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EDUCATION POLICIES FOR CULTIVATING STUDENT LEARNING: THE MODEL OF FINNISH AND SINGAPOREAN APPROACH

Abstract:

The modern world is more competitive and complex one in terms of getting a quality education and forwarding the countries into the development path. This research contends that system-wide excellence in student learning should be attainable with reasonable cost, using education policies differing from conventional market-oriented reform strategies predominant in many other countries. In this regards, Finland and Singapore are the examples of the best education model that have developed from an out-of-the-way agricultural and industrial state in the 1950s for Finland and 1960s for Singapore to the models knowledge economy, by means of education as the key to economic and social change and development. Believing on data from international student assessments and earlier policy analysis, this article describes how balanced improvement in student learning has been attained through Finnish and Singaporean education policies based on equity, flexibility, creativity, innovative, teacher professionalism, effective policy making from the government side and the most importantly trustworthy. Contrasting to many other education systems, significant accountability conveyed by high-stakes testing and externally determined learning standards has not been part of Finnish and Singaporean education policies. The insight is that Finnish and Singaporean education policies intended to enhance student achievement have been built upon ideas of sustainable leadership that place strong importance on teaching and learning, smart accountability, encouraging schools to craft the best teaching and learning environments and bring into practice educational content that best helps to their students reach the apex goals of education.

Keywords:

Educational Policy, Finish education, Singaporean education system

JEL Classification: I21, I28, I25

1 Introduction with Justification

World education system is going rapidly changing day by day due to the technological enhancement and development in ICT. Generally, the education sector is much affected by ICT and systematic approach to children's overall development. The best model of education is assumed as which can put priority to Early Child Education (ECE) in top importance. In this regards, there are various countries they are doing tremendous progress in this sector and become best education model countries in the world. After analyzing the comprehensive research on the reports of PISA and OECDs of 2012 and 2015 there are few countries they are doing best performance in ECE and the higher level of Education as well. One study (U21 Ranking 2012) shows for higher level education USA, Sweden, Finland, Denmark, Switzerland, Norway, Australia are in top ranking in terms of professional career but some of these countries are also more suffering from ECE up to grade 12 level of education.

From the PISA and OECD reports, there are few countries which have the best education system in lower and middle-level education for example Shanghai-China, Singapore, Hong Kong-China, Chinese-Taipei, South-Korea, Macao-China, Japan, Liechtenstein, Switzerland, Netherland, Estonia, Finland, Canada, and Poland within ranking wise top position (PISA, 2012). Among these countries, two countries Singapore and Finland are considered in this study. The reasons behind selecting Singapore and Finland in the study region are as follows:

- More or less similar history of educational system and development
- Both countries have very short educational history
- Both countries have very successful outcomes of educational journey
- Both countries are giving high priority in ECE, vocational education, and skilled based training
- Both countries have strong based on qualitative and top scorer teachers that mean more competitive people in teaching
- Rigorous training and professional development of teachers in both countries, teaching is the first choice
- Broad-based education system, meritocratic value and strong commitment from government side in both countries

2 Objectives of the Study

- To analyze and identify the best education model and practices in lower and middle and higher level education.
- To identify an effective educational model for small countries having limited economic resources for the growth and development and heavily depend on human resources.

- Linking these best educational model and practices with Nepalese perspective and Nepal can take maximum benefit from this comparative study of these two countries educational policies
- Recommending best educational policy for Nepal, which going to revise its federal educational policy after promulgation of new constitution 2015.

3 Research Methodology

- Basically descriptive analysis is done on the basis of reports of different organization, archives, Journals, and available published sources
- On the basis of reports from PISA (2012 and 2015) for lower and school level education and for higher level education, U21 Ranking of National Higher Education Systems 2012 is taken into consideration in this analysis.
- Analysis and findings of the best education models and the norms and values which are used in these two educational systems

4 Educational Journey in Singapore

OECD (2010) Singapore is an example of Asia's great success stories, transforming itself from a developing country to a today's modern industrial economy just in one generation. During the last decade, Singapore's education system has remained consistently at or near the top of the most major world education ranking systems. This discussion examines how this "tiny red dot" on the map has achieved and sustained highly developed stage. From Singapore's beginning, education has become a major instrument for building both the economy and the nation. The objective of Singapore was to serve as an engine of human capital to drive economic growth and make it sustainable. The ability of the government to match supply and demand for education and skills is a major source of Singapore's competitive advantage. Other elements in its success inculcates a clear vision, mission and belief in the centrality of education for students and the nation; persistent political leadership and alignment between policy and practice; a focus on building teacher and leadership capacity to deliver and reform at the school level with ambitious standards and assessments; and a good culture of continuous improvement and farsighted future orientation that benchmarks educational practices against the best in the world.

