely foster an environment in which new and better ways of tackling old problems are encouraged.

Furthermore, managers who believe that their society is paternalistic can be expected to presume that their subordinates are incapable of taking initiative without their assistance. Paternalistic managers would most likely consult with their employees on matters regarding them, but would reserve the right to make final decisions. This is known as participation in the study. On this scale, China scored a 151 while Israel scored a 106, most likely the result of China’s culture being more paternalistic than that of Israel.

The third cultural dimension tested was loyalty towards the community, or “the extent to which individuals feel loyal to their communities and compelled to fulfill their obligations towards in-group members even if in-group members’ demands inconvenience them.” It was believed that Chinese managers would score higher than their Israeli counterparts on the perceptions of such loyalties in their respective countries. In fact, Israel scored an 86 on this scale, the lowest of the 10 countries, while China scored a 125, one of the highest scores granted. This is a plausible conclusion given the two countries’ scores on Hofstede’s individualism index.

Managers who believe that employees feel compelled to care for others in society are likely to perceive that the same obligations exist in the workplace. Thus, on the obligation



towards others scale, Israel scored the lowest with an 82, while China scored among the highest with a 124. Such a relative lack of obligation towards others in the workplace in Israel may in-part explain the higher levels of innovative entrepreneurship in the country, as discussed above regarding Hofstede's individualism index.

The final cultural dimension tested was fatalism, or the "belief that it is not possible to fully control the outcome of one's actions." Israel and China scored similarly on this dimension, with Israel receiving a higher score of 55 as compared to China's score of 51. In societies that attach importance to fatalism, managers would most likely believe that employees are not malleable and therefore deem investment in training and development programs as unwarranted. Israel scored the highest on the malleability scale with a score of 164, while China scored among the lowest with a score of 143. Israeli managers' investment into employees' training and development may also explain in-part the relatively higher levels of innovative entrepreneurship.

Furthermore, managers in fatalistic cultures may assume that employees are reluctant to accept or seek responsibility, since doing so would not necessarily yield positive results. Once again, Israel scored the highest on the responsibility seeking index with a score of 161, while China scored the lowest of the ten countries with a score of 106. Given that Israeli managers perceive their employees as responsibility seeking, they are likely to give their employees that extra responsibility, which translates into more opportunities to advance, push boundaries, think of new solutions to problems, and ultimately to innovate.

Managers who perceive their employees to be malleable, proactive, and eager to take responsibility are more likely to empower their employees through goal-setting, to compensate them on the basis of quality of their work, and to enrich their jobs through the use of feedback, self-rule, value-added tasks, and skill variety. These managers are also likely to empower their

employees when it is assumed that employees work with others in the workplace. Since Israeli managers perceive their employees to be malleable, proactive, and responsibility seeking, it is no surprise that their HRM practices include job enrichment and reward allocation more so than their Chinese counterparts. However, given that Chinese managers perceive their employees to have higher levels of obligations towards others in the workplace, Chinese managers employ more empowering supervision than Israeli managers.

According to the omega-squares of each of the tested hypotheses, the biggest differences were present in the paternalism and proactivity scales. As described above, these two measures are undoubtedly crucial in explaining why there are higher relative levels of innovative entrepreneurship in Israel relative to China.

### ***Are There Cultural Differences in Learning Style?***

Yet another study relevant to this paper is one that explores the role of culture in influencing preferences of various learning styles. The study utilizes the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study which established ten global cultural clusters. Countries within a cluster are relatively similar to one another on the basis of a number of dimensions while being considerably different from countries in other clusters. For the purposes of this study, one country from each culture cluster was chosen to represent the learning preferences of the cluster as a whole; Italy was chosen to represent Latin Europe in which Israel is clustered, and Singapore was chosen to represent Confucian Asia, in which China is grouped.

