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**PROYECTO DE CONSULTORÍA PARA EL DESARROLLO DE UNA LÍNEA DE  
NEGOCIOS BASADA EN UN MÉTODO DE ENSEÑANZA ORIENTAL PARA UNA  
EMPRESA CANADIENSE**

**(CONSULTING PROJECT FOR THE DEVELOPMENT OF A BUSINESS UNIT BASED  
ON AN EASTERN TEACHING METHODOLOGY FOR A CANADIAN COMPANY)**

**TESIS PARA OPTAR AL GRADO DE MAGÍSTER EN GESTIÓN PARA LA  
GLOBALIZACIÓN**

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## **CONSULTING PROJECT FOR THE DEVELOPMENT OF A BUSINESS UNIT BASED ON AN EASTERN TEACHING METHODOLOGY FOR A CANADIAN COMPANY**

Rasul Learning Group - a Canadian consulting company in the industry of academic excellence - plans on being a local leader in the field in British Columbia through the establishment of a new business unit for math tutoring for children, using an adopted methodology from Asia.

Currently, the company offers a wide range of mentoring, coaching and academic support for students, schools, and families focusing on academic excellence.

The matter of focus of this project was based on the implementation of the Singapore method; a proven Eastern teaching model, for the learning of mathematics, in children attending elementary school. The used methodology was based on research and field work; using tools for the analysis of value propositions.

Even though the research results showed a strong influence of the cultural factors in the success of the "competence" of the students in Singapore, based on the results from standardized international tests, the approach used for teaching mathematics in Singapore offers a different perspective on the reasoning and problem solving processes for students in their childhood, compared to traditional models and methodologies traditionally used in North America.

The teaching model is based on three pillars for learning: concrete, didactic, and abstract. Singapore method was born out - as the ideal to adopt - based on the following principles: availability of the material and attitude of the country regarding the spreading of the method, the fact that the method was supported by cognitive studies, and positive experiences from some institutions using it in North America.

The results from the market analysis showed an annual market size of CAD \$ 335,880,000. Tutoring service would be considered "supplemental" for children in the private school sector in British Columbia, ABC1 (considering family income and educational level of the parents). The model is based on a face to face mentoring modality, and reinforced by the use of a multi-user platform.

Hence RLG would be a pioneer in spreading this methodology in the region; which is expected to be successful due to its high reputation on providing academic services of excellence. The project adds opportunities to create / strengthen partnerships with the educational community, and attract future customers for the existing services.

The main competitors are Kumon, Sylvan and Oxford. The competitive advantage of the project lies in the value of the methodology (and marketing strategy / communication associated with its spreading), and RLG position in the industry. There were identified some alignment factors (to be generated at RLG) and intellectual property (brand name) issues as the critical ones. Finally, the project showed an IRR of 23% and NPV (18.5%) of CAD \$ 48,485; assuming an investment of CAD \$ 123,628; which will be paid back in the third year. Project execution is recommended - for RLG - having in consideration the identified risks and mitigation actions described in this report.

## PROYECTO DE CONSULTORÍA PARA EL DESARROLLO DE UNA LÍNEA DE NEGOCIOS BASADA EN UN MÉTODO DE ENSEÑANZA ORIENTAL PARA UNA EMPRESA CANADIENSE

Rasul Learning Group - empresa Canadiense dentro de la industria de consultoría académica de excelencia - planea ser líder local en el rubro, en la provincia de British Columbia; mediante el establecimiento de una nueva línea de negocios para hacer tutorías de matemáticas a niños bajo una metodología importada del Asia. Actualmente, la compañía ofrece una gama de servicios de tutorías, coaching y apoyo académico para estudiantes, colegios y familias enfocados en la excelencia académica.

El tema foco de este proyecto se basó en la implementación del método Singapur, un modelo oriental de enseñanza probado para el aprendizaje de las matemáticas, en niños cursando la primaria (básica). La metodología empleada fue del tipo investigativa y en terreno; basándose en las herramientas para análisis de propuestas de valor.

A pesar de que la investigación arrojó una gran influencia de factores culturales en el éxito de la “competencia” de estudiantes en Singapur, a juzgar por los resultados en las pruebas internacionales estandarizadas, el enfoque de enseñanza de las matemáticas usado en Singapur propone una mirada distinta para el razonamiento y la resolución de problemas por parte de los estudiantes en etapa de niñez; en comparación con los modelos y metodologías tradicionalmente usados en norte américa.

El modelo de enseñanza se basa en tres pilares para el aprendizaje: *concreto*, *didáctico* y *abstracto*. El método Singapur fue corroborado - como el idóneo a importar - en base a las siguientes premisas: disponibilidad del material y actitud del país frente a la difusión del método, el hecho de que el método fue respaldado por estudios cognitivos y, experiencias de algunas instituciones aplicándolo en Norteamérica.

Los resultados del análisis de mercado arrojaron un tamaño de mercado anual de **\$335.880.000** dólares canadienses. El servicio de tutoría sería de tipo “suplementario” para niños del sector privado de la provincia de British Columbia, ABC1 (considerando ingreso familiar y nivel educacional de los padres). El modelo se basa en la tutoría forma presencial y reforzada por el uso de plataforma multiusuario.

De esta forma RLG sería pionero en difundir esta metodología en la provincia; hecho que se espera sea exitoso debido a su alta reputación en la provisión de servicios académicos de excelencia. El proyecto agrega oportunidades de crear/reforzar alianzas con la comunidad educacional, y atraer futuros clientes para los servicios existentes.

Los principales competidores son Kumon, Sylvan y Oxford. La ventaja competitiva del proyecto radica en el valor de la metodología (y estrategia de marketing/comunicación asociada a su difusión) y la posición de RLG en la industria. Se identificaron factores de alineamiento (a generarse en las dependencias de RLG) y de propiedad intelectual (nombre de marca) críticos a considerar. Finalmente, el proyecto arrojó una TIR de **23%** y un VAN (18,5%) de **\$CAD 48.485**, asumiendo una inversión de **\$CAD 123.628**, la que se recupera al tercer año. Se recomienda su ejecución, en RLG, considerando los riesgos identificados y las acciones para mitigarlos descritas en el presente reporte.

*A mis padres, Hugo y Alicia, por ayudarme a cumplir mis sueños...*  
*A mis hermanos y sobrinos, por la alegría que dan a mi vida...*  
*A Arturo, por todo lo que compartimos y vivimos a nuestra manera.*

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# **1. INTRODUCTIO**

## **1.1. Company description**

Rasul Learning Group (RLG) LLC is a full service educational consulting firm located in the province of British Columbia (BC), Vancouver, Canada. RLG offers comprehensive and customized advising services for Canadian students going to face the admission processes in North American and British universities. These services involve from the students' goals identification, preparation on taking the entrance tests for universities, colleges and graduated schools; and support on paperwork (application packs submission).

RLG has a 99% success rate on students' first preferences (RLG, 2015).

Additionally, RLG has closely worked with private secondary schools as a support tool for helping counselors and teachers to understand the universities profiles and admission processes, in order for them to prepare their students in advance. Besides, RLG has an area for family business which provides services for succession planning and career development.

Thus, RLG works with students, families and schools on their overall academic goals and plans for the future. RLG has become a premier educational consulting and coaching firm; founded in 2001 by Zahra Firoz Rasul, with a PhD on education and genre studies. The Canadian Press has stated that one of the main reasons of success for RLG lies in its founder, who stems from a family that has been a reference in the educational community in British Columbia. Her parents have participated in the board of the University of British Columbia, Simon Fraser and Aga Khan (Potts, 2015).

With proven expertise in the academic preparation area and career development, RLG currently counts on 14 expert professionals in the tutoring industry and serves more than 170 loyal clients (Potts, 2015).

RLG was incorporated on July 1, 2013; and now acts as an LLC registered in Vancouver, British Columbia.

Being a leader in the excellence education in the British Columbia province, RLG's mission is to provide comprehensive education services based on principles of thought leadership, and excellence for Canadian students.

## **1.2. Business opportunity & Globalization component**

RLG's positioning on the Canadian market has mainly taken place due to the reputation of the Rasul family in the British Columbia educational community, and word-of-mouth.

So far, RLG has been mainly providing services for young and adult clients through its different areas (Figure 1). Although the company has been successful in these segments, the board has the intention of expanding their users' scope and creating a new service to be offered to children; an untouched segment so far. In this way, RLG would cover the entire spectrum of academic preparation.

**Figure 1: RLG areas**



Source: Own elaboration with RLG executives

The Global Tutoring Market will surpass 102.8 billion by 2018. Based on GIA figures, the United States, Europe, and Asia-Pacific (notably Hong Kong, Japan, Singapore, South Korea, and China) are responsible for more than 90% of the global private tutoring market (Forbes, 2012).

Additionally, international statistics continuously position Asian children at the top, in terms of academic performance, considering the subjects assessed.

Furthermore, spending on tutoring generally had grown between 7 and 10 per cent in the last three years (CCL, 2007). As many as a third of Canadian parents hired a tutor for their children in 2007, being mathematics the preferred tutoring area.

Online tutoring tools and integrated resources are becoming a growing market. Technology such as Skype offers more remote tutoring services. However, face-to-face tutoring continues to be preferred for children. It is also worth considering that 67% of parents of young children report using some form of a child care system on a regular basis (Futurpreneur, 2013).

There are several business models into the tutoring industry, some of them performing under franchises system based on the reinforcement of certain subjects aligned with the traditional curriculum. The competition is strong. Players like Kumon, Sylvan and Oxford learning centers reach every day more and more children; because of their economics of scale (reflected in prices). At the mathematics field, the Japanese chain "KUMON" stands out.

The company seeks a market niche on the tutoring industry, at the mathematics area, for young children. As competition is strong, RLG's intention is to innovate on the service to offer.

Eastern education systems are worth watching. For RLG, taking into account a teaching methodology from an Eastern country represents a suitable opportunity for this project; not only because of the known results, but also because of the potential market in

Vancouver. It has been said that Vancouver is the most “Asian” City outside Asia (Vancouver Sun, 2015).

It is known that Singaporean methodology of teaching mathematics promotes a different way of learning for children, at high levels, focusing on enabling children’s minds to think and come up with solutions; rather than just to improve on their grades; involving a great part of face-to-face tutoring at very early ages. In addition, this methodology is being applied to some western schools, and they are reporting positive outcomes so far. Thus, Asian methodologies would work in western (CNBC, 2015).

Therefore, the globalization component of this project has to do with importing an Eastern methodology to be applied on a business unit, into the tutoring industry (for children) by a western company which provides educational services in the private education sector: RLG.

In addition, it is worth taking into account that the business could be expanded to the remaining Canadian districts and the U.S. through franchising. The latter point is out of this project’s scope, though.

### 1.3. Objectives

The **General Objective** of this project is to analyze an eastern teaching methodology for its application to a new business model for RLG, exclusively for Children.

The insight is born out of the requirement of their current clients who have tried out RLG’s services and want to start paving the path for their children towards excellence. This opportunity was later confirmed based on three motivations/assumptions:

- Demand: Parents’ attitude towards hiring supplementary educational services for their children is increasing; and Canada is following this trend. In addition, Vancouver’s population shows a great amount of people of Asian descent.
- Eastern trends on education: There are some schools in the USA and in Eastern Canada, which have been applying Asian Methodologies for teaching; where their results have been positive.
- Expansion: Considering the fact that RLG has historically been successful by word-of-mouth and by the familiarity with the British Columbia educational community, this project represents an opportunity for improving their network, capturing new customers, and enhancing strategic alliances.

Thus, this consulting project seeks to define/confirm this eastern methodology for teaching mathematics, and determine the feasibility of its implementation in a new branch for children at RLG.

In order to help the RLG executives to define the possibilities of setting up this new branch, this consulting project will explore for them and evaluate such elements as

industry context, market size, competition, potential clients, and it will reach a business model aligned with the mission and values of the company.

The following table shows this project's specific objectives and its deliverables.

**Table 1: Objectives & Deliverables**

<b>Specific Objective</b>	<b>Deliverable</b>
Studying cultural factors that have impact on the project. Determine/confirm the eastern learning methodology to be imported	Hand-Out: Singapore Math
Analyzing the global tutoring industry with focus on Canada and the local situation. Defining potential users and the market size, considering demographics and the RLG client profile.	Market Analysis
Determining the main competitors, and analyzing advantages and disadvantages compared to the project. Developing the business model for this new unit.	SWOT Analysis  Canvas Final Business Model
Obtaining recommendations for the execution of this project, in terms of regulatory aspects, intellectual property, and others arising from this consultancy.	Action plans
Developing the cost-economic evaluation of the project.	Cash Flow and its IRR & NVP indicators

Source: Own Elaboration

#### **1.4. Methodology**

The consulting project will consist of a "research and analysis" phase focusing on the choice of method (Singapore), global tutoring industry research, market analysis in Canada, competition, customer demographics and analysis of the company's position in this context. The internal situation of the company will be analyzed using a methodological framework called "SWOT" analysis for strengths, weaknesses, opportunities, and threats; of the company. The analysis makes a comparison between the project and existing firms.

The key success factors of the project will be identified by using facts from official literature, and by acquiring knowledge from RLG's executives during this internship period. In addition, several interviews will be held, with experts on education issues. The value proposition will be continuously checked by using a tool called "Canvas Model", in which it is possible to analyze the proficiency of the business model in progress (Osterwalder & Pigneur, Business Model Generation, 2010).

An action plan for RLG's executives will detail the critical milestones to accomplish when the project starts; followed by an operational plan. To develop the marketing plan the company will get in touch with a Vancouverite marketing agency: "Curve Communications".

The project will include a complete chapter regarding Intellectual Property issues.

An economic analysis will be developed using Net Present Value and Internal Rate of Return tools. A sensitivity analysis for the financial analysis will be presented.

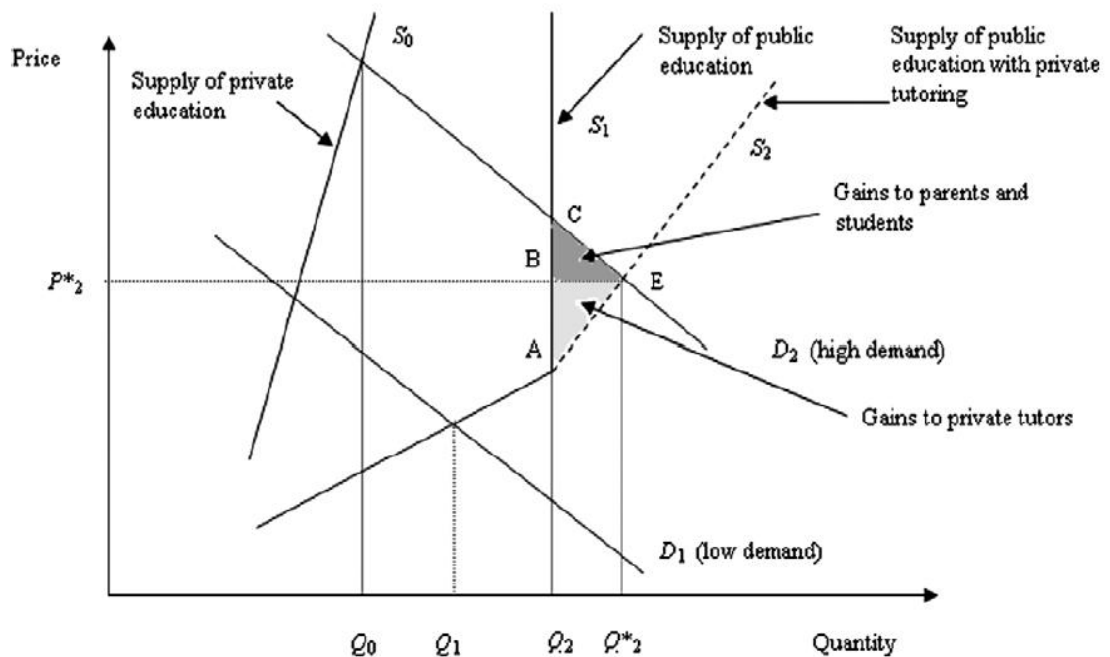
## 2. TEACHING METHODOLOGY

### 2.1. Overview & Concepts

As the field of education is huge, it is worth emphasizing that this project lies in the private side of education. Moreover, it takes into account the private and supplementary education area from a business point of view.

Even though, it is important to understand the interaction between education supply and demand for private tutoring (Figure 2); this report will not look for solving inequity's aspects in terms of education. Moreover, this tutoring project is not presented as a compensatory option for public education, because of the target market.

**Figure 2:** Education Supply and Demand with Private Tutoring



Source: Dang & Halsey, 2008

Figure 2 shows how the supplementary education plays a role in the existing educational context and it quantifies the value given to private tutoring.

In contrast, Julian Dierkes, a sociologist of Asian Education at the University of British Columbia, spoke of the value of private tutoring: “It all seems intuitively very plausible – adding additional hours of instruction every week, students are going to get something out of that, but we don’t really know” (Global News, 2013).

Having stated this, making the difference between tutoring industry and an educational system (of a country) becomes crucial, in order to analyze the context.

- 2.1.1 **Tutoring Industry:** Name for private supplementary tutoring that is offered outside the mainstream education system. The tutoring businesses are fragmented and there are many informal actors. Formal businesses generally are in the form of chains, like Kumon, Longman and Kaplan. Some sociologists and the press name the way in which the tutoring industry performs as a “shadow education”<sup>1</sup>.
- 2.1.2 **Shadow education:** The term shadow education refers to supplemental, privately-funded academic lessons outside of school (focused on the short term goals). Shadow education is a global phenomenon that occurs in all nations with national levels of participation ranging between 10 to over 80 percent. Like a shadow, it generally goes unnoticed and it takes the shape of formal school in curricula and purpose. Shadow education takes many forms. It can be as informal as a senior student teaching a junior student, or a teacher tutoring a student or group of students; moreover, it can be something more formalized and complex such as organized learning centers (Southgate, 2009).
- 2.1.3 **Education System:** While the term *education system* is widely and frequently used in news media and public discourse, it may be difficult to determine precisely what the term is referring to. It represents all the aspects of formal education in a country. The term **education system** generally excludes private schooling. It is referred more commonly to kindergarten through high school programs; in a state, district or country (Education reform, 2013).
- 2.1.4 **Education Methodology:** A set of system of methods, principles and rules for education. For instance, the curriculum, the contents in a subject, the *teaching methodology*, learning methods; and its cognitive aspects involved, classroom size, etc.