Now a day all children in Singapore perform a minimum of 10 years of education in one of the country's 360 schools. Research also shows that Singapore's students were among the top in the world in mathematics and science on the Trends in International Math and Science Study (TIMSS, 1995, 1999, 2003 and 2007). They also came in fourth in literacy rate of 2006 Progress in International Reading Literacy Study (PIRLS). Their excellence is further indicated by the fact that Singapore was one of the top-performing countries in 2009 according to PISA survey. Singapore was ranked as one of the best-performing

education systems in a 2007 McKinsey study of teachers (Barber & Mourshed, 2007), and was ranked first in the 2007 IMD World Competitiveness Yearbook (IMD, 2007) due to the best education for a competitive environment and economy. At the higher education level, the National University of Singapore was ranked 34th in the world and 4th in Asia in the Times Higher Education Supplement Rankings of World Universities in 2010 (Times Higher Education Supplement, 2010).

Lacking other resources, but human resources were and still are seen as the island republic's the most precious asset as so far. In fact, education was seen, from the very beginning, as central to building both the economy and the nation. Its job was to deliver the human capital engine as a means of economic growth and to create a sense of Singaporean identity. The economic goals of education have given education policy a very pragmatic way and a strong focus is given in scientific and technical fields. In fact, Singapore's education system has evolved over the past 40 years in tandem with the changing economy.

Ability-Based, Aspiration-Driven Phase of Singapore (1997 to the Present Day)

By the early 1990s, the efficiency-driven and quality education system had yielded clear results. But, as became clear during the Asian financial crisis of 1997, the world economy was shifting to a global knowledge economy. The competitive framework of nations was being redefined and national progress would increasingly be determined by the discovery and application of new and marketable ideas. The growth of the global knowledge economy required a paradigm change in Singapore's education system towards a focus on innovation, creativity, and more pragmatic research. A broader area of subject matter courses and a portfolio of different types of schools were encouraged, to specialize in arts, mathematics and science, and sports, as well as a number of independent schools (Lee et al., 2008).

In 2004, Prime Minister Lee Hsien Loong introduced the idea of "Teach Less, Learn More" as the next step under the Thinking Schools, Learning Nation umbrella. Its aim was to open up more "white space" in the curriculum to engage students more deeply in learning. Despite the system's widely-recognized successes, learners were still seen as too passive, overloaded with content, driven to perform, but not necessarily inspired.

A review of primary schools in 2009 focused on the question of how each child's learning can be driven by their innate curiosity and love of play. Art, music and physical education (PE) were also being enhanced in the curriculum. Finally, Curriculum 2015 re-emphasizes on a moral and ethical compass to rebalance content, skills, and character development to achieve a more holistic education (Ng, 2008).

A Forward-looking, Integrated Planning System in Singaporean Education

In modern Singapore, education has consistently become a building block for economic and national development. As Prime Minister of Singapore, Goh Chok Thong remarkably stated that “The wealth of a nation lies in its people.” This statement indicates that Singapore can successfully manage the demand and supply of education and educated human resources. Nowadays, Singapore has replaced streaming in elementary schools with subject matter banding and has also created more opportunities for students to move horizontally between streams at the secondary level and beyond to create more flexibility in the system and to recognize “late bloomers”. Another remarkable feature of the Singapore education system is the value, attention, and resources it devotes not only lower level achievers but also high achievers. In fact, this focus on “leveling up”, as a result of that the lowest stream gets very high-quality training, for example, “many pathways” approaches. The resources devoted to vocational education and technical training are immense and the vocational and technical system is perhaps the best in the world which is a significant element of the Singapore success story.

Finally, one of the major aspects of the human resource capacity of the Singaporean system is the civil service. Lee Kuan Yew’s philosophy of governance was to recruit very high-quality people into public service. Singapore has an extremely competent civil service, including in the ministry of Education. Top civil servants are carefully selected, well-trained (many at the best universities in the world), pragmatic, hard-working and well-paid. They have a global outlook, paying attention to education developments around the world, and are accustomed to using data and evidence in decision making. They have clear responsibility for the efficiency and effectiveness of the Singapore education system. The publication of the policy document, “Thinking Schools, Learning Nation” in 1997 led to a national education research agenda costing SGP 50 million (about USD 38 million).

Vision and Leadership in Singapore

Leaders with a bold and long run vision of the role of education in a society and economy are very much essential for creating educational excellence. Changing any system takes five to ten years – where there are frequent changes of political leadership, a guiding coalition needs to be created to keep the vision moving forward rather than having a change of direction with every change of government.

(i) Alignment of the Education System to Economic Development Goals

The strong link between education and economic development in Singapore has kept investment in education a central priority, made education policies highly pragmatic, led to high-quality mathematics and science and also to world-class vocational/technical education an area where most countries fail. It has also kept education dynamic,

expecting to change as conditions change rather than being mired in the past. While the tightness of the link may not be possible in less planned economies, bringing together economic and education policy makers, business and education leaders to continually assess changes in economic conditions to explore the ways to make education and economic development work better.

(ii) High-quality Teachers, Principals and Accountability

In earlier times, Singapore often had teacher shortages and was not always able to attract the highest quality people into teaching. In the 1990s, Singapore put in place a comprehensive and intensive human resource system to obtain high-quality teachers and school leaders who could meet its ambitions for its students. Thus, since then, education policies in Singapore are less focused on structure and more on maintaining and increasing the quality of the educational profession. In 2007, it introduced the GROW package, consisting of measures to promote teacher Growth, Recognition, Opportunity, and Well-Being.