The study demonstrates the differences to which culture can lead in preferential learning styles by drawing upon the experiential learning theory (ELT). Individuals choose preferred methods of learning as a result of “hereditary equipment, [their] particular life experiences and the demands of [their] present environment.” The ELT model describes two modes of grasping

experience—concrete experience (CE) and abstract conceptualization (AC)—and two modes of transforming experience—reflective observation (RO) and active experimentation (AE).

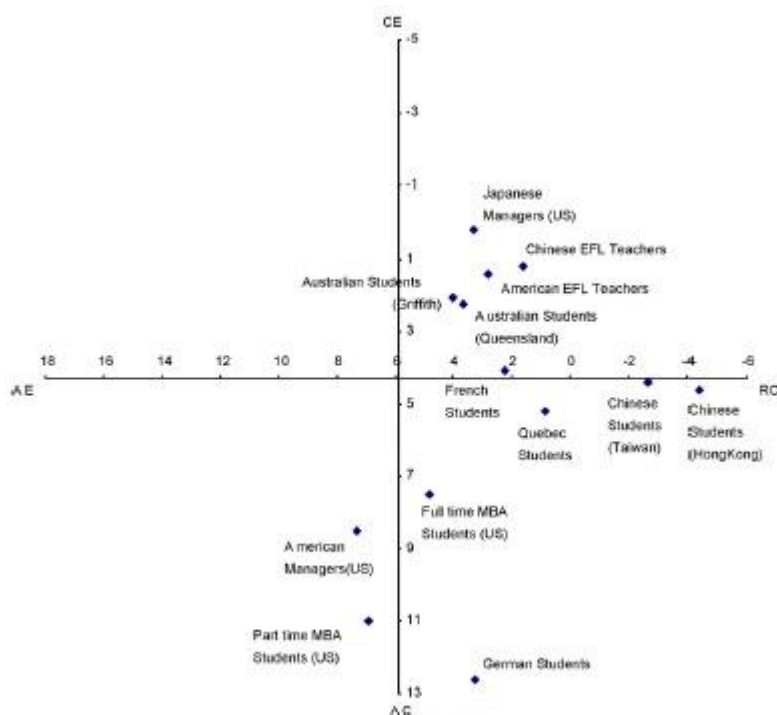


Fig. 2. Mean AC-CE and AE-RO scores.

As shown above, Italy placed in the second quadrant, showing an affinity of Latin Europe for concrete experience and active experimentation. Singapore, on the other hand, placed in the fourth quadrant, showing a strong preference of Confucian Asian cultures for abstract conceptualization and a slight preference for reflective observation.

Individuals who rely on concrete experience “are open to new experiences, depend on people contact for gathering information, are intuitive and make feeling based judgments.” Those who are more oriented towards active experimentation “like to try things out, are more willing to take risks and are practical and application oriented.” On the other hand, those who prefer abstract conceptualization “are logical and analytical in their approach to a learning situation and seek theories and generalizations.” Those who rely on reflective observation “watch and observe all sides of an issue in order to understand its meaning and take time to act.”

While it is difficult to define entrepreneurial spirit, it would seem from the above conclusions that countries in Latin Europe are more prone to fostering such spirit than those in Confucian Asia as a result of their respective preferred learning styles. As explained above, individuals in countries such as Italy and Israel are open to change, prefer to learn by acting upon their insights, and are likely to act faster as they rely upon intuition. As such, they are more likely to seek opportunities aggressively and to persevere in order to substantiate their ideas. They fear failure to a lesser degree than their counterparts in Confucian Asian cultures such as China, who are slower to act upon their observations and require a thorough and analytical approach to learning. As such, individuals in the latter group may miss out on or avoid opportunities in order to “save face” or because they acted too slowly. Thus, though there is no set formula for the ideal learning method of an entrepreneur, it can be assumed that as a whole, the learning methods preferred in Israeli society are more conducive to fostering entrepreneurial spirit than methods preferred in Chinese society.

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