This project is about importing a teaching methodology from an eastern country to be applied to a new player (RLG) into the private tutoring industry.

There are some ways for evaluating each education system performance.

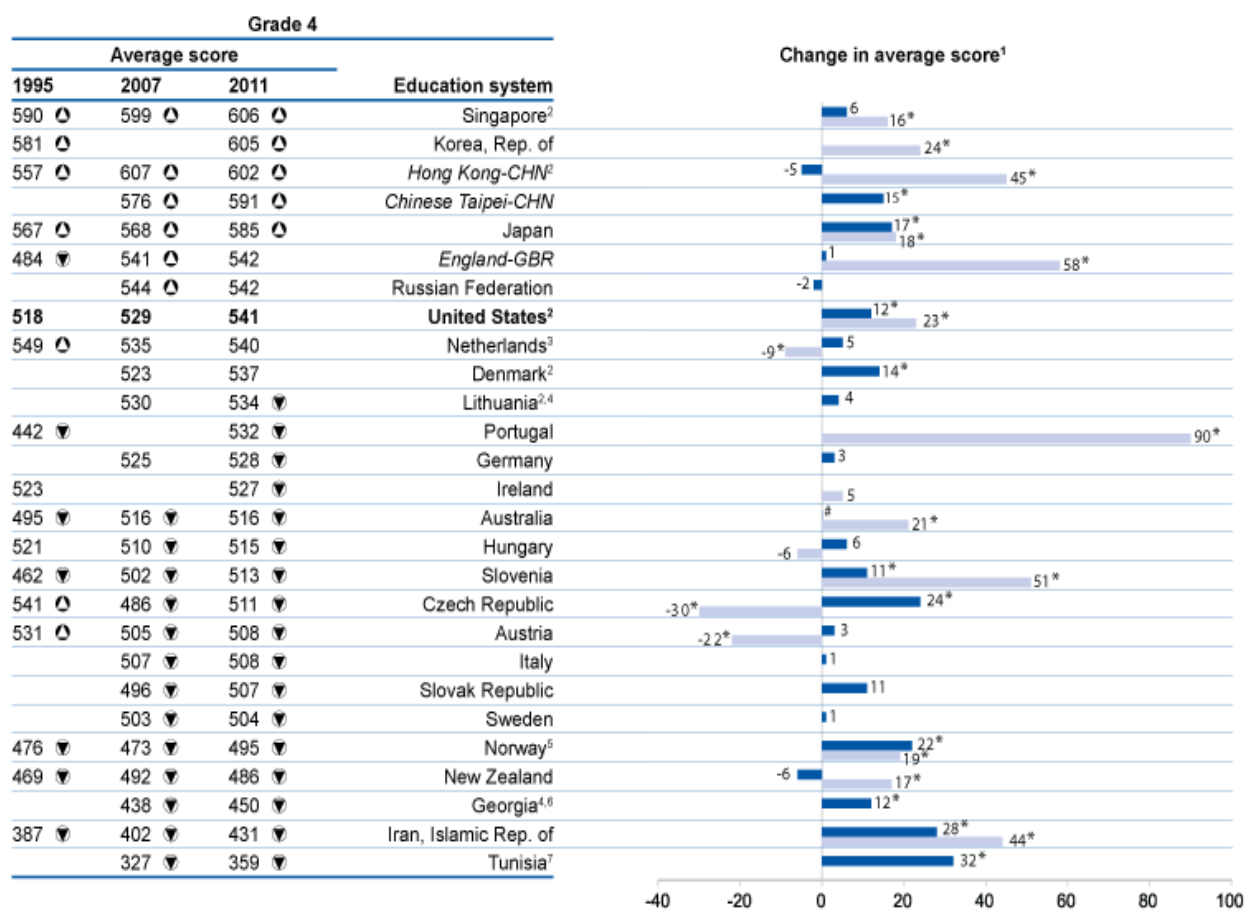
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<sup>1</sup> Communication with Mr. Julian Dierkes at the University of British Columbia; August 19<sup>th</sup>, 2015.

TIMSS is a series of international assessments of the mathematics and science knowledge of students around the world. The participating students come from a diverse set of educational systems (countries or regional jurisdictions of countries) in terms of economic development, geographical location, and population size. In each of the participating educational systems, a number of students is evaluated. Furthermore, for each student, contextual data on the learning conditions in mathematics and science is collected from the participating students, their teachers and their principals via separate questionnaires.

The last TIMSS for Grade 4<sup>th</sup> students took place in 2011. Table 2 shows the average score by education system as of 1995.

**Table 2:** Change in the average score (mathematics 4th grade students), by education system.



[2007-2011 in blue and 1995-2011 in light blue]

Source: TIMSS website, 2015

According to the table 2, eastern countries rank at the top, being the top three: Singapore, Hong Kong, and Korea. Therefore, the next point of this report will explore the success factors of Eastern education systems.



## 2.2. Eastern Education System Performance

In Table 2, it is observed that eastern education systems stand out and they are continuously highlighted. Thus, there must be common factors for eastern education systems that are impacting on the students' performance.

There are some cultural-related issues and manners that come across when analyzing an eastern education system performance.

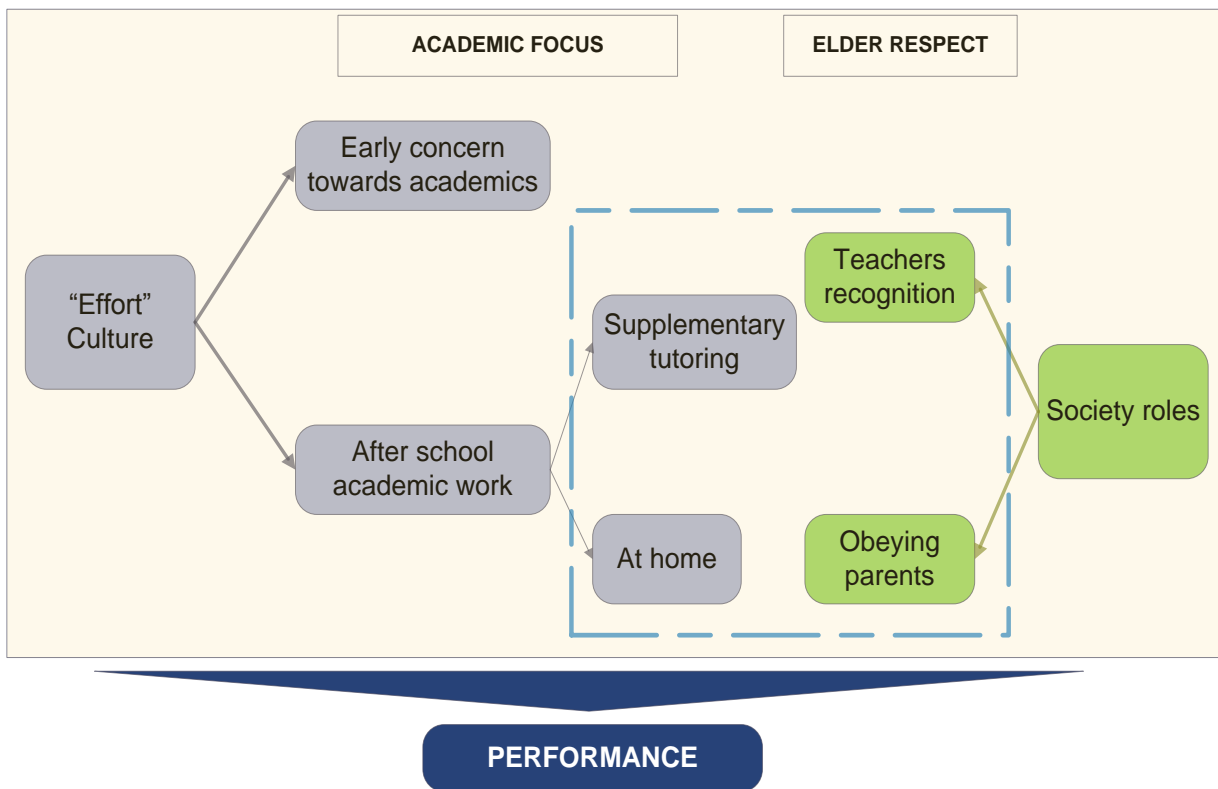
The following points would be the main general aspects lying in the high Education Systems performance, in the studied Asian countries.

- Early focus on academics issues. Asian education puts a lot more emphasis on academics early on, especially in mathematics (Ken Kao, 2014).
- Supplementary education (also known as “shadow education”) statistics in Asian countries. In the republic of Korea, nearly 90% of elementary students receive some sort of shadow education; and in Hong Kong, China, about 85% of senior secondary students do so (Bray & Lynkins, 2012).
- Social context. Children respect their elders and obey parents. Besides, Asian culture enhances the society roles. Even though parents actively reinforce their children at home, there is no doubt about the professor proficiency and authority (Greatschools, 2014). This way, parents align with the class objectives, maintaining the focus on the formal academic results.
- Academic involvement. According to an ETS report (ETS, 2007); Asian-American students also watched far less television, played far less video games, and had higher parental involvement in school than did their White, Hispanic and Black counterparts. Therefore, they would spend more time with books and doing homework.
- Meritocracy belief (Greatschools, 2014). The culturally based belief that “effort” leads to achievement, which confirms the academic involvement point.

As many of these aspects are intertwined with each other, there have been 2 common factors identified among Asian Countries as responsible for their academics results, which have to do with effort culture and society roles.

Figure 3 shows an explanatory diagram about the interaction of these factors affecting an eastern education system performance. It is necessary mentioning that this diagram shows common factors among Asian countries, considering the education systems ranking at the top in mathematics (Table 2). Aspects like self-confidence degree, nationalism sentiment - and the psychological aspects associated to it - are being overlooked due to the variety of results, in this exploratory work.

**Figure 3:** Factors interaction for achieving high academic results (Asian countries)



Source: Own elaboration

### 2.3. Teaching Methodology Selection

As stated, children from eastern education systems would do the best at mathematics because of some cultural factors.

On the other hand, it has been said that the school mathematics curriculum could also be responsible for the high achievements on mathematics.

When looking for mathematics curriculum of any education system, Singapore approach takes an outstanding place.

After its independence in 1965, Singapore embarked on an effort to develop a highly educated citizenry. Various education reforms were initiated and in 1980 the Curriculum Development Institute was established, which developed the Primary Mathematics program. This program was based on the concrete, pictorial, abstract approach. This approach, founded on the work of a renowned cognitive American psychologist Jerome Bruner, encourages mathematical problem solving, thinking and communication. Steady improvements in math proficiency among Singaporean students in international assessments were observed worldwide (through international statistics, like the TIMSS). Then, in the late 1990s, the Singapore's Ministry of Education opened the elementary school textbooks market to private companies. The approach behind the collection of

these books is called “Singapore Math”. From this time on, Singapore Math has gained a highlighted position in United States, in the education field and tutoring industry.

Singapore mathematics lessons begin by engaging students in hands-on learning experiences followed by pictorial representations, which help them form a mental image of mathematical concepts. This is followed by an abstract stage, where they solve problems using numbers and symbols. This approach makes the learning of mathematics fun and meaningful, and helps students develop positive attitudes about math (Jackson, 2012).

Typical U.S. math textbooks are thick and heavy, and they cover many topics superficially and usually in an incoherent way. In contrast, Singapore textbooks focus on fewer topics, taught in-depth for mastery, carefully building mathematical understanding in a systematic way (Jackson, 2012).

Therefore, despite the fact that cultural factors matter significantly when taking into account the eastern students’ performance in mathematics, Singapore Math represents a valuable opportunity to import from, confirming the company’s intention, due to the following points:

- ✓ Material Availability: material language (English).
- ✓ Country’s willingness to spread their methodology.
- ✓ The curriculum is supported by cognitive learning studies.
- ✓ Singapore Math gaining position and recognition in North America (US).

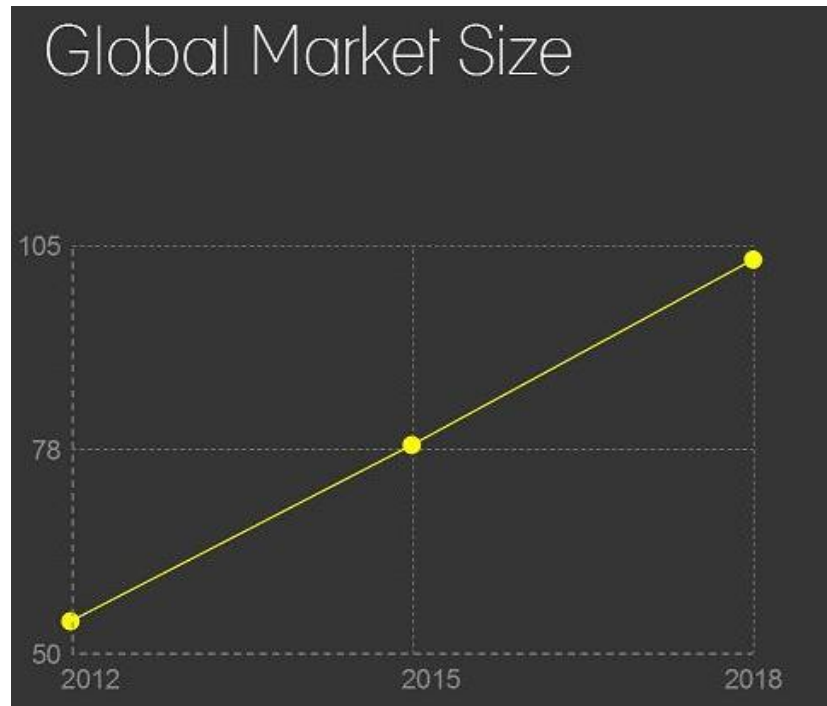
As a result of this consulting project, an explanatory document about Singapore Math was created by the author of this thesis project, and revised by RLG’s executives. It discusses the value of this methodology and the motivations for its implementation in Vancouver, by RLG (Appendix 1 – Singapore Math Hand Out).

### 3. MARKET

#### 3.1. Tutoring Industry at glance

The private tutoring market is set to grow. In, 2012, the market size was \$54 billion. In 2015, it is predicted to exceed \$78 billion (Edchron, 2014). The Global Tutoring Market will surpass 102.8 billion by 2018 (Forbes, 2012).

**Figure 4:** Global Tutoring industry growth



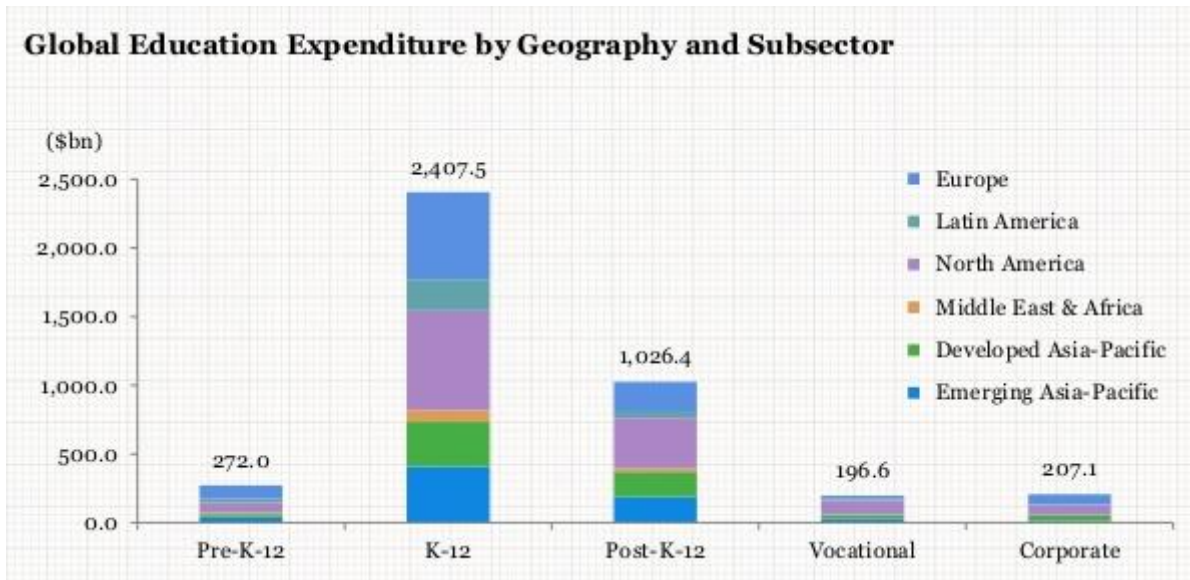
Source: Edchron, 2014

Based on GIA figures, the United States, Europe, and Asia-Pacific are responsible for more than 90% of the global private tutoring market (Forbes, 2012).

The main reasons cited by the report for the meteoric growth of the private tutoring industry were:

1. The unique need of individual students that the education system cannot cater to, and
2. The growing desire for parents to equip the best education for their child in the global economy of today.

**Figure 5: Global Education Expenditure by Geography and Subsector**



**Note:** K-12 represents all the stages from kindergarten to K-12

Source: Education Snapshot, 2011

Figure 5 confirms parents' concern about their children readiness for superior schools (universities, colleges). Private tutoring will give each child the best possible chance to get good grades and secure a better, more comfortable future (Edchron, 2014). With private tutoring industry now becoming a shadow education system, this is great news for effective education businesses. The individual attention in private tutoring also offers students help, in order to grow in character – gaining confidence as they understand the academic concepts being taught (Edchron, 2014).

The global tutoring industry has few entry barriers, making it easy for small operations to set up a business and attract clients; lots of them performing in an informal way. The educational service market is large and growing with several types of opportunities available for franchises. As of 2008, there were approximately 58,113 establishments in the industry which earned a combined \$19.4 billion dollars in revenue. The industry is largely fragmented – the fifty largest companies represent just 30% of the total revenue in the industry (Franchisehelp, 2015).

Online platforms are becoming a growing market for young/adults tutoring. Some of them ask for an initial fee or simply perform as non-profitable entities, like the massive firm Khan Academy.

The vast majority of revenue in this industry comes from tuition or program fees. Gross profits tend to range from 60-90% depending on the location and particular course.

Tutoring is a popular franchise option, either home-based or on-site location. The home-based model employs the franchisee as a broker who acts as an intermediary between educators and teachers – who provide tutoring – and students – who receive instruction in any number of subjects. Examples for this first case are “Club” Z tutoring and “Creative”; and, for the last one are “Kumon” and “Huntington Learning” (Franchisehelp, 2015).