Singapore runs on the performance of good management practices. Teachers, principals, ministry and National Institute of Education (NIE) staff, and students all have incentives to work hard and show the best performance. To maintain the performance of teachers and principals, serious attention is given for setting annual goals, garnering the needed support to meet them and assessing whether they have been met. Reward, punishment, and recognition systems include honors and salary bonuses. Individual appraisals also take place within the context of school excellence plans. While no country believes it has got accountability exactly right, Singapore's system uses a wide range of indicators and involves a wide range of professionals in making judgments about the performance of adults in the system.

(iii) Meritocratic Values

Underpinning the whole Singaporean system is the belief – for students of all ethnic backgrounds and all ranges of ability – that education is the route to advancement and that hard work and effort pay off. The government has developed a wide range of educational and social policies to advance this goal, with early intervention and multiple pathways to education and career resulting in immense social mobility with a shared sense of national mission and cultural support for education a near-universal value.

Lee Kuan Yew's (previous leading president) greatest fear was that his little country would fall prey to the kinds of ethnic and religious rivalries that have thwarted the development of so many other societies. He realized that what happens in the schools could be one of the most important antidotes to this threat. So the schools became a theater in which the country would do everything possible to give all students the skills and knowledge needed

to succeed, irrespective of their socioeconomic status. The country has been successful at training the teachers to diagnose student challenges and ways to address them. The belief that achieving high standards is a function of effort is stoutly embraced in Singapore and extends to the great emphasis on raising the quality of the educators. Singapore is one of the best examples in the professional way where its teachers view their responsibilities. All these elements of policy have combined to produce a remarkably well-performing education system.

(iv) Where is Singapore on the Educational Continuum

In fact, Singapore could be the "poster child" for the educational journey and development continuum. From a standing start in 1960, this small country has steadily advanced to the point at which it is now widely recognized as having one of the world's leading economies and most advanced and successful education systems. Leadership in Singapore was quite sure of the role of education and training as the key element in their strategy to raise income apart from attracting foreign business.

More than any other country in the world, Singapore has aggressively pursued a policy of advancing in education and other areas by systematically benchmarking the world's best performance and creating a world class education system based on what they have learned through their benchmarking (OECD, 2010).

(v) Holistic Development of Students

The Desired Outcomes of Education (DOE) articulates the importance of holistically nurturing students to become well-rounded persons - morally, intellectually, physically, socially and aesthetically through a set of eight core skills and values which are (i) Character Development (ii) Self-Management Skills (iii) Social and Cooperative Skills (iv) Literacy and Numeracy (v) Communication Skills (vi) Information Skills (vii) Thinking Skills and Creativity and (viii) Knowledge Application Skills.

(vi) Professional Development of Teachers

Just as the curriculum evolves to inculcate new learning that students need for the future, the professional development program for teachers becomes critical as teachers have to strive to equip themselves with the necessary competencies to guide and always facilitate students' learning. To meet the needs of distinct groups of students according to their ability and learning styles, teachers have to be equipped with the skills of differentiated instruction methods and teachers need to continue to develop their capacity to leverage technology to enhance students' learning experiences. for the sake of better preparing students to meet changing national and global needs of the 21st century, MOE has embarked on a process to review its curriculum, pedagogies, and assessments as well.

It is important that MOE ensures balance, rigor, relevance and responsiveness of the curriculum to meet the needs of the 21st century. Teachers should focus on teaching for

enduring understanding and skills. Assessment has to be contextualized and made more authentic to equip students with skills and attitudes to face new problems and issues that come on their way.

(vii) Desired Outcomes of Education

Table 1: Conceptual Underpinnings of the 3:3:3 Roadmap 2007–2012, Singapore

At the end of primary education, students	At the end of secondary education, students	At the end of pre-university education, students
are able to distinguish right from wrong	have moral integrity	are resilient and resolute
have learnt to share and put others first	have care and concern for others	have a sound sense of social responsibility
are able to build friendships with others	are able to work in teams and value every contribution	understand what it takes to inspire and motivate others
have a lively curiosity about things	are enterprising and innovative	have an entrepreneurial and creative spirit
are able to think for and express themselves	possess a broad-based foundation for further education	are able to think independently and creatively
take pride in their work	believe in their ability	strive for excellence
have cultivated healthy habits	have an appreciation of aesthetics	have a zest for life
love Singapore	know and believe in Singapore	understand what it takes to lead Singapore

Source: Conceptual Underpinnings of the 3:3:3 Roadmap 2007–2012, Singapore

Table 1 Cleary indicates that at the end of the primary, secondary and tertiary education what are the expectations of society or say parents and government. A clear vision with 3:3:3 roadmaps is launched.