Some franchises are geared towards younger children and provide a combination of child care and education. These franchises provide after school child care for working parents while also offering education – early education programs for the youngest kids, with math and reading, and other school subject skills for kids who are older but still too young to be left on their own (Franchisehelp, 2015).

As an example, across North America, spending on tutoring is estimated at \$6-billion dollars annually, although exact figures are hard to come by because the business is difficult to track (CBC News, 2009).

### **3.2. Tutoring Industry in Canada**

The number of formal businesses that offer comprehensive tutoring services has grown between 200%-500% in major Canadian cities over the past 30 years, a growth that is independent of public school enrolments or economic trends (Aurini and Davies, 2003). The tutoring business in Canada is fragmented and it is mainly shared by well-known companies such as Sylvan, Oxford and Kumon. Successful brands in this industry have built strong reputations through word of mouth and effective advertising. These centers often offer more than just reinforcement in problem areas. They usually focus on diagnosing a student's weaknesses and offering individual support.

These companies have over 500 centers in Canada alone. Independent models like Calgary tutoring center are also springing up (CBC News, 2009)

The demand is strongest in mathematics, then Reading/Writing, and, finally, Science (CCL, 2007).

Aurini describes the growth in supplemental education as a "revolution," created largely by educated parents who feel pressured to help their children compete for the best spots at university. These parents aren't against public school education. They just want more for their kids (Futurpreneur, 2013). Most parents who hire tutors (73%) estimate that their children's overall academic performance is in the A or B range. Thus, the majority of tutors are hired by parents of children whose academic performance is from average to high achieving (CCL, 2007).

According to the Canadian Council on Learning (2007), spending on tutoring generally has grown between seven and 10 per cent in the last three years and expectations are that this trend will continue. Household income is the strongest predictor of parents' decisions to hire tutors. Families with annual household incomes greater than \$100,000

are almost three times more likely (2.9 times more likely) to hire tutors than families making less than \$40,000 (CCL, 2007).

Therefore, housing spending on education will also be considered.

As many as a third of Canadian parents hired a tutor for their children in 2007 and Face-to-face tutoring continues to be preferred. Besides, 67% of parents of young children report using some form of a child care system on a regular basis (CCL, 2007).

This desire for tutoring in Canada is intriguing in international context. Scholars typically trace international variations in the market demand for tutoring to countries which ask for post-secondary entrance exams. In contrast, Canadian universities lack entrance exams, and are not arrayed on a steep prestige hierarchy as are universities in Japan and the United States. Yet, tutoring businesses are growing substantially in Canada (Aurini, Davies, 2003).

### 3.3. The Vancouver market

In Vancouver, three businesses have been identified as having strong presence: **Kumon**, **Sylvan** and **Oxford** learning centers. There could be more as some tutors do not readily advertise. It is worth mentioning that they do not state Singaporean-like approaches.

Some independent units were also identified during this consulting (considering those which tutor on mathematics) by witnessing firsthand among the main neighborhoods in Vancouver and by browsing in the internet. Most of them offer personalized classes and they mainly advertise through social media.

Fees vary dramatically, but an average cost is probably around \$100 per student a week.

Cultural factor also plays an important role. According to Prof. Dierkes, 2013, advertising strategy of supplementary education in Vancouver suggests a disproportionate interest among Asian-Canadian populations – or at least the perception of such interest by supplementary education providers. It is noticeable, as well, that many homepages appear to have distinct Asian branding strategy, often displaying Asian-looking children, student and teachers (Dierkes, 2013).

#### 3.3.1. Characteristics

In general terms, this market is highly dynamic and difficult to quantify. As parents prefer face-to-face way, there might be plenty of demand for unformal tutoring at home which is hard to track. Nevertheless, it is clear that the main chains are dominating the demand because of their economics of scale reflected in their continuous discount prices.

The characteristics of the markets are given by parents' drivers and demographics issues to be detailed on.

The amount of users will finally define the potential market, which, in this case, consists of the amount of children targeted.

Between half and one-third of a Grade 5 classroom in Vancouver, are likely to be taking some form of supplementary education (Dierkes, 2015).

**3.3.2. Market size**

To define the potential market, there will be selected specific cities within the “Greater Vancouver Area”.

As the final users of this business will be children from primary education (elementary school), population projections of children are considered (ages 5-9). Another discriminatory parameter, for this first selection, will be Household Income.

Children Population: Official projections of population based on the last census (2011) shows that there are **122,052** children in the Greater Vancouver in 2015 (Appendix 2). The population varies from 0 to 31.334 individuals (5 to 9 years), considering the 39 main cities belonging to the Greater Vancouver.

Average Household income: The following locations show the highest household incomes.1° Balcarra, 2° Anmore, 3° West Vancouver.

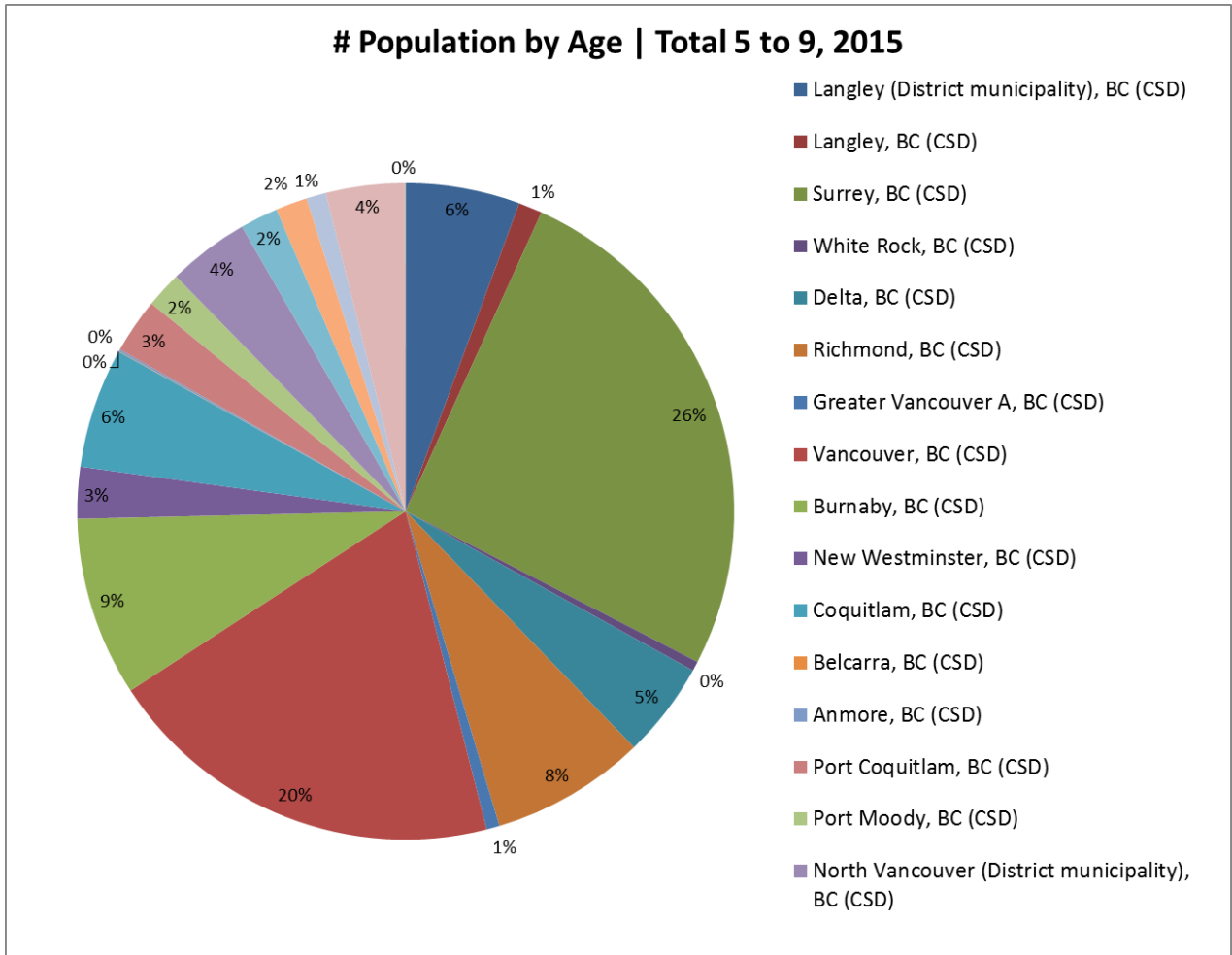
If it is considered “the core” of the greater Vancouver area, Children population is **121,432** selecting 20 subdivisions (Figure 6 – Figure 7).

**Figure 6:** Main subdivisions for Census





Figure 7: Target children population



Source: Own elaboration using official data from Canadian Demographics Official Financial Post Market, 2012

Having selected the subdivisions in Greater Vancouver, the following parameters will be included to determine the market.

**a) Market size from demographic perspective**

**% Household Income above \$100,000:** As the statistics confirm the fact that *families with annual household incomes greater than \$100,000 are almost three times more*

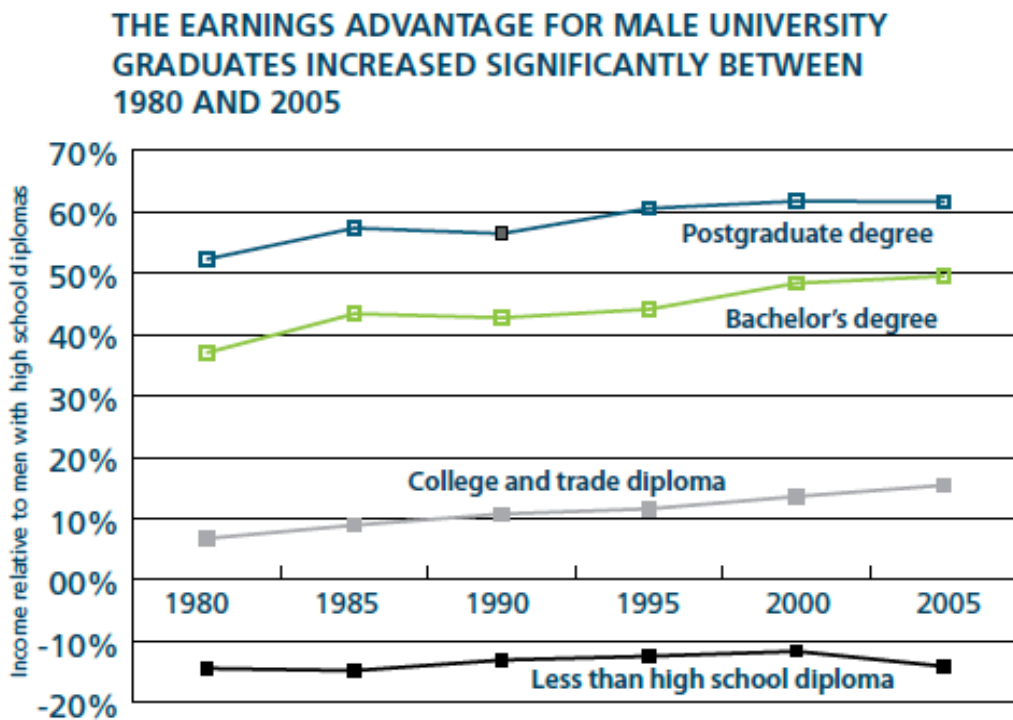
likely (2.9 times more likely) to hire tutors than families making less than \$40,000 (CCL, 2007), this amount will be quantified.

In each city (subdivision), there is a portion of all households which applies to Household income > \$CAD 100,000 (annual basis). The percentages were taken from Canadian Demographics Official Financial Post Market, 2012.

**Parents' Educational attainment:** As literature says - when discussing the drivers for hiring tutoring services for children –, “educated parents are worried about their children future”. It is reasonable to assume that parents have a sort of university degree or higher. In addition, greater incomes are usually associated to better academic education.

University graduates, Census data confirms (AUCC, 2010), see their income increase more rapidly and consistently throughout their careers. The incomes reported by a University degree (Bachelor and post graduate), are historically around 50% above high school or college diploma (Figure 8). This fact allows this study to consider “Education attainment” as a discriminatory factor to get the demand.

**Figure 8:** Effect of a degree in earnings (income)



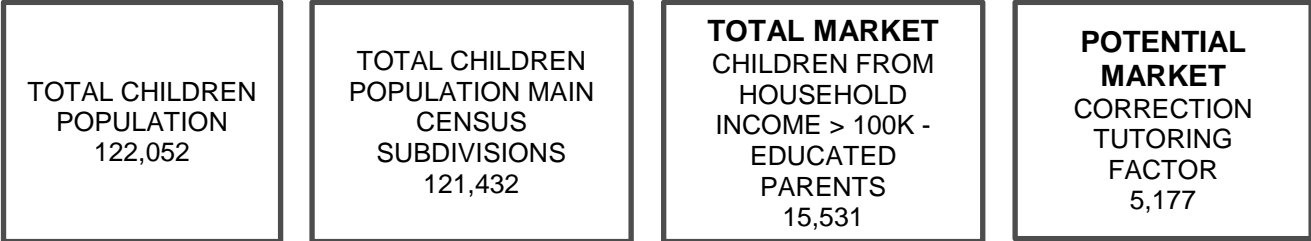
Source: AUCC, 2010

For the reason mentioned at the beginning of this point, High income plus the education attainment of parents have to be accomplished together, in terms of calculations (Appendix 2).

Finally, a correction-tutoring factor of 1/3 will be used because of the conversion [tutoring effective hiring] rate.

**Amount spent on education by household:** It speaks about the people’s expenditure on education; therefore, it gives an idea about the monetary value given to academic issues. It confirms the “income” assumption. The more they earn, the higher their education expenditure is (Appendix 2). Appendix 3 shows the family group number to reach the assumption: “1 household equals 1 child at the target age”.

**Figure 9:** Market size (total children)



Source: Own elaboration

**b) Market size from academic performance perspective**

As the service is for children proficient in mathematics, it is necessary to analyze the market from the academic perspective. As Singapore Math represents a new way of learning mathematics, children must be proficient at this area.

**Schools presence/performance:** Private schools number would tell us where the target children are and how they are doing. The last report from Fraser Institute about the elementary schools’ ranking showed that private schools have the highest mathematics scores (Fraser Institute, 2015). This report shows the schools and the amount of students proficient in mathematics.

There were found **16,793** children belonging to private schools which continuously show high scores at “numeracy”. This result is consistent with household and parents academic attainment model, because they are coming from the private sector. Besides, they are probably including children from families with businesses which do not state earnings in terms of income.

**Table 3:** Market size based on children mathematics performance

Education District	# Children Proficient at mathematics
Langley	1,091
Surrey – White Rock	3,852
Delta	601.263
Richmond	842.09
Vancouver	5,614.83
Burnaby	1,260.70
New Westminster	385.12
Coquitlam, Annmore, Belcara	672.56
Port Coquitlam – Port Moody	307.59

North Vancouver	947.52
West Vancouver	471
Pitt Meadows - Maple Ridge	747
<b>TOTAL MARKET</b>	<b>16,794</b>
<b>POTENTIAL MARKET</b> (after applying tutoring factor)	<b>5,598</b>

Source: Own elaboration (official data from Fraser Institute Schools report, 2015)

To value the market size, this project will consider the schools performance perspective (b) because it stands for actual enrollments, being consist with the income/parent education perspective. In addition, a Canadian study of tutoring shows that among attitudinal variables, again, the largest effect –on hiring tutoring services - is desiring private school. That is to say, parents who express a desire for private schools are more likely to desire tutoring than are parents who do not share a desire for private schools (Davies, 2002).

To evaluate the annual market size, this project will consider the price/hour charged by the Oxford Learning center (average from 45 to 55 CAD), because it is a Canadian firm, and it has stated a standard fee.

Assuming a tutoring service for 6 months, twice a week, the results for the market size valuation are presented in the following table:

**Table 4:** Annual Market size in \$CAD

# Children	Tutoring hour (\$CAD)	Hours/year Child	Market Size (\$ CAD)
5,598	50	1,200	335,880,000

Source: Own elaboration

#### 4. STRATETIC ANAYSIS

RLG will meet different competitors which have to have the following features:

- Tutoring Mathematics to children from elementary schools, especially from the private ones and,

- Performing in learning centers (Face-to-face approach)

#### 4.1 Key Competitors / SWOT Analysis

The main competitors are listed in the table below.

**Table 5:** Main tutoring companies – that include math tutoring for children- in Vancouver

Company	Description	Price for Math Program
KUMON	Math & Reading Learning Centers. Japan originated franchise company, whose mission is to help in the reinforcement of children from public schools, middle and upper levels. There are 21 locations (fact from 2 <sup>nd</sup> quarter, 2015). - Self-learning focus and use of the textbooks according to the level.	120 CAD first month (6 months of contract)  Twice/week (half hour each)
Sylvan	Math, Reading & Writing Learning Centers. With areas on science and technologies. North American based franchise company. In 2013, it was recognized as the number one franchise by the American Association of Franchisees & Dealer. It focuses in medium and upper levels. There are 12 locations (fact from 2 <sup>nd</sup> quarter, 2015). - Personalized-learning. Reinforcement of the known STEM skills. Robotics, Lego and iPads are used under licenses. - Subjects aligned with standard curriculum.	260 – 320 CAD monthly  Twice week
Oxford	A growing Canadian Franchise company, with over 10 learning centers in Vancouver (Fact from 2 <sup>nd</sup> quarter, 2015). Middle and upper levels.  It is focused on assessing the child’s potential by a “Dynamic assessment” and, tailoring a personalized program based on the “dynamic conditions” (aligned with the Canadian curriculum core).	360 CAD monthly (45 – 55 CAD / hour) <sup>1</sup> Twice/week
My Grade Booster tutoring services	Personalized, at home tutoring program. They stated that could teach by using Singaporean books, in very special cases in which children are very good at mathematics.	45 CAD/hour

Book Tutor	Smart	Reinforcement of traditional subjects	130/month Once/week
Ikoma Abacus		Its owner is a Japanese woman who started to promote Eastern methodologies of concentration and skills development; by using a calculating instrument called “Soroban” (abacus). She is incorporating more eastern approaches to their functions.	Differentiated fee

Source: Own elaboration with official data from newspapers and private interviews.