(viii) Transforming Teacher Education in the 21st Century in Singapore

Globalization and the increasing convergence of digital technologies were the defining characteristics of our world at the turn of the 21st Century. When boundaries blurred due

to the swiftness of information transfer, then knowledge became power. With governments gearing up to prepare their citizens for the knowledge economy, the greater responsibility has been placed on education institutions to meet the challenges brought about by this new landscape. This outlook is very evident in Singapore, where talent drives our economic success. Education is the main enabler for a nation with no natural resources and whose competitive edge lies in arming its people with skills and competencies needed for the 21st century. Even though beyond just the economic pursuit of developing individuals as global citizens, there is felt the need to preserve their national culture, identity, and values rooted in family and community is just as important in an increasingly borderless world as so far. This requires an international education system that adopts a holistic approach to developing the whole person and his or her full potential as well.

The National Institute of Education (NIE) as the premier teacher education institute in Singapore since 1950, and as a founding member of the International Alliance of Leading Education Institutes, recognizes its crucial responsibility in this national endeavor. Its strategic roadmap from 2007 to 2012 is inspired by a vision of being an institute of distinction renowned for its teaching and research excellence. The 3:3:3 Roadmap as illustrated in table 3.2 anchored on the 3 pillars of meeting the needs of stakeholders, achieving international recognition through educational research, and impacting the educational fraternity internationally. In the 3 core strategy areas of Teaching, Research and Corporate Support, a range of initiatives have been launched to propel NIE forward towards establishing itself as a world-class provider of teacher education (TE) to serve the needs of educators, both in Singapore and beyond, as well as a Centre of excellence and innovation in educational and content research. These strategic thrusts are underpinned by 3 enabling success factors: relevance, responsiveness, and quality.

NIE recognizes the importance of its tripartite relationship with NTU and MOE as it operates within an academic community while being accountable to Singapore’s macro-educational policies. As with the framing of the 3:3:3 Roadmap (table 2), NIE embarked on the PRE initiative with a view to strengthening the foundations created by prior successes in teaching, research, and strategic partnerships.

Table 2: Transforming Teacher Education: Achieving the Vision of the 3:3:3 Roadmap

Vision	An Institute of Distinction		
Mission	Excel in teacher education & educational research		
3 Pillars	Achieving international recognition through educational research	Meeting the needs of stakeholders	Impacting the educational fraternity internationally
3 Strategies	Teaching	Research	Enabling corporate support
3 Success Factors	Responsiveness	Quality & Excellence	Relevance

Source: A Report by the National Institute of Education, Singapore, 2007

(ix) Broad-Based Curriculum

The study shows that Singapore's national curriculum aims to nurture each child to his full potential, to discover his talents and to develop in him a passion for life-long learning attitude. Students should go through a broad range of experiences to develop the skills and values on them that they will need for their coming life. The broad-based curriculum inculcates literacy, numeracy, bilingualism, the sciences, humanities, aesthetics, physical education, civics and moral education and National Education as well.

Time and again, the curriculum has been reviewed to address the current need for a common set of values, knowledge and competencies and at the same time, allow differentiation to meet the needs of students with different talents and abilities as well. To make better prepare students to meet changing national and global needs of the 21st century, MOE has embarked on a process to review its curriculum, pedagogies, and assessments system and so on. The reviewed curriculum seeks from teachers a focus on teaching for enduring understanding and skills, contextualized and more authentic assessments to equip students with skills and attitudes to face new problems and issues (Seng, 2007).

To sum up, Singapore is a success story of intelligently harnessing the ongoing technological revolution to accelerate development and transformation of the whole economy. Despite limited natural resources and unpromising initial economic conditions, Singapore has compressed its development journey and moved from the third world to

the first world economy and positioned itself effectively for a global, knowledge-based, and innovation drove economy (Chua, 2012).

Lessons Learned from Singapore

Singapore is both a “rapid improver” and a “continuing high performer” to those who believe that large-scale change in educational performance is not possible. It has shown several times more evidently that change is possible. Singapore has developed a high-quality system in terms of educational retention, quality, and efficiency but its success today is no accident. While the small-scale and tightly-coupled nature of the education system in Singapore may make its approaches seem inapplicable elsewhere, in fact, Singapore is the size of many states/ provinces or large cities in other countries. Many of its principles and practices are applicable to countries of a different scale and governance structure, although their implementation would have to take a different form. Some of the key lessons learned from Singapore are as follows:

- Clear Vision and Strong Leadership
- Alignment of the Education System to Economic Development Goals
- Coherence of the Education System
- Clear Goals, Rigorous Standards and High-Stakes Gateways
- Curriculum, Instruction and Assessment to Match the Standards
- High-Quality Teachers and Principals
- Strong Central Capacity and Authority to Act
- Accountability
- Meritocratic values
- Holistic Development Approach of Students
- Professional Development of Teachers
- Transforming Teacher Education in the 21st Century in Singapore
- Broad-Based Curriculum with adapting the proven practices from abroad

5 Finish Educational Journey, Education Policies and Practices

Various Studies show that Finland is very successful in the journey. The educational achievement and attainment, it is regarded as a country of having the world’s most literate societies as well. In the same vein more than 98 percent attend pre-school classes; 99 percent complete compulsory basic education; and 94 percent of those who start the academic strand of upper secondary school graduate. One the other hand completion rates in vocational upper secondary school also reach close to 90 percent (Statistics Finland, 2010; Välijärvi & Sahlberg, 2008). In those days the level of Finnish adults’ educational attainment is admirable by international standards as well. According to the

OECD, 38% of Finnish 25-34 year-olds have attained a higher education degree and over 90% have upper secondary education qualifications (OECD, 2010b).

In the very short journey of education, Finland emerged in 2000 as the top-scoring OECD nation on the international PISA assessments, researchers have been pouring into the country to study the 'Finnish miracle.' It approved Finland did significant progress in the short journey of education in a couple of decades. Many types of research suggest one element decides all others that are excellent teachers. This policy brief examines the crucial role that teachers and teacher education have played in the dramatic transformation of Finland's education system (Sahlberg, 2010). He came to the conclusion first teach the teachers and only high-quality teachers can provide better education to the children.

Becoming a Teacher, a rigorous process in Finland

In between young Finns, teaching is consistently the most admired profession in frequent opinion polls of high school graduates (Helsingin Sanomat, 2004). To be a primary school teacher in Finland is a very competitive environment and process, where Finland's best and brightest youth are able to fulfill those professional dreams as well. In every spring, a number of high school graduates submit their applications to the Departments of Teacher Education in eight Finnish best universities. Even though it's not enough to complete high school and pass a very rigorous matriculation examination, successful candidates must have the highest scores and excellent interpersonal skills. Annually only about 1 in every 10 applicants will be accepted to study to become a teacher in Finnish primary schools (Sahlberg, 2010). He also added that there are two phases to the selection process for primary school teacher education. First, a group of candidates is selected based on matriculation examination results, the high school diploma issued by the school, and relevant records of out of school accomplishments. In the second phase the candidates have to go through:

- Candidates complete a rigorous written exam on assigned books on pedagogical matters.
- At the same vein, candidates must involve in an observed clinical activity replicating school situations, where social interaction and communication skills come into play.
- lastly, but importantly, only the top candidates are interviewed and asked to explain why they have decided to become teachers. These highly capable candidates complete a rigorous teacher education program at government expense no private or individuals' expenditure is needed.

Teachers also the main reason Finland now leads the international pack in literacy, science, and math. Up to the 1960s, the level of educational attainment in Finland

remained rather low. The selection process is so competitive only 1 out of 10 adult Finns in that time had completed more than nine years of basic education; achieving a university degree was an uncommon attainment (Sahlberg, 2007). Today, Finland widely recognizes the value of its teachers and trusts their professional judgments in schools. Without excellent teachers, Finland's current international success would have been impossible (Sahlberg, 2010).

Strong Vocational education and training in cooperation with the world of work

Vocational education and training cover eight fields of education, more than fifty vocational qualifications including over a hundred different study programs. The scope and value of vocational education are three years of study and each qualification includes at least half a year of on-the-job training and learning in workplaces. Vocational education and training should be completed in the form of school-based training or apprenticeship training as well. The national qualification requirements have been based on a learning outcome approach from the early 1990s as a result of that close co-operation with the world of work has been felt. Basically, in Finland vocational qualifications are developed in cooperation with the industries, service sector and other key stakeholders. The objective behind these types of vocational education and training is to support flexible and efficient transition into the labor market as well as occupational development and career change as well. In addition to the needs of the market, development of vocational education and training and qualifications take into account the consolidation of lifelong learning skills as well as the individuals' needs and opportunities to complete qualifications flexibly to suit their own circumstances in the future as well.

In this regards, the studies are based on individual study plans, comprising both compulsory and optional study modules as well. The students' learning and competencies needed are assessed throughout the period of study from starting. Normally, the assessment is based on the criteria as defined in the national qualification requirements. One of the main and very competent assessment methods is the vocational skills demonstrations which are work assignments relevant to the vocational skills requirements and are given in authentic settings. At the same time, skills demonstrations are designed, implemented and assessed in co-operation with representatives of the world of the work.

Higher education with a dual structure

In Finland, the higher education is offered by normally either universities or polytechnics. In one side the study reflects that Both sectors have their own profiles and importance. Generally, Universities emphasize and keep in priority the scientific research and instruction. In the other side the Polytechnics, also known as universities of applied sciences, adopt a more practical approach to teaching and learning. There is some barrier to entry to all fields of study. There is high applicant volumes outweigh the number of

places available, universities and polytechnics use different kinds of student selection criteria as well. Normally, these include success in matriculation examination and entrance tests both and take the decision.

Most university students aim for a Master's degree

As so far, the Finnish Matriculation Examination offers general eligibility for higher education. In addition, those with a post-secondary level vocational requirement or at least a three-year are three levels of competence-based on qualifications: vocational qualifications, further vocational qualifications and specialist vocational qualifications as well. The study shows that vocational qualification has general eligibility for university education. At the time of admission, the Universities may also admit applicants, who are otherwise considered to have the necessary skills and knowledge to complete the studies and in universities, students can study for Bachelor's and Master's degrees and scientific or artistic postgraduate degrees as well, which are also called the Licentiate and the Doctorate degrees. In the study plan of two-cycle degree system students first, complete the Bachelor's degree, then after they may go for the Master's degree. As a compulsory task, students are admitted to study for the Master's degree and the target time for taking a Master's degree is generally 5 years. Even though the average time for taking a Master's degree in Finland is six years. The education thinks tank and policy-makers have introduced several measures to shorten graduation times and increase completion of studies, including personal study plans and financial incentives.