<sup>1</sup>Global CBC News, 2013

From now on, this report will be calling this project “RLG Singapore Math Center” (Vancouver). RLG has to make sure this name can be used, though. This project will also be covering aspects related to Intellectual Property issues.

### TOP Tutoring centers (compared to RLG Singapore Math Center)

#### Strengths

- Brand awareness.
- Well established and several locations.
- Economics of scale by franchising.
- Success on improving children’s grades.

#### Weaknesses

- Seen as “Massive”.
- Do not state any “proven approach”.
- Success on learning is put into doubt by tutoring experts in Vancouver.

#### Opportunities

- Continue expanding their services and get more buy-in by wealthy and achieving families.
- Create new areas focused on improving learning skills rather than the grades themselves.

#### Threats

- May decide to undertake new Singaporean-like approaches.
- Offer online tutoring with parents support.

## RLG Singapore Math Learning Center

### Strengths

- Brand awareness by word of mouth.
- Well-known as a full educational and comprehensive educational service provider (know-how on getting achievers of excellence).
- Familiar with local community.

### Weaknesses

- Will need space for performing as tutoring center.
- Does not have IT issues covered at the corporate level.

### Opportunities

- Position as a leader in the entire academic and professional growth area toward excellence.
- Make learning exciting not only for children, but also for parents and teachers.
- Being the pioneers in bringing a unique methodology based on the Singapore approach.

### Threats

- High schools may begin to offer in-school Singapore Training and; therefore, parents may feel that private tutoring would not be necessary. Besides, they might want to supplement other areas and/or activities for their children. Example: sports could become competitors. For this, they should coach teachers, too.
- Get certification or accredited teachers (availability of standardized resources) could be overwhelming.
- Other learning methods flourishing.
- Licenses and copyright issues (Intellectual Property protection).

## **4.2 Target Market**

The project is focused on offering the service to consumers (ABC1).

Target Market profile for RLG Singapore Math Tutoring:

- Parents with children at very early age [4 to 9] (demographics)

- One or both parents holding a degree -parents who care about education (demographics)
- Family income: \$ 100 k plus (demographics)
- Parents desiring that their children attend university (lifestyle)
- Parents feeling overwhelmed with demands placed on their time with increased competition for university admission (behavior)
- Businesses families
- Located in high levels area (scope)
- Teachers and academic-based professionals (focused on excellence)

**Target market:** 3.8% of the potential market

#### 4.3 Keys to Success & Value Proposal

A consistent networking strategy and visibility program in the area of the business location will be essential to develop exposure to parents.

Emphasizing the personalized program, according to the child level/needs through ongoing training, is crucial to succeed.

Communication and educational-community relationships development will be a priority marketing strategy (being involved in education-related activities). Point 7 of this report will cover a complete chapter about communications and marketing plans.

As part of this strategic analysis, it is worth mentioning that as the need of teachers' proficiency becomes critical, the project will involve training teachers, too. As RLG is going to be the first-mover (player) in Vancouver, it would have to target teachers in a strategic way.

As the Singapore methodology begins to spread in Vancouver, and RLG will be keeping in touch with Singaporean-based entities, *RLG Singapore Math Center Vancouver* will become the only one center associated with Singapore Math in this region (in a way that goes beyond the purchase of books). Therefore, support (buy-in) from the private and public sector is a good move too. The project might include providing teachers, from the public sector, with scholarships.

Therefore, the following critical factors are identified:

1. Location (access vs costs)
2. Academic staff (willing to integrate Singapore Math to their functions)
3. Technology (platform and systems of communications)
4. Focus on learning (culture)
5. Marketing strategy focused on education community and benefits of the method.

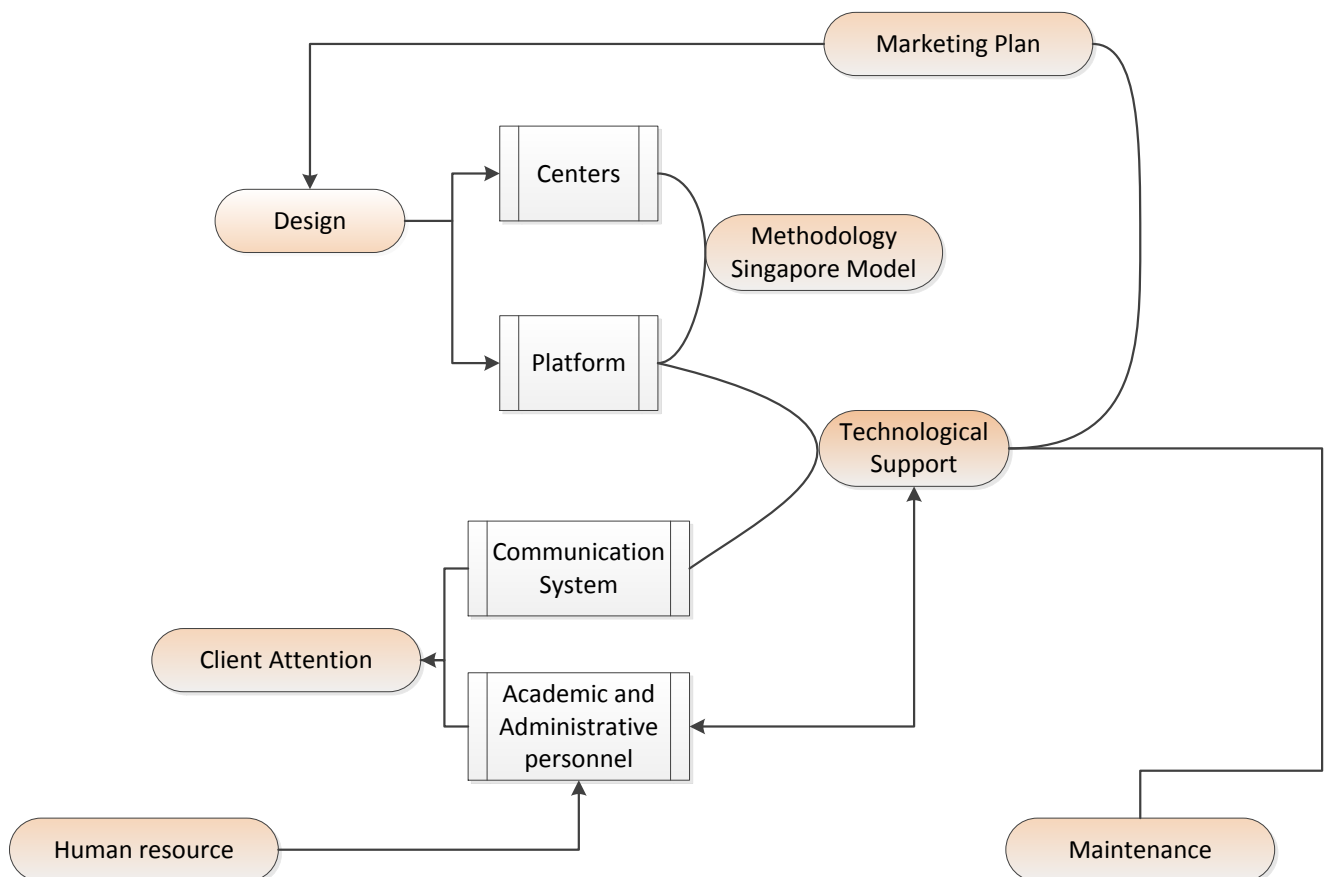


**Value proposal:** a combination of a face-to-face and self-learning approach under a Singaporean model. The model to generate value to the final client is outlined as follows:

Primary activities:

1. Design of the center and the active platform for dynamic and multiuser learning. It has to be aligned with the marketing strategy.
2. Client attention: excellence client treatment, with a continuous feedback to parents. Usage of mobile applications to notify parents is an example of this. Immediacy is also a differentiator for this service. They should stress that they are offering interaction and response, not merely expertise.
3. Methodology: the learning approach will state Singaporean methodology. However, a “facilitator” will develop the distinctive approach; then, it will be subjected to continuous analysis and feedback.
4. Human resources: For Academic and Administrative personnel. It has to generate a culture of learning.
5. Technology (functionality of the platform and its maintenance, upgrading, etc).
6. Marketing plan
7. Maintenance of facilities and issues regarding technology

**Figure 10: Value Chain Proposal**

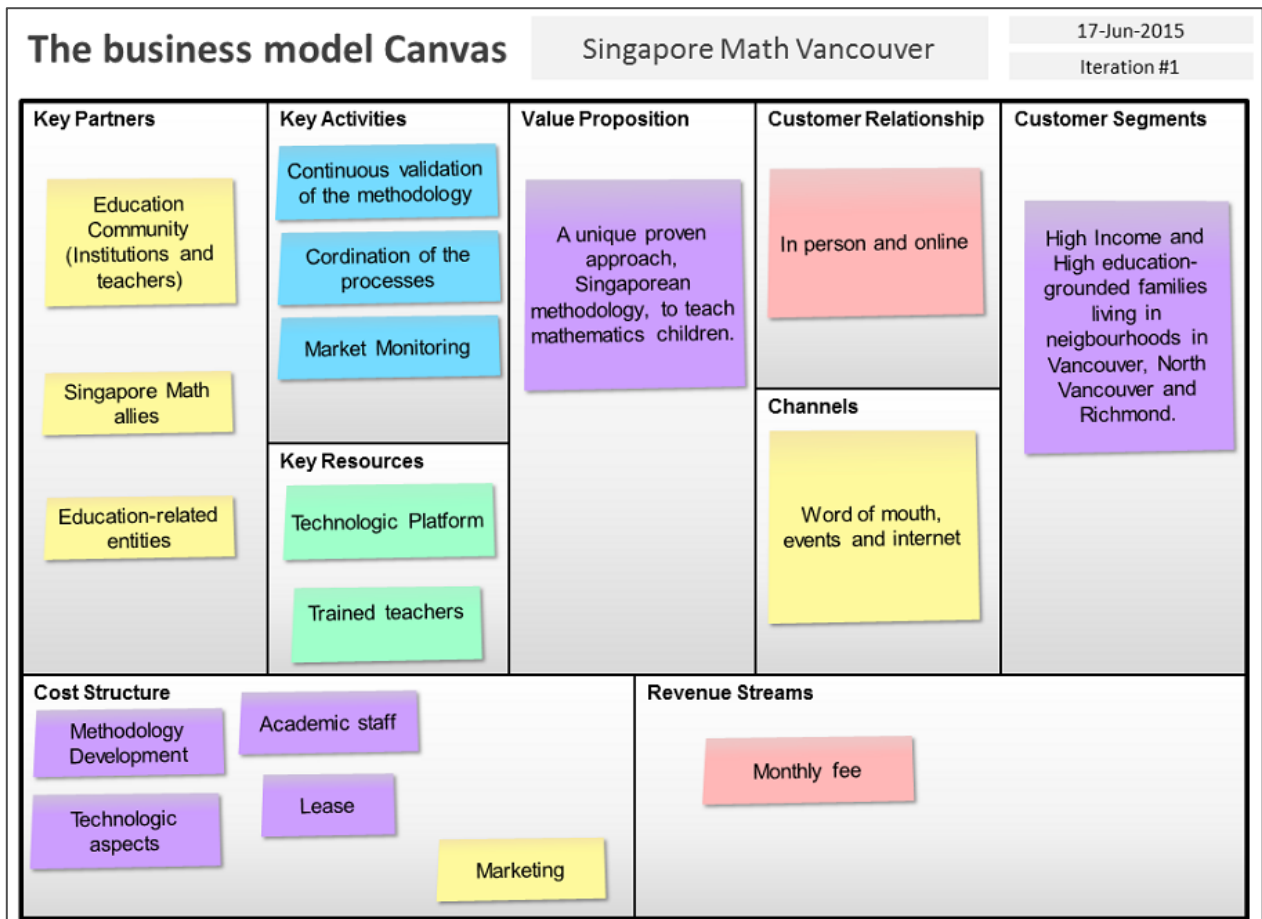


Source: Own elaboration for the purpose of this study.

Having defined, in general, these critical activities, it is possible to summarize that the project has 3 main components:

1. **Service** with focus on client service and the processes associated with the Singaporean-based methodology, which is the central value proposition.
2. **Promoting & Communication:** a good communication plan is necessary for the success of this project (buy-in by key schools, institutions and professionals in the education field). In addition, it will help to reach partners or allies at the local and at the international level.
3. **Technology** will be used not only for keeping in touch with parents, but also for the interactive learning process, the coordination of resources in the center, and the records for RLG (feeding the Learning Management System).

**Figure 11:** Canvas Model for the project



Source: Own elaboration for the purpose of this study.

The project will be putting a lot of effort into networking and engaging in community events. However, it is important to consider that the product has to be addressed to segments identified in the Market research part of this study. This way, the tutoring center will avoid being seen as the majority of the massive tutoring centers are seen. The uniqueness of the method has to play a crucial role in branding it.

This project's strength lies in the experience in academic issues and networking at RLG. The Singaporean methodology has been proven in North America but it is possible to find conflicts when children are used to being taught by a routine model (Canadian/North American curriculum). The facilitator should continuously do analysis of the psychological factors involved, the curriculum, with a focus on enhancing the learning process. "To successfully implement Singapore Math, three critical aspects have to be properly managed: professors' abilities (to perform under the pentagon model), texts being used and, manipulatives use<sup>2</sup>".

The availability of teachers and their suitability to teach at higher levels are going to be important issues to consider. It is necessary to train and coach the teachers, assess them and engage them. Certifications and Partnerships with Singapore-based institutions will be needed. They will be covered in chapters 7 and 8 of this report.

## 5. ACTION PLAN

This chapter gives RLG a guideline to implement this project. The following section will describe critical issues to catch up with the action plan's steps.

As the project will have to involve hiring new people and it has an important content component (regarding Singapore Model development), RLG will have to have an experienced party, ideally at the board, for validating the model, reviewing the curriculum, etc. This party is called "Education or Academic Party" which keeps continuously in touch with the incoming **Facilitator**. There will be an "Academic head" position working closely with the Facilitator.

An Operations party will validate the administrative system with the incoming **Operations manager**. Most of these functions are associated with costs and coordination. Therefore, it is recommended that the Operations party be an executive with management and accounting functions.

As technology plays an important role in this project, it has to be seen as an opportunity for RLG to update their technological issues since currently they do not have any IT area at the corporate level. This project suggests hiring an **IT & Marketing specialist** responsible for all technological issues. Besides, this person could become a CTO.

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<sup>2</sup> Miguel Urbina (interview). Mathematics teacher, Singapore Math trainer. November 24<sup>th</sup>, 2015.

The approach is focused on knowledge retention (keeping all the information, knowledge, know-how and content in the corporate level); and continuous feedback of the learning approach, in charge of the Facilitator.

Operations Manager will leave the legacy to an administrative position in the learning center (central desk person), and then he/she could switch to corporate in order to undertake accounting and financial functions.

IT & Marketing expert functions begin more focused on the systems development (platforms, website, systems integration, etc.). Her/his abilities and skills at Marketing have to be proven, too. This, because this person is expected to take on marketing functions in the long-term. That is to say, IT & Marketing expert will start with the development and integration of all the systems outlined in this project. Meanwhile, an external agency will carry out the marketing tasks outlined in the project. Once the learning center is running, this person will be in charge of marketing strategy dynamics forward on.

Thus, the action plan will be focused on three areas: Academic or educational, Operations and Technological (which includes IT & Marketing areas). It will be divided into three phases: Alignment at RLG, Process flow for initial set up, and running.

### 5.1 Alignment at RLG

To start off, defining a project leader is crucial.

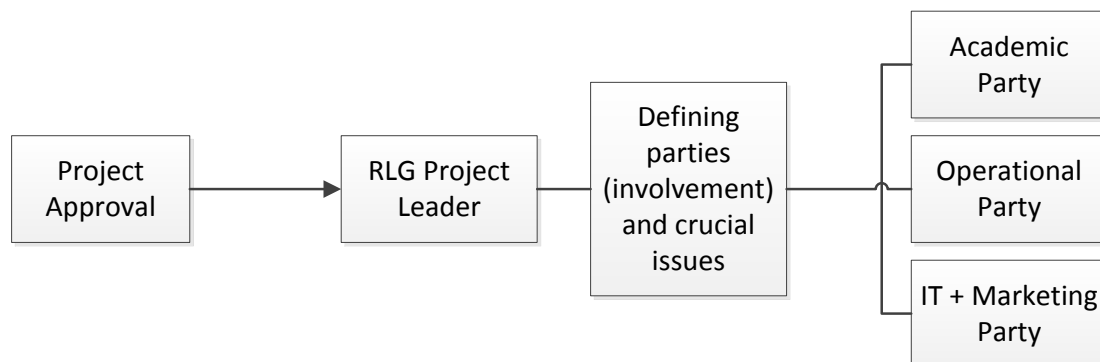
In this first stage, it is necessary that RLG defines which ones are the critical milestones to validate.

Note: The Project Leader could be one of the parts representatives (seniority).

Project leader defines the critical aspects of involvement, like the validation of the logo, lease, IP issues, communication plan, etc.

The parties will be defined.