Polytechnic degrees provide students with practical professional skills

In Finland, the general requirement for admission to polytechnics is the completion of general upper secondary education or vocational education and training and student's selection to polytechnics is mainly based on three factors which are entrance examinations, school achievement, and work experience. Normally, polytechnics may also admit applicants who are otherwise considered to have the necessary skills and knowledge to complete polytechnic studies. At the same time, Degree studies at polytechnics give a higher education qualification and practical professional skills as well. They inculcate a core and professional studies, elective studies and a final project. All degree studies include practical on-the-job learning basis. In fact, the extent of polytechnic degree studies is general, 210–240 ECTS points, which means 3–4 years of full-time study. There is a further possibility to take a polytechnic Master's degree after acquiring at least of three years' work experience. The polytechnic Master's also takes the duration of 1.5–2 years, and it is equivalent to a university Master's degree as well.

The most important part of Finish education is the participation of upper secondary students in vocational education and training (VET) is very high with 70.1% following vocational courses in 2013 compared to an EU average of 48.9% which is very low in

comparison to Finland. According to a report of (European Commission 2012), the number of participants in apprenticeship training has traditionally been relatively low in Finland, but student numbers have increased considerably in recent years (ca. 70 000 in 2009, corresponding to about a quarter of all initial VET students). On the basis of employability rate of recent upper secondary graduates 12 stood at 74% in 2014, which is above the EU average.

Highly motivated and qualified teachers

One of the greatest achievement in the successful journey of Finish education is teaching is an attractive career choice in Finland. Therefore, the teacher education institutions can select the applicants who are the most suitable for the teaching profession. An interesting fact is that the intake into class teacher education is only 10 percent of all applicants only. According to OECD (2012) in various subject teacher education, the intake varies from 10 to 50 per cent depending on the subject but in vocational teacher education, the intake is 30 percent of the applicants. Another survey of OECD (2010) shows that the trust that teachers enjoy in Finnish society is deserved and reflects the very high quality of their training such as Finnish teachers have earned the trust of parents and the wider society by their demonstrated ability to implement and enhance professional discretion and judgement in the way they manage their classrooms and respond to the challenge of helping virtually all students become successful learners inside and outside the classroom.

The quality of teachers and teaching lies at the heart of Finland's educational success, and the factors responsible for producing that quality can be found at the connection of culture and policy as well. One of the policy aspects was the 1979 decision to move teacher training into the universities and make it substantially more rigorous but another aspect was the subsequent decisions of governments in the 1980s to evolve and enhance increasing levels of authority and responsibility for education from the ministry of education to municipalities and schools as well. The study of OECD (2010) shows that this movement was largely an expression of ideology, of a growing skepticism in the west about the role of central governments and their ability to know what works best in the field is most important.

Recent Policies and Practices of Finish Education

In Finish educational system, early childhood education and care (ECEC) has been the object of different reforms which is assumed as the most important step. To make system Finish government changed administration and steering of ECEC services were transferred from the Ministry of Social Affairs and Health to the Ministry of Education and Culture (2013). The study reflects that a Core Curriculum for Pre-School Education (2000) was established from 2001 and renewed in 2010 with National Curriculum Guidelines on

ECEC (2003, renewed in 2005) to match the design of local curricula. In addition, legislation on early childhood education and development of uniform pre-primary education instruction are in progress to ensure that all children have equal prerequisites.

Recent involvement in curriculum reform for pre-primary to upper secondary education was in preparation for 2016. Working groups of education officials think tanks of education, researchers, and teachers are focusing on structure and national objectives which were set in June 2012, conceptions of learning, support for learning and the different subjects. The renewal aims to enhance on strengths, supporting student growth and focusing on the core educational content and local pedagogical development. It is completed by 2014 and local curricula should be completed by 2016.

All these studies show that Finland has been a pioneer in measures to prevent low performance. Government supports through the Ministry of Education Strategy 2015 outlines key strategic areas in education, including securing equal opportunity in education and culture, and promoting participation and inclusion as well. To support disadvantaged groups, the following strategies were forwarded:

(i) The National Core Curriculum for Instruction Preparing Immigrants for Basic Education (2009) aims to support students with the immigrant background so that they can attend basic education.
(ii) The Action Program for Equal Opportunity in Education (2013) aims to improve the situation of disadvantaged groups and to reduce gender differences and the impact of socio-economic background in education. This will include one year of preparatory education for immigrants (starting in 2014) to improve opportunities for general upper secondary education for students with the immigrant background.

Table 3: Finish education system in level wise

Academic degrees	Vocational degrees	Typical ages
PHD(doctor)	Employment	-
Licentiate		
Bachelor	Polytechnic	+(3 or 4)
Master	Polytechnic	+(2 or 3)
Upper Secondary School	Vocational School	16-19
Comprehensive School (Compulsory)		7-16
Pre-School		6-7

Source: OECD Report, 2014

Table 3 shows that the educational structure of Finland. They don't give focus on students till 7 years. Then from 7-16 years there is compulsory and more comprehensive model. Upper secondary is 16-19 years in this age more vocational courses used to teach and so on.

Lessons from Finland's Success

There is no single definition or process which can explain Finland's outstanding educational performance. However, most analysts observe that excellent teachers play a critical role inside and outside the classroom. They strongly believe that teachers are the main pillar of developing and implementing good education system in the country. Among the successful practices that we can learn from Finland's education, which is given as:

(i) The development of rigorous, research-based teacher education programs that prepare teachers in content, pedagogy, and educational theory, as well as the capacity to do their own research, and that include field work mentored by expert veterans;
(ii) Significant financial support for teacher education, professional development, reasonable and equitable salaries, and supportive working conditions;
(iii) The creation of a respected profession in which teachers have considerable authority and autonomy, including responsibility for curriculum

design and student assessment, which engages them in the ongoing analysis and refinement of practice.

An important finding is that the teachers' capacity to teach in classrooms and work collaboratively in professional communities has been scientifically built through academic teacher and educational experts. More than that, a critical condition for attracting the talented young people to teaching is that teacher's work is an independent and respected profession, rather than just a technical implementation of externally instructed standards and tests. Teachers' strong competence and well preparedness create the prerequisite for the professional autonomy that makes teaching a valued career.

Recent policy responses Finland's preventive approach to school failure has been successful. It combines early recognition by teachers of low performance with the holistic support that involves both school and social welfare staff. Teacher quality has also been developed through strong initial teacher education to a master's level with practical experience. To provide clear criteria, raise quality and facilitate evaluation, Quality Criteria for Basic Education (2010) was developed, and evaluation activities will be merged into a new Education Evaluation Centre from 2014. To inculcate the local stakeholders and communities a general reform of the Finnish municipality structure has been prepared to secure high quality and equitable education services and consolidate local self-government system. In sum features of Finish education are given below:

- Strong vocational education and training in cooperation with the world of work
- Higher education with a dual structure
- Most university students aim for a Master's degree
- Polytechnic degrees provide students with practical professional skills
- Becoming a Teacher, a rigorous process and all teachers should have at least master's level education
- Highly motivated and qualified teachers
- The school system is 100% state funded with a huge budget

6. Analysis of Issues

In 2012 PISA measurements (table 4) below, 44 countries or economies were participated in the measurement of problem-solving skills. In this more general achievement area, Asian countries were again the highest and Finland was the only European country that breaks into the top ten. In the table below Singapore is standing in top rank and followed by Korea, Japan and China. The rank of Finland was 10th. This research contends that system-wide excellence in student learning should be attainable with reasonable cost, using education policies differing from conventional market-oriented reform strategies predominant in many other countries. In this regards, Finland and Singapore are the

examples of the best education model that have developed from an out-of-the-way agricultural and industrial state in the 1950s for Finland and 1960s for Singapore to the models knowledge economy, by means of education as the key to economic and social change and development

Table 4: Problem-solving in PISA measurement in 2012

Problem-solving in PISA measurement	Results
OECD average	500
Singapore	562
Korea	561
Japan	552
Macao-China	540
Hong Kong-China	540
Shanghai-China	536
Chinese Taipei	534
Canada	526
Australia	523
Finland	523

Source: OECD Report, 2014

Table 5. Snapshot of performance in mathematics, reading and science (PISA 2012)

	Mathematics				Reading		Science	
	Mean score in PISA 2012	Share of low achievers in mathematics (Below Level 2)	Share of top performers in mathematics (Level 5 or 6	Annualized Change in score points	Mean score in PISA 2012	Annualized change in score points	Mean score in PISA 2012	Annualized change in score points
OECD average	494	23.0	12.6	-0.3	496	0.3	501	0.5
Shanghai-China	613	3.8	55.4	4.2	570	4.6	580	1.8
Singapore	573	8.3	40.0	3.8	542	5.4	551	3.3

Hong Kong-China	561	8.5	33.7	1.3	545	2.3	555	2.1
Chinese Taipei	560	12.8	37.2	1.7	523	4.5	523	-1.5
Korea	554	9.1	30.9	1.1	536	0.9	538	2.6
Macao-China	538	10.8	24.3	1.0	509	0.8	521	1.6
Japan	536	11.1	23.7	0.4	538	1.5	547	2.6
Liechtenstein	535	14.1	24.8	0.3	516	1.3	525	0.4
Switzerland	531	12.4	21.4	0.6	509	1.0	515	0.6
Netherland	523	14.8	19.3	-1.6	511	-0.1	522	-0.5
Estonia	521	10.5	14.6	0.9	516	2.4	541	1.5
Finland	519	12.3	15.3	-2.8	524	-1.7	545	-3.0
Canada	518	13.8	16.4	-1.4	523	-0.9	525	-1.5
Poland	518	14.4	16.7	2.6	518	2.8	526	4.6

Source: OECD, PISA 2012

Figure 5 indicates that the performance of the mathematics. reading and science which is the PISA result 2012 and more Asian countries are performing better like Singapore, China, Korea, Japan etc. The ranking of Singapore is 2nd and Finland is 11th. This research is done for the student of lower secondary and secondary levels of students.