**Figure 12:** Scheme for "Alignment" at RLG



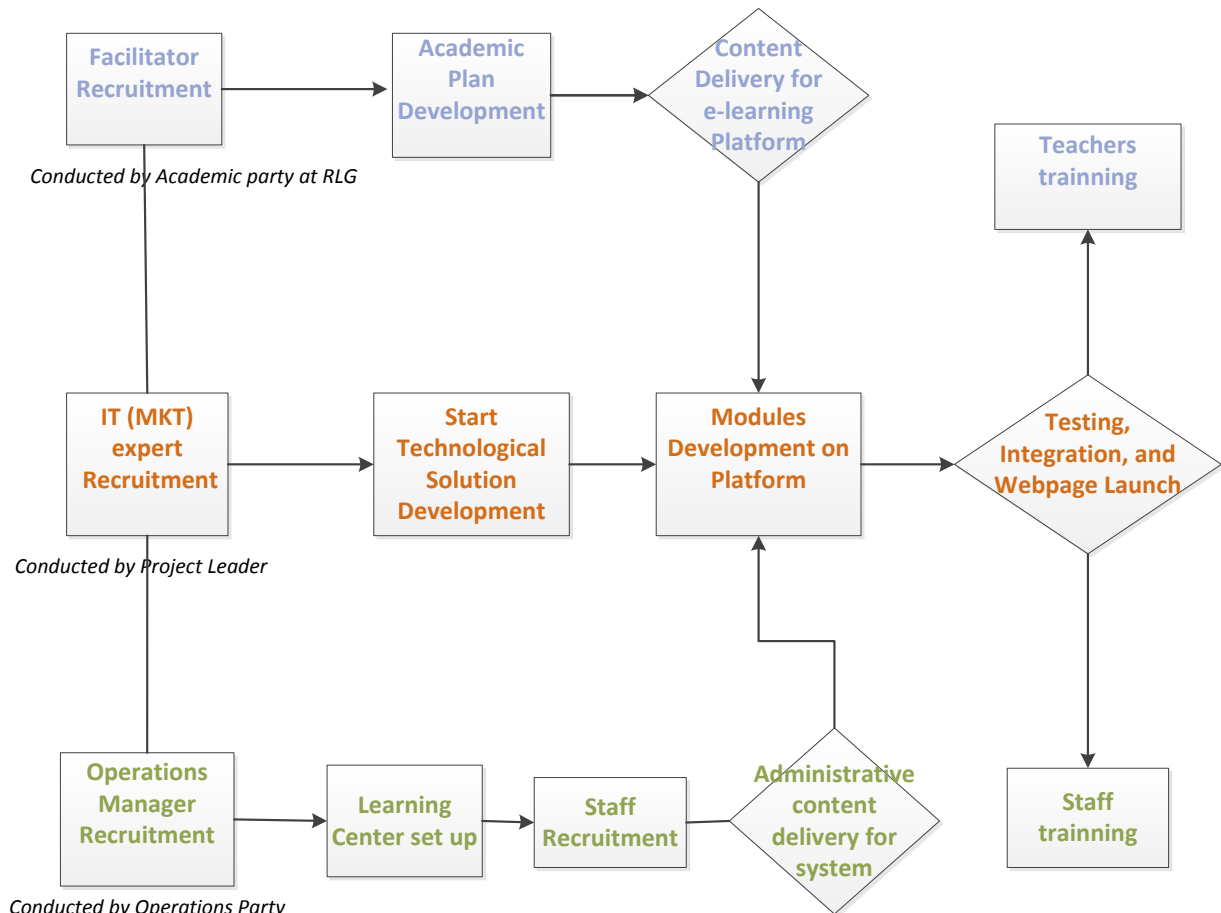
## 5.2 Process flow for initial set up

The success of this project implementation lays in the coordination of the process and the interaction among the academic, technological and operations areas. The following drawing shows how all these areas interact with each other for the set up period.

Academic functions were colored in blue, technological functions in red and operational functions in green.

Diamonds represent critical points to continue with the next steps during the implementation stage.

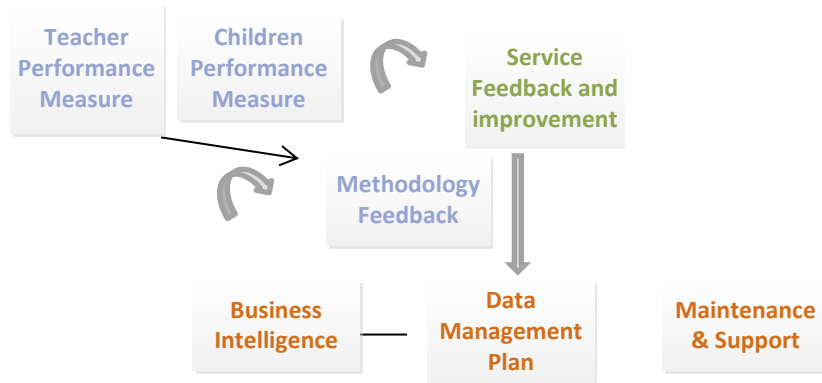
**Figure 13:** Scheme for "Process flow for initial set up"



### 5.3 Running (normal functioning)

During normal functioning, Methodology & Service feedback will be the drivers for the operations and performance improvement at the learning center.

**Figure 14: Scheme for "Running"**



Source: Own elaboration

## 6. OPERATIONS

This project includes the pioneer location in the Greater Vancouver area. It is possible to replicate the units in the future to expand the business.

### 6.1 General issues for operating

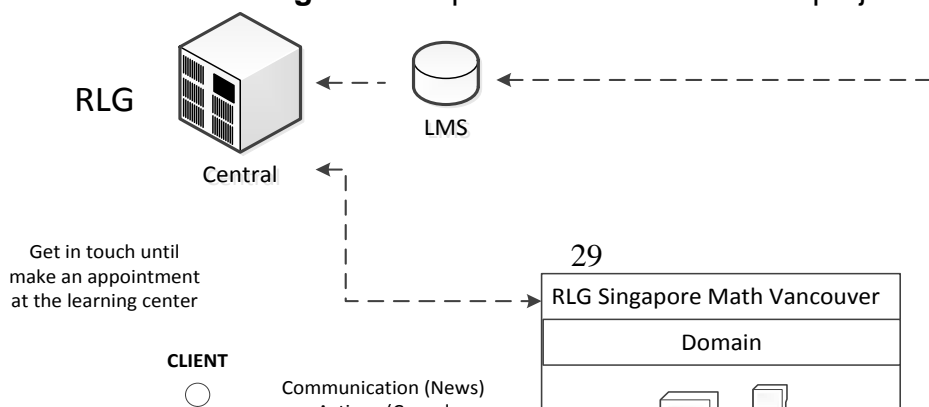
The learning center has to be located in and around a suitable location; and of an easy access (near of highways, close to a number of schools).

Hours of operation are Monday – Friday 2:00pm – 8:00pm and Saturdays 9:00am – 5:00pm.

There will be an easy-to-navigate website for marketing and contact information purposes. Monetary transactions will be conducted on the website (it could be linked to the RLG online current payment system), however clients will be able to schedule or cancel appointments, and also to make payments, at the center's central desk.

There will be an integrated and interactive platform performing the digital tasks as complement to the face-to-face process. Figure 15 shows a general view of this project.

**Figure 15: Operations scheme for the project**



Source: Own elaboration

The website will be developed by an external developer. In addition to designing the website and the technological information systems needed, the developer could perform maintenance and support on an as-needed basis.

The center could also be used to teach and train teachers from external schools (private as well as public schools).

All the information coming from the learning center (regarding students' historical academic records) will be sent to the RLG Learning Management System (LMS).

## **6.2. Human Resources**

The following full time staff will work during the project implementation.

- Facilitator (education expert, mathematics)
- IT (with a background on Marketing)
- Financial & accounting (existing position at RLG)
- Operations Manager (for administrative functions)
- Academic head (Teacher)

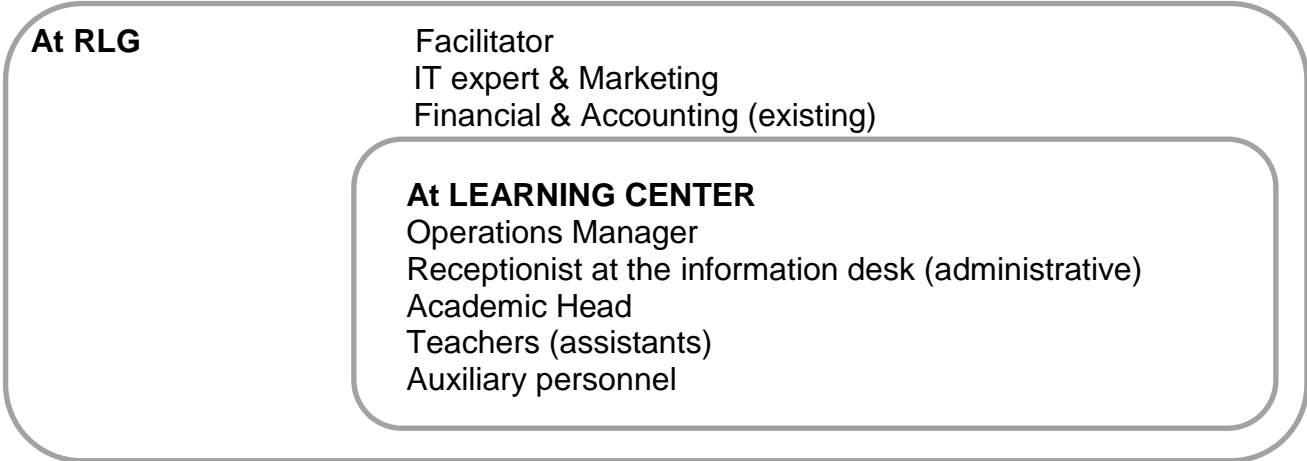
The RLG Singapore Math Tutoring Area will have the following part time staff:

- Administrative assistant (receptionist at the information central desk of a location)
- Teacher assistant
- Auxiliary personnel (cleaning, assistance)

The project will start out small with one teacher. Plans are to hire more part-time independent teachers working in the afternoons once being trained and aligned with the methodology (Detailed in the financial model).

The number of assistant teachers will be increased as sales increase (it is detailed in the financial model, too).

**Figure 16:** Human resources (existing and needed)



Source: Own elaboration

Additionally, it is recommended that RLG develops a compensation plan in the long-term, for the key positions in order to promote sales, improve administration issues and enhance client satisfaction.

**Table 6:** Positions & Descriptions

Position / Time mode	Description
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<p><b>Facilitator / Full time</b></p>	<p>Skilled and knowledgeable in academic area and children psychology regarding educational issues.  Facilitator will be developing the methodology (not only for children, but also for teachers).  This professional is responsible for establishing key relationships with schools, universities, colleges, and foreign institutions related to Singapore Math.  Responsible for the delivery of the content (academic module) for the platform development.  When running; facilitator will be working on the feedback and performance of the learning approach and relationships with the education community.</p> <p><u>Key Features:</u>  Teacher with experience on leading academic areas or with influence on educational issues in BC. Proficient at mathematics.</p> <p>Head of a school program or assistant of a Head of school with more than 5 years of experience. Proficient at mathematics.</p>
<p><b>Academic Head / Full time</b></p>	<p>Academic Head will be an authority, regarding academic issues, in the learning center, backed by the Facilitator.  The person in this position will work in the classroom, as well as in interviews (to be detailed in point 6.3.1). He/she will give feedback to the Facilitator related with methodology performance, and will input grades, reports, communications, and so on into the system.</p> <p><u>Key Features:</u>  Teacher with a vision on education of excellence.</p> <p>Mathematics teacher.</p>
<p><b>Teacher assistant / Part time</b></p>	<p>This person will be giving assistance to the children in the classroom. Their main function is to give feedback to the Academic Head regarding the methodology performance, and based on their direct experience in the classroom.</p> <p><u>Key Features:</u>  Teacher with vision on education of excellence.</p> <p>Mathematics assistant teacher, experience with children.</p>

<p><b>IT &amp; Marketing expert /</b> Full time at the corporative</p>	<p>Skilled and knowledgeable in Information Technologies (IT) and marketing. This includes having the ability to identify the company's target market from time to time, and perform in a way that will interest consumers. The professional will start with the technological systems implementation (with suppliers). Responsible for achieving maximum performance from those suppliers.</p> <p>When running, he/she will take on more labors regarding marketing and communication (Business Intelligence, Data Management, maintenance/support).</p> <p>This person will possibly become a sort of CTO at RLG in the long-term. Decision-making and Strategic thinking skills are required.</p> <p><u>Key Features:</u></p> <p>Technical Project Manager with a Master on Marketing, at least five years of experience in leading-positions.</p> <p>Project Manager with a Master on Marketing, and at least five years of experience in leading-positions.</p> <p>Technical Project Manager with an MBA, and at least five years of experience in marketing areas.</p> <p>Project Manager with an MBA, and at least five years of experience in marketing areas and IT support.</p>
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<p><b>Operations Manager /</b> Full time</p>	<p>This person will be responsible for all administrative issues at the learning center. This includes having the ability to identify the administrative needs from time to time, with a focus on client service.</p> <p>He/She has to work closely with Financial reporting or the accounting side at RLG. The professional is responsible for enabling the learning center before it is up and running.</p> <p>This position could become a Branch Manager at the corporative level; thus, decision-making and strategic thinking skills are required.</p> <p>Then, he/she will give responsibilities to the administrative person at the central desk.</p> <p>Areas involved: Staff recruitment and training, coordination, leases, permits, licenses, administrative content delivery for the technological platform. When running, will have labors of service feedback and improvement.</p> <p>Under a possible future franchise model, this position would jump to the corporative level (becoming a branch manager). The Operation party at RLG would release financial issues to this position.</p> <p><u>Key Features:</u> Operations manager experience, with an MBA or Master on Accounting.</p> <p>Master of management with experience in administrative tasks.</p> <p>Commercial areas. At least 5 years of experience.</p>
<p><b>Administrative assistant /</b> Part time</p>	<p>This position will perform at the information central desk at the learning center. Communication skills are required.</p> <p><u>Key Features:</u> Client service experience. Software use and familiar with technologies Visionary. Experience in operations is desirable Willingness to be trained for personal development.</p>
<p><b>Auxiliary assistant /</b> Part time</p>	<p>This position will be responsible for cleaning and assisting in basic labors for the learning center operations.</p> <p><u>Key Features:</u> Willingness to learn is desirable. Familiar with computer use.</p>

Source: Own elaboration

### 6.3. Process/Service

1. Parent gets in touch with RLG Singapore Math.
2. The first session with the student is an assessment of the student's level of skills, psychological aspects and current way of learning. To do that, an action agenda is co-created with the Academic head of a learning center. Central Desk reports back to the parent on the initial assessment and provide the quotation with the tutoring plan (3-4 days). Privacy/disclosure issues are talked about in this session.
3. Parent pays up front for at least the first 6 lessons after the quotation; for larger amounts they can post-date bank checks. It could also be done online.
4. Lessons are designed to achieve children's engagement on this new learning approach, considering gaps to close to their traditional schooling system (if applicable). Regular feedback will be provided for parents who will have access to the performance reports and feed inputs online (and applications use).
5. Records are kept with each student. The receptionist (desk) will record all this type of information to be kept by RLG.
6. Any problems they seem to have with the material or any issue will be taken by the Academic head at the learning center.
7. After all of the tutoring sessions (possibly even during) if parents are satisfied with the tutoring, a letter of recommendation is asked (posted it on the website with their permission).
8. RLG (headquarter) will be responsible for follow up and staying further connected by using the information from the learning center's records.

### 6.3.1 Singapore Math approach

The following table attempts to describe how all of the academic resources will be interacting in order to deliver the service on children, taking into account the Singaporean learning approach.

**Table 7:** Singapore Math approach service at the learning center

	Purpose	Description	Key component or Deliverable
<b>STEP 1: Request reception</b>	To convert a client touch (online, calls or visits) in a request.	<p>The client enters online either by looking for the specific location (using online maps or even visiting in person); or by browsing the service. For instance: RLG home webpage, referrals pages, etc. When not being entered by the location, the query will be processed in the <b>RLG</b> general platform and; then, it will be sent to the learning center.</p> <p>When the request is in the hands of the learning center, it is processed by the <b>Administration Area</b>.</p> <p>Administration Area and RLG central must solve customer doubts and provide information about the service, promoting the bounties of the service, as well as offering promotions for more than one child, etc.</p> <p>Then, an appointment for the child's assessment with the <b>Academic Head</b> of the center is scheduled under a FIFO basis. The appointment date goes to the <b>Academic Head</b> Dashboard who then carries out the interview and collects the information used by the facilitator.</p> <p>Academic Head will also use standard assessment tools (including psychologic profile); previously defined by Facilitator.</p>	<p>Appointment (from Administration to Academic Head)</p> <p>Information from the interview and assessment tools (from Academic Head to Facilitator)</p>

<p><b>STEP 2:</b> <b>Child Profile</b></p>	<p>To identify their current abilities with focus on problem solving and their current way of learning</p>	<p><b>Facilitator</b> will analyze the information provided by the Academic Head, for every case, and, finally, will provide the system with the child's profile. The report would also include gaps between the child's current way of learning and the proposal methodology. * If the child is not attending a school, more details about their learning activities have to be provided by the parent in step 1. The report has to include specific issues for every child to keep in records.</p>	<p>Report of child profile (from Facilitator to the system).</p>
<p><b>STEP 3:</b> <b>Define General tutoring approach</b></p>	<p>To maximize the alignment between the children capabilities, current teaching application and the Singaporean-based model.</p>	<p>The <b>Facilitator</b> will identify the approach to follow in every specific child case considering the gaps and possible risks. The idea is to avoid at most, the probability of conflict between the methodologies, while reinforcing capabilities and tutoring under the pentagon model, using abstract, pictorial and concrete approach. The requirements have to be accomplishable. Timing must be suggested. The final users are the Teachers and Administrative area in every learning center. Examples of the requirements to be stated in this step are:</p> <ul style="list-style-type: none"> <li>- The child has to get aligned with their Level first or</li> <li>- The child has to take the "Level 3 – Singapore" course.</li> <li>- It is recommended parental support or assisted homework is recommended, by using interactive platform.</li> </ul>	<p>Report of the strategy to close the Gaps and maximize the abilities (from Facilitator to administrative and academic users of the learning center).</p>
<p><b>STEP 4:</b> <b>Action Plan</b></p>	<p>To state the actions that will make the child grow from their current state to the desired one.</p>	<p><b>Academic Head</b> is responsible for the validation of the academic resources to meet the requirements. All the requirements outlined in the latter step will be checked according to the availability of the resources: Classroom distribution, Teachers availability, Schedule &amp; curriculum issues, Class size, Parental involvement if applicable,</p>	<p>Tutoring Plan including suggested schedules (internal, validated by the <b>Academic Head</b>).  Report &amp; quotation for</p>

		<p>Feedback and measure of success, Technological applications and available dashboards, etc. It will be outlined in the Tutoring Plan.</p> <p>There will be a report for parents showing important issues about the test results, the program to follow, schedule and the possible risks (in the case of children with poor mathematics performance). It also will include the quotation (price) and the details.</p> <p>Examples of the specific actions:</p> <ul style="list-style-type: none"> <li>- The child will attend to classes on Tuesday or Thursdays, in the classroom number X for 3 months until the next evaluation. The sessions are of 50 minutes. (Schedule)</li> <li>- The measure of the improvement will be based on Level 2 test.</li> </ul>	parents (from Administration area to parents).
<b>Step 5: Performance &amp; Historical Report</b>	To establish the communication with parents regarding their children's performance; while holding a historic review on the child's performance (records for the future).	<p>This step starts with the quotation approval and the beginning of the tutoring process for the child.</p> <p>The quotation approval gives the kick off for enabling a user account for every parent (first month payment is required).</p> <p>Teachers assist children, in person, every session in classroom.</p> <p>A relationship between the child and the RLG staff will be established.</p> <p>Administrative area at every learning center should enter the historical data for every student.</p>	Online communication with parents (child's performance, news, notifications, etc). Records for RLG.

For teachers training, a self-learning module in the technological platform was considered, independent from that of children. Facilitator will be validating the approach for the teachers. Since it is thought that they would require less face-to-face hours, it is suggested to schedule teachers training on Fridays. In addition, Saturdays will be used for teacher meetings or events for engaging with the educational community. Then, they will be working on the self-learning module at their homes.

**Figure 17:** Schedule for the learning center operations

	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
14:00 - 16:00	Attending to clients	Assessments	Attending to clients	Assessments	Attending to clients	Teachers meetings & events (morning)
16:00 - 17:00	Early bird	2 level	Early bird	2 level	Teacher module	
17:00 - 18:00	Kindergarten	3 level	Kindergarten	3 level	Teacher module	
18:00 - 19:00	1 level	4 level	1 level	4 level	Teacher module	

Considering these office/operations hours, the learning center will be starting with one Teacher (Academic head) and Teacher Assistant (s) moving from one room to another, according to the human resources plan. The class hour lasts 50 minutes in order to have time to change.

#### **6.4. Capacity**

The maximum classroom size will be of 14 children, in accordance with the General Canadian Standard (BC Teachers Federation, 2012).

The area of each room has to be large, for performing different illustrative tasks (use of manipulatives).

Being conservative and consistent with the focus on clients, the considered classroom size is of 12 children. Considering the need of having at least 4 rooms, the area available is to be more than 2200 ft<sup>2</sup>. In the financial model, the rent considers a location of 2500 ft<sup>2</sup>.

According to a Canadian consulting report for education (Educhatter, 2014), the new tutoring centers, typically compact 1200 sq. ft spaces in shopping plazas, offered initial learning level assessments, study skills programs, Math skills instruction, career planning, and even high school and university admissions testing preparation.



## 7. COMMUNICATIONS & MARKETING

### 7.1. Marketing Strategy

#### **Communications and Marketing plans were developed in June, 2015.**

The main focus of the marketing strategy will be based on delivering a consistent message to potential customers, which focuses on the proven success and uniqueness of the Singapore Methodology for teaching mathematics. Therefore, communication within the education community plays a crucial role.

The marketing strategy for RLG Singapore Math Learning center was planned on four different lines:

1. Schools and universities presence
2. Through Rasul Learning Group existing network
3. Targeted Neighborhoods presence
4. Online Presence

One critical step in promotion is to develop an innovative concept (reflected on a compelling logo), which will make people curious and interested. It was outlined in the critical implementation activities. Having approved the logo; it is possible to design the centers, make posters, leaflets and social media campaigns.

An external company will be developing all design issues and participating in promoting the product. They can promote the product by providing with a temporary sales person (to be supervised by the Academic party), acting as a public relations representative.

1. As the educational community will become a powerful stakeholder, school presence will be a primary marketing strategy. Ideally, relationships with Vancouver and North Vancouver districts will have to be achieved, starting in November (week 13 on Gantt chart). It is necessary to have a suitable communication plan. There will be informative sessions in key private schools. Vancouver private schools Expo will be held in November 8<sup>th</sup>, 2015. It is a good instance to show up and advertise.

It will also include sponsorships of events, and organization of mathematics Olympiads.

The schools to start with (existing contacts for RLG):

- Coast Mountain Academy
  - Stratford Hall IB World School
  - King David High School
  - UBC (Education Campus)
  - SFU
  - Langara College
2. As RLG has its existing network, and as face to face relationship building is critical to the success of the business; marketing strategy will focus primarily on networking activities where prospective clients are likely to be in attendance (Business conferences, family business meetings, etc.). Academic Party will be responsible for this.

The following conferences were identified as to be present there:

- IECA semi-annual conference (4<sup>th</sup> to 7<sup>th</sup> November, 2015)
  - Vison 2040 Think Tank (19<sup>th</sup> and 20<sup>th</sup> November, 2015)
  - Women in Enterprising Families Initiative (21<sup>st</sup> and 22<sup>nd</sup> November, 2015)
3. As the methodology promises a new way of learning, imported from an Eastern educational system, a good ratio of Asian-background people is expected. Parameters such as Asian-populated sectors, Asian-immigrants and Canadian Asian-background children will be included to target neighborhoods. To address neighborhoods, networking events will involve the Vancouver and the North Vancouver community, as well as Richmond (Asian-populated neighborhood). The idea is to expand networking in these areas. Sales person or agency reporting RLG project leader will be performing some of these tasks by placing posters, with tear offs, in coffee shops, grocery stores and community centers in the area.
- Additionally, informative sessions will be offered. If parents are interested, they would be provided with publications and articles, via email, to get in touch with them. This would be followed up 3-4 days later with an email or a phone call. Having an effective contact management system by the responsible of the communication plan is important (Sales person or agency reporting RLG project leader).
4. Since the target groups are mainly professionals and executives, the online presence will initially focus on the existing contacts and those ones from their circles. Business press presence (releasing articles of Singapore Math) has to be considered. Referral pages will be created (An external agency will be providing support in terms of media presence during the launch) for online advertising during the implementation and launch periods.

As the Business Families Foundation has The Business Family Center in The Sauder school of Business, the project will be spreading through UBC.

As mentioned at the beginning of this point, an external company will be developing design issues and participating in promoting the product. A complete price quote for marketing services was done by a local Marketing Agency – Curve Communications – which includes logo design and branding, online advertising, traditional advertising (printings), and public relations (Appendix 4). Due to the lack of available time on part of RLG’s staff, public relations were included. This Marketing agency will provide RLG with a kind of “Sales person” in order to spread the methodology toward the educational community while attracting clients. This process must be mandatorily guided by the educational party at RLG.

#### Marketing Objectives<sup>3</sup>

- **Goal #1:** Spreading in at least 3 independent schools by area (Starting in Vancouver and North Vancouver).
- **Goal #2:** Having 10 prospective contacts per event, starting in November 2015.
- **Goal #3:** 500 online touches per week (to the right people); landing in 4 sales.

#### Positioning Statement

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<sup>3</sup> Goals discussed with executives at RLG.

It is a high quality tutoring company, with a focus on excellence, at very early ages, through a different way of teaching mathematics under a unique methodology.

## **7.2. The Initial Sales Process**

The initial selling processes will involve an informal meeting with potential clients in the form of networking, community meetings, casual gatherings with associates and educational institutions. This will be followed by phone calls so as to get them interested. Once the prospective client has shown interest in the service, it will follow up with the reception of a publication about Singapore Math, via email (within three days). A follow-up call will be made; and where possible a one-on-one meeting arranged (4 days). After the meeting, the process continues in accordance with Table 7, Step 2 on. Payment is due at the beginning of the first tutoring month.

## **7.3 Strategic Alliances**

During this consulting the following primary alliances were identified.  
Primary alliances: Marshal Cavendish Education, Singapore Mathematics Society, Singapore Math institutions from Singapore and USA. These alliances will be covered in the Intellectual Property point (Chapter 8).

## **7.4 Pricing Strategy**

Competition (price): average of \$CAD 45/hr plus an assessment fee (from \$CAD 30 to 60 per hour).

RLG Singapore Math Tutoring will be asking a monthly fee of \$CAD 460/month. Discounts for families could be offered (more than 1 child).

Pricing will reflect the image of high quality tutoring using the unique Singaporean approach.

Considering twice/week; competition charges around \$400 CAD. RLG Singapore Math Learning center will have to charge more than this price (See financial model) in order to differentiate from competition, through the offering of this unique methodology.

## **8. INTELLECTUAL PROPERTY**

Singapore Math is a registered trademark of Singapore Math Inc.

Singapore Math Inc ® has contractual agreements with Singapore publishers on most titles carried on this site. The agreements include, but are not limited to, exclusive distribution rights of these titles in the U.S.A. and Canada (Singapore Math, 2015).

There are some historical facts interesting to know, in terms of Intellectual Property issues.

It is known that in the late 1990s, the Singapore's Ministry of Education opened the elementary school textbook market to private companies, and **Marshall Cavendish**, a local and private publisher of educational materials, began to publish and market the *Primary Mathematics* textbooks.

Steady improvements in math proficiency among Singaporean students in international assessments were observed worldwide. As of 2004, U.S. versions of Singapore mathematics textbooks were adopted in over 200 U.S. schools after concluding that U.S. schools could benefit from by adopting these textbooks. These textbooks were already being distributed in the U.S. by Singapore Math, Inc., a private venture based in Oregon. They sell Singapore Math books in English; for students (children), parents and teachers in the U.S. and in Canada. Besides, they provide support for: homeschooling, training for home educators, and math assistance for parents; and have well-known institutions and professors as allies. They continuously spread the methodology in the Americas.

According to conversations via email, the RLG learning center could use their books without a formal license agreement in place.

However, as the objective of the project is adding value through the Singapore method, RLG should name this learning center as “RLG Singapore Math Vancouver”, “Singapore Math Canada” or something like these (including the words “Singapore Math” in the name). Therefore, IP issues must be considered.

### 8.1. IP Analysis for this project’s purpose

According to the Canadian Intellectual Property Office, Singapore Math is an existing name in the Canadian Trademark Data. It would seem that Marshall Cavendish International (Singapore) PTE Ltd. has taken over the name because it says that Singapore Math, Inc. *is the old owner* of this existing trademark (Canadian Intellectual Property Office, 2015).

Three alternatives – regarding the brand name - as ways to go will be discussed<sup>4</sup>:

1. Using the words: “Singapore Math” in the name (Singapore Math Vancouver Center, Singapore Math Canada, RLG Singapore Math, etc.)

This alternative is quite risky because of the existence of the name “Singapore Math” in the official data source (Canadian Intellectual Property Office, 2015).

Additionally, education and mathematics are two key words - for this analysis’s purpose - being displayed in the search (Canadian Intellectual Property Office, 2015).

Therefore, even though the markets are different, the fields (education and mathematics) would be in the same industry.

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<sup>4</sup> Aspects discussed with Professor Simon Blair, IP expert at the University of British Columbia, Vancouver, Canada.

As a consequence, the name has to be quite different from these two words – Singapore and Math – to avoid conflicts and it will depend on the trademark owner criteria and interests.

Their policies on criteria are unknown, as well as their willingness to partner with.

## 2. Stating the use of Singapore method (not in the name)

Even though the brand will not state “Singapore Math” in the name, RLG could state that they use Singapore Method to teach students. It is safe since RLG is a local well-known company into the educational world. Additionally, books from Singapore Math Inc. could be purchased without any license agreement.

## 3. Partnership

To avoid trademark conflicts and make sure about the legality of the strategy, RLG might partner with Marshall Cavendish in order to get permission about using “Singapore Math” words for naming the center, while getting the most suitable and updated material for learning purposes. It is going to be the most effective and time-demanding alternative because of its uncertainty. Besides, it will require high levels of coordination and effectiveness.

## 8.2. Recommendations

For all the points discussed above, Intellectual Property issue has to be seen as an opportunity to get partners by performing in the same environment (current players); instead of being isolated from this world. Besides, strengthening relations with this community will reduce the risks associated with legal issues. Finally, it will be positively impacting on the long-term strategy about the franchiser model.

The analysis shows the importance of having Marshall Cavendish Ltd. as a primary partner. Marshall Cavendish will be involved in this project at any point (directly or indirectly). Therefore, the recommendations will be focused on branding with Singapore Math name but without missing the necessity of having Marshall Cavendish Ltd. as a primary ally.

The first step to take is getting in touch with “Smart & Biggar” agency [SMART & BIGGAR 2300 - 1055 West Georgia Street P.O. Box 11115. Vancouver], which acts as an agent for Marshall Cavendish International in BC.

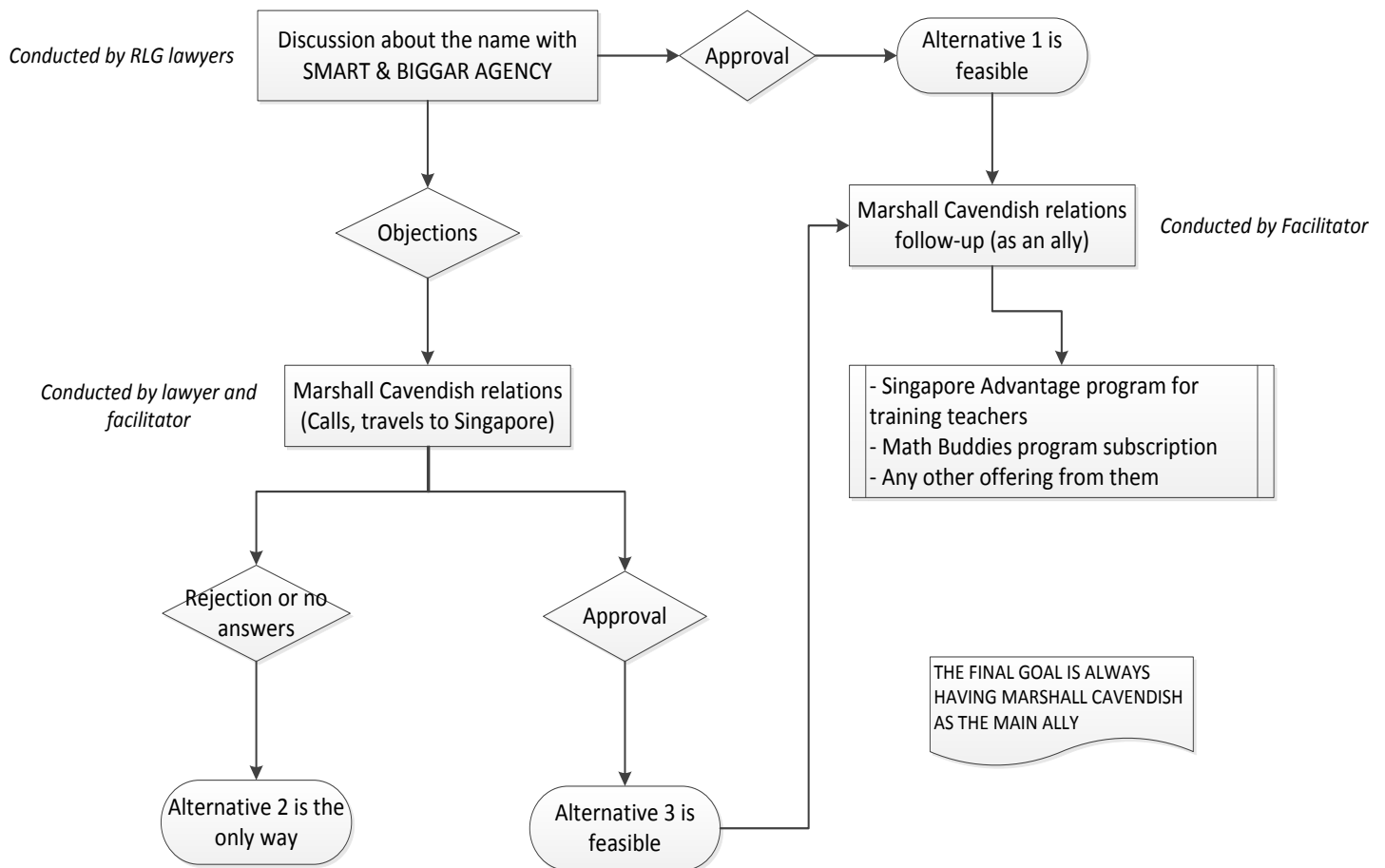
Offices hours for advisory will have to be paid (around 375 CAD plus taxes per hour) to this agency. If it states that there is no problem about calling the learning center using “Singapore” and “Math” words; then, conversations with Marshall Cavendish will not be so urgent. Otherwise, RLG will have to start getting in touch with them as soon as possible. Facilitator, under the educational party authorization, will be involved in the process by inquiring about their training programs, like the “Singapore Advantage

Program” and the “Math Buddies online program” (both lectured by Marshall Cavendish).

It is important that facilitator checks this action plan before he/she goes into the activities, as well as the timelines and the risks associated with IP issues. The alignment from RLG lawyers, facilitator and any party involved in this process is key.

Figure 18 shows a flow diagram about the key steps to follow, during this project implementation, regarding IP issues.

**Figure 18: Steps for IP issues**



Source: Own elaboration

After having the name, RLG should protect it in the Canadian Intellectual Property Data Therefore, the costs included in the “Intellectual Property” item, have to do with preparing/filling a Canadian Trademark application, registration, examiners’ report and objection treatment (\$CAD 4000).

Additionally, an item for Lawyers advising from Smart & Biggar Agency was included, consisting of 5 advisement hours (\$CAD 375 plus 5% taxes).

## 9. FINANCIAL PLAN

It is a fact that some RLG's current clients have offered support to fundraise the project. Share percentages would be analyzed once having the total cost for this project implementation. Therefore, it is out of this consulting scope.

It is also possible to get some funds from private institutions which may be interested. Due to the fact that this project is considered within an existing company, there will be some resources to be shared within the company, especially in terms of human resources; detailed in the Action Plan (Chapter 5).

Considering the number of 12 children per room (under the maximum standard of 14), it is stated:

First year, expectations are to have 92 children per month, starting in April.

A growth rate of 23% is being considered.

An assistant professor will be added each year until the third year of operations.

Teachers with more experience will start work at 15:00 every day, with the early bird children. 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> level classes could take place on Fridays if needed.

### 9.1. Investments

The following table shows the items to invest in, as start-up costs.

**Table 8: Investments**

Item	Amount	Price/unit (CAD\$)	Investment (CAD\$)
Branding & Advertising Curve communications service	1	19500	19500
Platform (Up Work freelancer) <sup>5</sup>	1	38192	38192
Server	1	999	999
Computers (Dell Inspiron 20-3048)	4	379	1516
Software licenses	4	200	800
Data shows	2	800	1600
Television	1	1000	1000
Telephone (Fido Company 2C, x 1 line)	1	35	35
Tablets (Dell pilot, glass protector)	42	429	18018
Building set up (building conditioning for operating)	1	50000	50000
Intellectual Property issues (detailed in chapter 8)			
- Trademark Canadian application process	1	4000	4000

<sup>5</sup> Freelancer: platform developer suggested.