Higher Education

Given the importance of higher education, a nation needs a comprehensive set of indicators in order to evaluate the quality and worth of its higher education system. A report by Martin and OECD (2011) of the International Institute for Educational Planning, a UNESCO affiliate, comments as follows: “Many countries are currently exploring the best means of designing indicator systems for their higher education sectors. They perceive the need for an indicator system to improve communication on the progress of their higher education systems to the public at large and funding organizations, as well as to monitor the implementation of their public higher education policies.”

U21 Ranking of National Higher Education Systems 2012

A nation’s economic development depends crucially on the presence of an educated and skilled workforce and on technological improvements that raise productivity. The higher education sector contributes to both these needs: it educates and trains; it undertakes pure and applied research. To evaluate the standing of national higher education systems by providing rankings in four broad areas. These are: Resources, Environment, Connectivity and Output

The rankings are then combined to provide an overall ranking.

Table 6: Higher education report of U12 Ranking of National Higher Education System 2012

Rank	Country	Score
1	United States	100.0
2	Sweden	83.6
3	Canada	82.8
4	Finland	82.0
5	Denmark	81.0
6	Switzerland	80.3
7	Norway	78.0
8	Australia	77.8
9	Netherlands	77.4
10	United Kingdom	76.8
11	Singapore	75.4
12	Austria	73.8

Source: U12 Ranking of National Higher Education System 2012

In table 6 the report prepared by U12 Ranking of National Higher Education System 2012 shows that higher education in United States is in the high and topmost rank scoring 100. Similarly, Finland is in fourth and Singapore is in 11th position.

7. Findings, Conclusions and Recommendation

Findings:

This research focuses on the countries having small in size and limited economic resources and proved that good education policy in the country can change the economic status of the country with the help of good human resources are the main driving force for economic development. Singapore is good example in both a “rapid improver” and a “continuing high performer” to those who believe that large-scale change in educational performance is possible. Similarly, it is very good example of educational success lesson to the countries having small in size and limited economic resources and in the same vein

this is also very good example of educational success who want change their countries in less than one generation.

Some additional lessons from Singaporean and Finish education model are as Vision and Leadership, Alignment of the Education System to Economic Development Goals, Coherence of the Education System, Clear Goals, Rigorous Standards and High-Stakes Gateways, Curriculum, Instruction and Assessment to Match the Standards, High-Quality Teachers and Principals, Strong Central Capacity and Authority to Act, Accountability, Meritocratic values, Adaptation of proven practices from abroad as well.

The Finnish educational system has also succeeded among older age groups. The mean Finnish proficiency scores of people aged 16 to 65 in both literacy and numeracy are significantly above the average of OECD countries participating in the Survey of Adult Skills. Finnish adults are in second place in the Survey of Adult Skills with Japan (OECD, 2013b).

In this study most of the analysts observe that excellent teachers play a critical role inside and outside the classroom and they strongly believe that teachers are the main pillar of developing and implementing good education system in the country.

Similarly, the development of rigorous, research-based teacher education programs that prepare teachers in content, pedagogy, and educational theory is very important in education. Both countries result show that there should be significant financial support for teacher education, professional development, reasonable and equitable salaries, and supportive working conditions are equally important elements of successful education system.

The creation of a respected profession in which teachers have considerable authority and autonomy, including responsibility for curriculum design and student assessment make them ongoing analysis and refinement of practice and make the teaching as a prestigious and first choice of high performers graduates.

Conclusions:

Singapore and Finland have done tremendous progress and leading world education arena by nurturing and cultivating their children providing time basis education, skills with broad-based knowledge using top level and talented human resources by making teaching a prestigious profession.

Rigorous training and professional development of teachers in both countries shows that teaching is the first choice and meritocratic value and strong support and commitment

from government side and the most importantly the alignment of the education system to economic development goals are some key success part of education in both countries

Recommendations:

The countries having limited resources and small in size can apply these educational models and these are very good examples of developing and least developed countries to catch development trend in very short period of time. In the same vein the current research done by Dahal, G. & Nowak, A.Z. (2016), Dahal, G. (2016), Nowak, A.Z., et al (2016) also proved that a good education can plays the significant role in economic growth and socioeconomic development of the country. So developing countries can take maximum benefit by enhancing the best education policy.

Different countries of the world have their own educational policies but educational policies of Finland and Singapore are approved and tested not only words but also in practice as well by making teacher a role model and developing them with trainings and other professional development skills, reasonable and equitable salaries, and supportive working conditions by making teaching a number one choice of high performers graduates.

Adaptation of proven practices from abroad by the developing countries like Nepal which are going to reform their education system and tracking the countries in development path by making education as a tool of development can be best lesson from educational policies of these both countries Finland and Singapore.

The countries which want to change their socioeconomic status in very short period of time with in two decades these are the best example of educational models and educational policies.

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