- Smart & Bigger Agency advising (cost/hour)	5	394	1969
<b>TOTAL INVESTMENT (CAD\$)</b>			<b>137628</b>

Source: Own elaboration

Appendix 4 shows some details of the Branding & Advertising item.

## 9.2. Operations Costs

The operations costs will be split into two costs: fixed and variable costs. Wages are being considered into fixed costs. Appendix 5 shows how the wages cost structure varies through the project under implementation and under execution.

### 9.2.1. Fixed Costs

Fixed costs for this project are shown in the following Table, Table 9.

**Table 9: Fixed costs**

Items	Year 1	Year 2	Year 3	Year 4	Year 5
Wages	424688	462008	499327	499327	499327
Communications & Marketing service	75000	39000	39000	39000	39000
Technological Support (external)	5435	7235	7235	7235	7235
Rent (lease)	72137	78695	78695	78695	78695
Insurances and Permits	7100	2000	2000	2000	2000
Automobile, delivery & travels	14932	8000	8000	8000	8000
Supplies (Office & Operating)	4500	6000	6000	6000	6000
<b>TOTAL FIXED COSTS</b>	<b>603792</b>	<b>602937</b>	<b>640257</b>	<b>640257</b>	<b>640257</b>

Source: Own elaboration

It was said that the first year is key to spread this methodology among the educational community. As it can be observed, year 1 accounts have almost twice the Communication and Marketing costs; which is consistent with the marketing strategy. The first year, the learning center will be operative from the third month on; therefore, the costs based on a “per month” basis were adjusted.

Regarding traveling, trips to Singapore - in order to establish relationships with Singaporean-based institutions - are included.

The cost structure considers incorporating an assistant part-time teacher, when sales increase; until the third year (capacity permitted).



### 9.2.2. Variable Costs

The following table shows the purchases to carry out, per child, in terms of materials (manipulatives, books, etc.) which will be provided after client payment. Figure 19 shows a manipulative pack as an example.

**Figure 19:** Manipulative pack (example)



Source: Singapore Math Inc., official webpage

Numbers from Table 10 are also consistent with the amount of children enrolled, per year.

**Table 10:** Variable costs

Items	Year 1	Year 2	Year 3	Year 4	Year 5
Purchases per client/user	17480	21470	26410	32490	39900
<b>TOTAL VARIABLE COSTS</b>	<b>17480</b>	<b>21470</b>	<b>26410</b>	<b>32490</b>	<b>39900</b>

Source: Own elaboration

### 9.3. Sales Forecast

Key Assumptions:

- No sales in the first three months due to extensive networking.
- Slowest months: First three months
- Fee, monthly = 460 per month

- Each student, on average, will attend two tutoring session per week. Each session lasts 50 minutes.
- Each student, on average, will have 6 months of tutoring

**Table 11: Incomes**

Item	Year 1	Year 2	Year 3	Year 4	Year 5
# fee/month	92	113	139	171	210
# months	9	12	12	12	12
Fee / Month (\$CAD)	460	460	460	460	460
<b>Total sales (\$CAD)</b>	<b>380880</b>	<b>623760</b>	<b>767280</b>	<b>943920</b>	<b>1159200</b>

Source: Own elaboration

#### 9.4. Cash Flow

To compute the Discount Cash Flow rate (DFC), it is assumed:

- $\beta$  of the education industry<sup>6</sup>: 1.13 % [Beta]
- Average annual return small companies stocks<sup>7</sup>:  $17 \pm 0.34$  % [E(Rm)]
- Long-term bonds<sup>8</sup>:  $5.5 \pm 0.09$ % [Rf]

$$\text{Capital cost} = R_f + \text{Beta} (E(R_m) - R_f)$$

Capital cost = DFC

$$\text{DFC} = 18.5\%$$

Table 12 shows a cash flow structure, considering 5 periods (yearly). Then, Net Present Value was computed using this DFC. Then, Figure 20 shows the cash flow graphics.

#### Notes of interest:

<sup>6</sup> Betas by Sector (US), Adamodar, January 2015, Retrieved, 29<sup>th</sup> December, 2015, from: [http://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/Betas.html](http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html)

<sup>7</sup> A subset of small cap stocks traded on the NYSE. Dimensional Fund Advisor's Small Company Fund (1982-1997).

<sup>8</sup> Portfolio of U.S. Government bonds with maturity near 20 years.

This model considers a new location exclusively for the learning center.

This model does not include scholarships costs and additional alliances.

A Growth Rate of 23% is considered, taking into account the fact that the Kumon Math & Reading program grows between 25% and 40% annual, in the American region<sup>9</sup>.

The working capital was computed by using the accumulative deficit maximum.

**Table 12: Cash flows**

	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
<b>Price:</b> 460						
<b>Children:</b> Starting with 92						
<b>Growth rate:</b> 23%						
CASH INFLOW (SALES)	0	380880	623760	767280	943920	1159200
FIXED COSTS	0	-603792	-602937	-640257	-640257	-640257
VARIABLE COSTS	0	-17480	-21470	-26410	-32490	-39900
DEPRECIATION	0	-4627	-4627	-4627	-4627	-4627
OPERATIONAL RESULT	0	-245018	-5274	95986	266546	474416
INTEREST	0	0	0	0	0	0
LOSSES FROM LAST EXERCISE	0	0	-245018	-250292	-154306	112240
NON OPERATIONAL RESULT	0	0	-245018	-250292	-154306	112240
EBIT	0	-245018	-250292	-154306	112240	586656
TAXES	0	0	0	0	-22448	-117331
EAT	0	-245018	-250292	-154306	89792	469325
DEPRECIATION	0	4627	4627	4627	4627	4627
LOSSES FROM LAST EXERCISE	0	0	245018	250292	154306	0
OPERATIONAL FLOW	0	-240392	-647	100613	248725	473951
INVESTMENTS	-137628	0	0	0	0	0
TERMINAL VALUE	0	0	0	0	0	4627
WORKING CAPITAL	-241039	0	0	0	0	0
WORKING CAPITAL RETRIEVAL	0	0	0	0	0	241039
SUBSIDY (OWN CAPITALS)	378668	0	0	0	0	0
CAPITALS FLOW	0	0	0	0	0	245666
<b>NPV (18.5%)</b>	<b>48485</b>					
<b>IRR</b>	<b>23%</b>					

Source: Own elaboration

The business evaluation presented was structured not considering credit use (investment using own capitals). Executives at RLG will present this report to interested partners and clients who probably will fundraise it in a variety of portions.

The critical points impacting on the results have mainly to do with the following aspects:

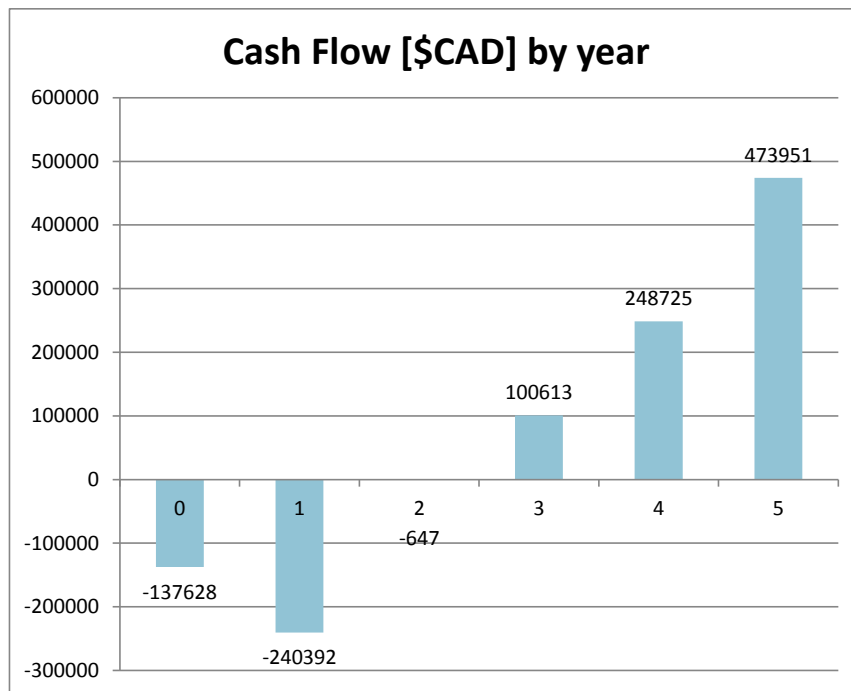
<sup>9</sup> Behind America's tutor boom (www.marketwatch.com).

- The fact that the project considers a location to be conditioned, which is expensive (main cost within the investment item).
- Soft entry. The first months are going to be slow in attendance, even though it is known that some current RLG clients will be, for sure, clients of the learning center.
- Wages according to the market for qualified positions (highest salaries). Thus, it is expected having the best professionals available in Vancouver.

If an IRR (Internal return rate) of **23%** is considered, the project does not represent an outstanding opportunity to invest in. The returns are just fair, with a present value of **\$CAD 48485**. **Payback is at the third year** (Figure 20).

Nevertheless, it is worth mentioning that the evaluation comes from a conservative position, and own capitals financing was considered.

**Figure 20:** Cash flow for the project



Source: Own elaboration

To improve the results, it is not possible to vary the amount to invest in (\$CAD -137628) since the most expensive items are critical for the success of the project: building set up and platform development (Table 8).

On the other hand, the costs related to teachers (salaries and training) are high and essential as well.

The number of teachers needed to reach the project profitability is 5 (for the projection period):

- 3 teachers for the first year (Facilitator, Head teacher, Teacher assistant),
- 4 teachers for the second year (adding one Teacher assistant) and,
- 5 teachers for the third year (adding another Teacher assistant).

From the third year on, it is assumed the achievement of economics of scale to continue running with the same amount of teachers. Appendix 5 is also useful to visualize this figure.

Taking these issues into account, “teachers’ amount” and “investment” will be factors that will remain unchanged when analyzing the sensitivity of the project.

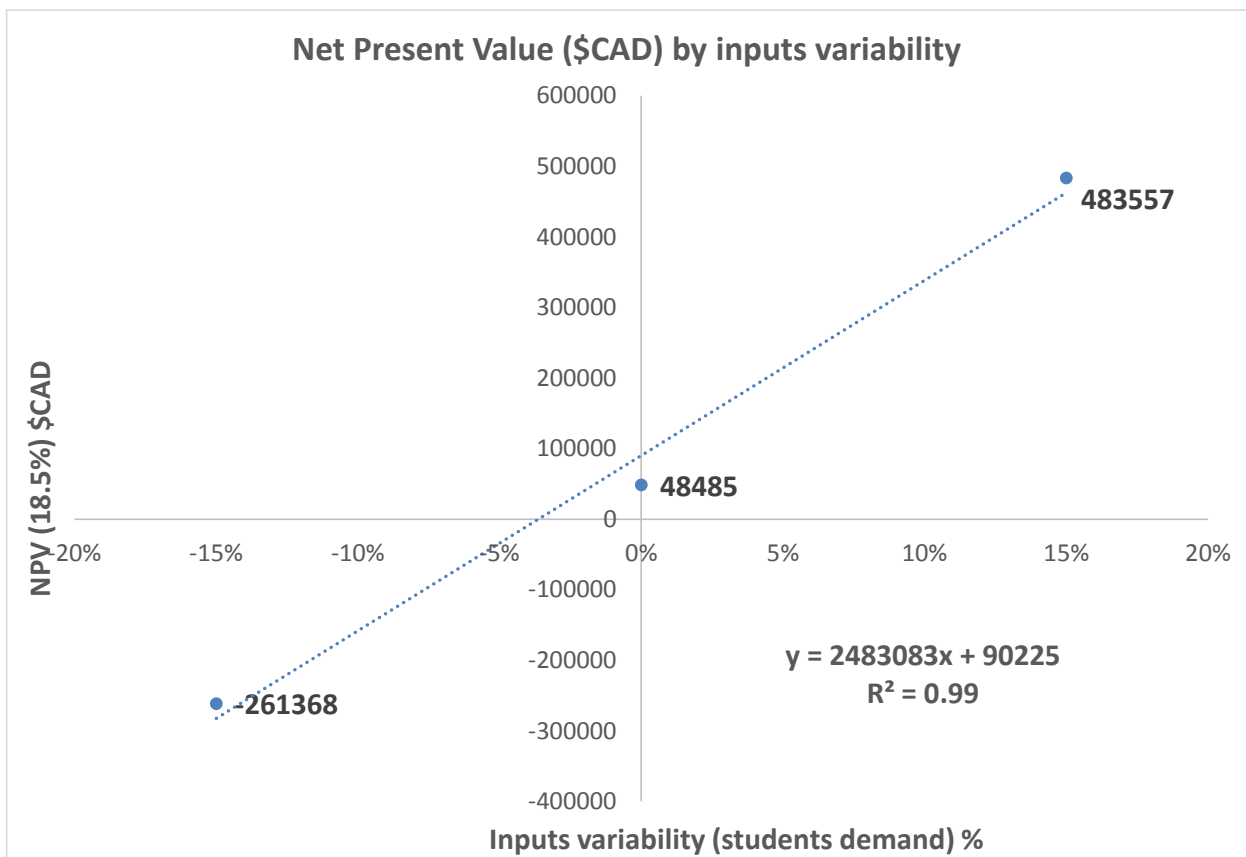
### 9.5. Sensitivity analysis

The independent variable, for this project, is “incomes”. IRR and NPV are impacted by the demand, which is reflected in the earnings (price x quantity or “pxq”).

As covered before, price was set up considering the upper levels for the tutoring industry in Canada, which is strategically consistent. This sensitivity analysis will not consider the price as variable.

Therefore, the following sensitivity analysis will look for the impact of the student demand on the factors of IRR, payback, and NPV (18.5%); without varying “teachers’ amount, “investment” and “price”. Figure 21 shows a sensitivity analysis for the project, considering three sceneries (Pessimistic, Probable (presented in the last point), and optimistic).

**Figure 21:** Sensitivity analysis graphic and table.



Scenery	Inputs variability	IRR	NPV (18.5%) \$CAD	Payback (year)
Pessimistic - at 85% expectations	-15%	-5%	-261,368	4 <sup>th</sup>
Likely - at 100% expectations	0%	23%	48,485	3 <sup>rd</sup>
Optimistic - at 115% expectations	15%	56%	483,557	2 <sup>nd</sup>

Source: Own elaboration

It can be observed that, in general, the project is highly sensitive to the amount of students. In a pessimistic scenery, reaching 85% of the probable demand, the IRR turns into a negative value, and the Net Present Value is negative, too. Payback is at 4<sup>th</sup> year. Investment is not worth of it.

On the other hand, by just increasing 15% of the possible scenery, it is possible to double the IRR index. Besides, the NPV (18.2) would go from \$CAD 48,485 to \$483,557; and payback would be at 2<sup>nd</sup> year.

It is necessary to emphasize that all sceneries involve the “soft entry” assumption. Therefore, the amount of students is always low at the first year (fact that definitely impacts on these elements).

In addition, the intersection is at -3.63% of inputs variability (Figure 21). At this position, the Net Present Value is 0, and the IRR is equal to the DFC.

Table 13 shows the amount of students needed to accomplish each position and, to break-even.

**Table 13:** Amount of students by year at each position

Year	Position			
	Pessimistic	Probable	Optimistic	Break-even
1	78	92	105	88
2	96	113	130	108
3	118	139	160	134
4	145	171	197	165
5	178	210	240	202

Source: Own elaboration

The numbers from Table 13 confirms that there is a sharp sensitivity in terms of demand. In fact, with just few students more, from the “break-even” position, it is possible to reach the “probable scenery”. In the same way, going from the probable scenery to the optimistic one, requires a little increase in terms of student enrollment.

## 10. RISKS & MITIGATING ACTIONS

This chapter presents a deep analysis of the risks identified for this project, its impact, and actions for their mitigation. This analysis considers all the aspects involved in this project. Table 13 presents a risks analysis for this purpose.

**Table 14:** Risks Analysis

Risk identified / Impact	Mitigating actions
--------------------------	--------------------

<p>Low demand / high impact</p>	<p>Having low attendance comes from the fact of failing in terms of communication and marketing plan. Therefore, it is necessary to achieve the best performance from the external agency and coordination with the RLG personnel, especially in terms of project leader performance, especially at the beginning.</p>
<p>Lack of buy-in from the educational community / medium impact</p>	<p>As RLG participates in the education community of British Columbia, this risk qualifies as a low impact risk. Nevertheless, it is important to maintain the relationships with academic institutions, and understand that promoting the benefits of this methodology is the best way to succeed, even though it will allow attracting competitors from the schooling and the tutoring side.</p> <p>It is important to consider the Singapore Math experience; and the opinions about the methodology and its possible risks regarding the way of learning.</p>
<p>Partners from Singapore and Singapore-based institutions are reluctant to participate / medium impact</p>	<p>This risk is the most crucial one for this project. Even though it is possible to use books from Singapore Math U.S. distributor, the most important and challenging part of this project has to do with achieving partnerships or alliances with official Singapore-based institutions.</p> <p>Singapore Math distributor could be an ally, but they do not certificate. Singaporean-based institutions - like Marshall Cavendish - do not certificate for Singapore Math, either; but having them as allies can facilitate the execution of the marketing strategy, and the differentiation from prospective competitors.</p>
<p>Teachers willingness to learn Singapore Math and proficiency / Medium impact</p>	<p>As stated, in Vancouver, Singapore methodology has not flourished yet. Therefore, there are no so many teachers performing under the Singaporean approaches. Professors can be brought from the east or from U.S.</p> <p>To mitigate this issue, there are some instances needed to be carried out:</p> <ul style="list-style-type: none"> <li>-Developing activities/programs/partnerships with schools already applying Singapore Math in order to obtain their experience at Singapore Math implementation, and for training professors.</li> <li>-Hiring programs or seminars dictated by Marshall Cavendish related to the Singapore Math approach for teachers.</li> <li>-Training teachers in U.S. or in U.S. based institutions which have multiusers online platforms.</li> </ul>



<p>Emerging competition</p> <p>/ Low impact</p>	<p>There could be some existing learning centers that could be watching Singapore Math as a valuable opportunity. In Vancouver, there were just two tutoring business identified which apply Singapore Math, independent (not franchised). It is considered as a low impact risk because they do not have strong presence in the educational community. However, in order to avoid surprises, RLG has to move quickly in order to achieve its “pioneering condition” in the Vancouver market.</p>
<p>Operations failure</p> <p>/ Medium impact</p>	<p>Operations failure can arise from the lack of coordination among the implementation activities. Any key task not accomplished can weaken the value of this project. For example, it is crucial to reach the best coordination possible when attempting relationships with Singapore-based institutions. Communication strategies have to be consistent.</p> <p>Legal support has to be aligned with RLG strategies undertaken for reaching partnerships and alliances in order to avoid losing reliability.</p> <p>It is highly recommended following the action plan and Gantt chart (Appendix 6) outlined in this report.</p>

Source: Own elaboration

## 11. CONCLUSIONS AND RECOMMENDATIONS

In general, the main and specifics objectives were accomplished.

The opportunity for RLG to apply the Singapore Math approach in Canada was deeply analyzed.

Cultural factors related to this method were identified and summarized in an explanatory document (**Hand-out**) which speaks about the uniqueness of this approach, and its proven results.

Additionally, it was confirmed that there is a growing demand for tutoring services and Canada is not an exception. This positions the country as an attractive target for foreign and local tutoring companies.

In Canada, the leading subject for tutoring is “mathematics”. The Singaporean approach – for education - is taking over many places in the world, especially at the mathematics field.

The **market analysis** reached a potential market size of \$CAD 335,880,000; with 5,598 children, considering the Census projections for 2015.

Once carried out the **SWOT** analysis, it was concluded that Rasul Learning Group has been successful at training students towards education of excellence. Integrating a new branch for tutoring children represents a valuable opportunity not only for them, but also for the entire educational community.

The main competitors identified were: Kumon, Sylvan and Oxford learning centers. With prices varying from \$CAD 30 to \$CAD 60, per tutoring hour in Canada, RLG will charge \$CAD 57.5.

The business model was based on a mix of face-to-face tutoring and technological platform use. The development of the **Canvas** template, for this project, led to conclude that the most challenging issue to cope with is the need of establishing relationships with Singapore-based institutions in order to differentiate it from prospective competitors. Besides, the lack of Singapore-based certifications for private purposes has to be carefully treated. Thus, a consistent communication strategy was included in the Marketing Plan.

Although attractive, it must be considered that to enter the potential market for this project is a challenge. Nevertheless, the company has a competitive advantage regarding networking and familiarity with local clients. It will facilitate its penetration into the targeted segment (household income > \$CAD 100K and parents’ university degree attainment).

There were some alignment factors detected for RLG; and intellectual property issues to take into account. The development of **action plans** to cover these topics were fully accomplished.

At the financial side, the project showed an **IRR of 23%**, and a **NPV (18.5%) of \$CAD 48,485** with an **investment of \$CAD 137,628**. Payback is at **3rd year**. The economic evaluation involved a “soft entry”, starting with **92** students (1<sup>st</sup> year). The most sensitive and movable factor, showed in the financial plan, was students’ demand. The learning center capacity has enough space for them, and for expansion in the future.

Finally, although it does not represent an outstanding investment opportunity, it is recommended, anyway, its execution, because of the value proposal for enhancing RLG position in the educational community, their pioneering condition, and potential long-term earnings.

### 11.1. Key Recommendations for the project implementation

- Focus on Marshall Cavendish relationships from the very start. RLG has presence in the Vancouver education market, but not in Singapore. Therefore, RLG executives have to be keen in order to relate with the Singaporean institutions.
- Prepare samples and brochures to be delivered (with Curve Communications) to neighborhoods as part of the testing process, in order to check the reception of the message.
- Negotiate using a win-win strategy when making alliances. For example, providing scholarships for schools teachers while being recommended in their schools.

### 11.2. Final Recommendation

- Evaluate a franchising model in the long-term for expanding into North America.
- Sublease the location in the mornings or create another business activity in order to harness the rent. Otherwise, move RLG facilities to share building costs.
- Surveys for Asian-Canadian population to confirm purchase willingness.

## BIBLIOGRAPHY

Allen, (2013), Balancing Surrey School budget, Retrieved, Jun 1<sup>st</sup>, from: <http://www.surreyleader.com/news/212557861.html>

AUCC, (2010), The value of a university degree. Association of Universities and Colleges of Canada. Brochure from September, 2010.

Aurini and Davies, (2003), The transformation of Private Tutoring: Education in a Franchise Form, Retrieved, Jun 1<sup>st</sup>, from: <http://nall.oise.utoronto.ca/new/aurinidavies.pdf>

Bray M., Lykins Ch., (2012), Shadow Education, Private Supplementary tutoring and its implications for policy makers in Asia, Education and Development, Edition N°9, 2012.

Blair S., (2015), Personal communication during office hours.

British Columbia Teachers Federation (2012), BC Education Facts, retrieved, 14<sup>th</sup> July, 2015, from: <http://www.bctf.ca/uploadedfiles/public/publications/2012edfacts.pdf>

Canadian Council of Learning (CCL), (2007), Results for Elementary and Secondary School learning, Retrieved, Jun 1<sup>st</sup>, 2015, from: <http://www.ccl-cca.ca/ccl/Reports/SCAL/2007Archive/SCALStructuredTutoring.html>

Canadian Demographics Official Financial Post Martet, (2012), Canadian Demographics book 2012 FP, final edition, census information BC.

Canadian Intellectual Property Office, (2015), Results for Singapore Math Trademark, Retrieved, 8<sup>th</sup> July, 2015, from: <http://www.ic.gc.ca/app/opicipo/trdmrks/srch/cntnBscSrch.do?textField1=singapore+math&selectField1=tm&useblg=bscSrch.do%3Flang%3Deng&languageDirection=f&lang=enq&submitButton=Search>

CBC News, (2009), The Global Tutoring Revolution, Retrieved, Nov 1<sup>st</sup>, 2015, from: <http://www.cbc.ca/news/canada/the-tutoring-revolution-1.831039>

CNBC News, (2015), Singapore Math teaching would work in western schools, Retrieved, Jun 15<sup>th</sup>, 2015, from: <http://www.cnbc.com/2015/06/18/singapore-math-teaching-would-work-in-western-schools-report-says.html>

Dang, H. and Halsey F., (2008), The growing phenomenon of private tutoring: Does it deepen human capital, widen inequalities, or waste resources?, Retrieved, December 1<sup>st</sup>, 2015, from: [http://siteresources.worldbank.org/INTPUBSERV/Resources/Dang\\_private\\_tutoring.pdf](http://siteresources.worldbank.org/INTPUBSERV/Resources/Dang_private_tutoring.pdf)

Davies, Aurini and Quirke (2002), New Markets for private education in Canada, retrieved, 8<sup>th</sup> June, 2015, from: <http://www.cea-ace.ca/sit0es/default/files/EdCan-2002-v42-n4-Davies.pdf>

Davies, Scott, (2002), Understanding the growing demand for private tutoring in Canada, Retrieved, Jun 15<sup>th</sup>, 2015, from: <http://nall.oise.utoronto.ca/res/65ScottDavies.pdf>

Dierkes (2013), Supplementary Education: Global Growth, Japan's experience, Canada's future, Retrieved, Jun 15<sup>th</sup>, 2015, from: <http://www.cea-ace.ca/sites/default/files/EdCan-2008-v48-n4-Dierkes.pdf>

Dierkes, (2015), Communication by an interview held on August 19<sup>th</sup>, 2015.

Edchron (2014), Supplementary education, Retrieved, Nov 1<sup>st</sup>, 2015, from: <http://www.edchron.com/2014/07/22/after-school-tuition-supplementary-or-mandatory/>

Education Snapshot, (2011), General Concepts, Retrieved, Nov 1<sup>st</sup>, 2015, from: <http://www.slideshare.net/marklittlewood/e-learning-global-market-overview-and-detailed-data-on-sector-ibis-capital>

Education Reform, (2013), Education System, Retrieved, Nov 1<sup>st</sup>, 2015, from: <http://edglossary.org/education-system/>

Educhatter, (2014), The private tutoring explosion, Retrieved, December 1<sup>st</sup>, 2015, from: <https://educhatter.wordpress.com/2014/09/06/the-private-tutoring-explosion-why-are-parents-turning-to-tutors-after-school/>

ETS, (2007), The family: America's smallest school, Policy information report, Retrieved, December 1<sup>st</sup>, 2015, from: [https://www.ets.org/Media/Education\\_Topics/pdf/5678\\_PERCReport\\_School.pdf](https://www.ets.org/Media/Education_Topics/pdf/5678_PERCReport_School.pdf)

Forbes (2012), Global tutoring industry, Retrieved 2<sup>nd</sup> may, 2015 from: [http://scorenexus.com/wp-content/uploads/Global\\_Private\\_Tutoring.pdf](http://scorenexus.com/wp-content/uploads/Global_Private_Tutoring.pdf)

Franchisehelp, (2015), Education Industry Analysis 2016, Costs & Trends, Retrieved, November 20<sup>th</sup>, 2015, from: <https://www.franchisehelp.com/industry-reports/educational-franchise-industry-report/>

Fraser Institute, (2015), Studies in Education Policy, Report Card on British Columbia's Elementary schools 2015, Edition May 2015.

Futurpreneur Canada, (2013), The Business Plan: On the right Path, Business plan sample for Zebra tutoring.

Global Industry Analysts Inc., (2014), Private Tutoring: A Global Strategic Business Report, Retrieved, Jun 1<sup>st</sup>, 2015, from: [http://www.strategyr.com/Private\\_Tutoring\\_Market\\_Report.asp](http://www.strategyr.com/Private_Tutoring_Market_Report.asp)

Global News, (2013), Private tutoring is thriving in Canada, but it is necessary?. Retrieved, May 20<sup>th</sup>, 2015, from: <http://globalnews.ca/news/920126/private-tutoring-is-thriving-in-canada-but-is-it-necessary/>

Great schools, (2014), How do Asian students get to the top of the class?, Retrieved, December 1<sup>st</sup>, 2015, from: <http://www.greatschools.org/gk/articles/parenting-students-to-the-top/>

Jackson, (2012), My view: American students can benefit from Singapore Math, CNN press report, Retrieved November 10<sup>th</sup>, 2015, from: <http://schoolsofthought.blogs.cnn.com/2012/10/10/my-view-americas-students-can-benefit-from-singapore-math/>

Ken Kao, (2014), Why are Asians good at mathematics?. Blog, Retrieved, November, 10<sup>th</sup>, 2015, from: <https://www.quora.com/Why-are-Asians-good-at-math>

Osterwalder, A., & Pigneur, Y. (2010). Business Model Generation. John Wiley & Sons.

Potts Michael, (2015), [Personal communication during this consulting period]. Financial Executive at RLG, Vancouver, Canada.

Rasul Learning Group (RLG), (2015), Graduating class of 2015, Retrieved, May 20<sup>th</sup>, 2015, from: <http://rasullearning.ca/rasul-learning-blog/>

Singapore math, (2015), Singapore Math Inc. webpage. Retrieved, May 20<sup>th</sup>, 2015, from:

<https://www.singaporemath.com/terms.asp>

Southgate, Darby (2009). Determinants of shadow education: Across National-Analysis, Retrieved, Nov 1<sup>st</sup>, 2015, from:

[https://etd.ohiolink.edu/ap/10?0::NO:10:P10\\_ETD\\_SUBID:69961](https://etd.ohiolink.edu/ap/10?0::NO:10:P10_ETD_SUBID:69961)

Surrey, (2015), Official data from the municipality webpage, Retrieved, May 20<sup>th</sup>, 2015, from: <http://www.surrey.ca/city-services/1343.aspx>

Urbina, M., (2015), [Personal communication at the end of this consulting period], Mathematics professor, Singapore Math Coach, Curico, Chile.

## APPENDIX 1: HAND-OUT DOCUMENT (3 PAGES)

Rasul Learning Group

# Singapore Math

July 15th, 2015

Priscila Fernández Aedo

This document provides a general view of the tutoring industry - with focus on Canada and from the education point of view - and it ties to Singapore Math approach as a valuable opportunity.

### Tutoring Industry

The Global Tutoring Industry is 200%-500% in major Canadian cities are going to get so-growing (it will surpass 102.8 cities over the past 30 years, something out of that, but we don't

## Singapore Math

*Since children can be assumed to be more or less the same everywhere as far as intelligence is concerned, any difference in performance might probably be attributed to the educational system (Dindyal, 2006).*

## FACTORS OF SUCCESS OF SINGAPORE APPROACH

### Why Singapore Math Approach

**Differentiated Curriculum for students:** Singapore is one of the few countries in the TIMSS study that uses differentiated curricula for different groups of the students, while most countries around the world provide the same curriculum in mathematics to all students. Belgium, Netherland and Russia do the same, and they are also scoring at the top.

**Teachers:** The mathematics curriculum in Singapore is closely monitored and implemented in well-resourced schools by highly trained teachers most of whom are subject specialists. Besides, Singapore has a centralized system of education and, as such, has a national curricu-

process from the schools is quick to reach the Educational Ministry because of the small size country.

**Suitable School environment:** Regardless the suitability of the teachers, the Ministry of Education in Singapore identified the ability of the school resources, safety on schools, and perception of the school climate; as conditions for its success.

**Attitude:** As a result of TIMSS-2003, the ministry of education also emphasizes on the students attitude towards mathematics, and the students' aspirations and home support.

*The logical other place to look for any explanations regarding this*

**SMCE:** The core of the model is problem solving and the five sides forming the pentagon are: concepts, processes, metacognition, attitudes, and skills. The pentagon model clearly goes beyond the simple enumeration of content for the school mathematics syllabus. It emphasizes not only the content to be taught but also the processes and effective aspects of learning mathematics. Despite of the changes in the curriculum carried out the last years, the pentagon model still remains the backbone of the school mathematics curriculum in Singapore.

**Books:** According to Beckman (2004), although it has to be recognized the social context, there are

## Singapore Math

# How Singapore Math fits as a valuable option for supplementary tutoring service in Vancouver?

## Outlooks

Cultural issues.

Possible drawbacks when aligning children to the curriculum.

Copyrights issues.

The necessity of face-to-face learning at very early ages.

The possibility of reaching a feasible way to implement the model since there is material available.

Trends on tutoring industry.  
Parents drivers towards supplementary education in Canada (demographics).

The amount of Asian-derived people living in Vancouver who could be interested in.

The fact that there are some schools in America applying Singaporean approach.

Further:

5/1





## APPENDIX 2: MARKET

### Census Subdivisions in Greater Vancouver, BC (CD)

	# Population by Age   Total 5 to 9, 2015	Household Income   Average Household Income (Current Year \$), 2015	% Household Income   Household Income 100000 or Over (Current Year \$), 2015	% Household Population 25 to 64 Years by Educational Attainment   University certificate, diploma or degree above bachelor level, 2015	Average Total expenditure   Education   Other educational services, 2015	Average Total expenditure   Education   Other courses and lessons (excluding driving), 2015	POTENTIAL MARKET
Langley (District municipality), BC (CSD)	6.823	\$107.591,00	41,39%	8,63%	\$17,09	\$220,04	589
Langley, BC (CSD)	1.413	\$72.683,00	22,43%	4,47%	\$10,72	\$116,04	63
Surrey, BC (CSD)	31.334	\$95.139,00	33,33%	9,46%	\$15,80	\$198,09	2963
White Rock, BC (CSD)	577	\$84.865,00	30,75%	15,71%	\$7,96	\$94,81	91
Delta, BC (CSD)	5.712	\$108.061,00	43,20%	10,99%	\$18,29	\$239,53	628
Richmond, BC (CSD)	9.263	\$87.026,00	28,56%	13,38%	\$14,44	\$174,31	1240
Greater Vancouver A, BC (CSD)	774	\$96.111,00	21,78%	49,77%	\$16,45	\$220,30	169
Vancouver, BC (CSD)	24.019	\$88.024,00	25,94%	17,01%	\$12,17	\$137,24	4085
Burnaby, BC (CSD)	10.716	\$82.068,00	27,33%	14,29%	\$12,62	\$141,85	1531
New Westminster, BC (CSD)	3.081	\$78.080,00	26,03%	12,23%	\$10,01	\$103,13	377
Coquitlam, BC (CSD)	7.174	\$94.206,00	35,44%	13,72%	\$15,63	\$196,94	984
Belcarra, BC (CSD)	25	\$243.836,00	49,15%	27,49%	\$43,24	\$689,71	7
Anmore, BC (CSD)	130	\$174.055,00	69,73%	16,16%	\$28,56	\$404,97	21
Port Coquitlam, BC (CSD)	3.281	\$100.569,00	34,56%	8,49%	\$16,19	\$202,71	279
Port Moody, BC (CSD)	2.151	\$110.834,00	45,57%	17,49%	\$17,67	\$232,54	376
North Vancouver (District municipality), BC (CSD)	4.873	\$130.035,00	46,19%	19,08%	\$20,55	\$289,13	930
North Vancouver, BC (CSD)	2.274	\$80.040,00	24,55%	14,82%	\$9,99	\$101,62	337
West Vancouver, BC (CSD)	1.884	\$198.193,00	44,57%	26,12%	\$32,18	\$515,96	492
Pitt Meadows, BC (CSD)	1.169	\$95.996,00	36,18%	6,31%	\$15,21	\$181,90	74
Maple Ridge, BC (CSD)	4.731	\$94.388,00	35,33%	6,21%	\$15,14	\$184,95	294
Tsawwassen, BC (CSD)	28	\$152.556,00	39,74%	14,71%	\$25,79	\$370,40	4
<b>Sum</b>	<b>121,432</b>						<b>15,531</b>

Bowen Island, BC (CSD)	209	\$108.644,00	46,59%	24,12%	\$12,82	\$173,27	74
Lions Bay, BC (CSD)	65	\$137.674,00	53,14%	20,72%	\$14,32	\$194,87	24
Semiahmoo, BC (CSD)	2	\$81.827,00	25,68%	0,00%	\$13,33	\$153,19	0
Musqueam 2, BC (CSD)	85	\$116.179,00	28,76%	13,51%	\$21,16	\$308,92	18
Coquitlam 2, BC (CSD)	0	\$115.786,00	100,00%	0,00%	\$15,76	\$184,78	0

Coquitlam 1, BC (CSD)	2	\$136.836,00	62,50%	5,26%	\$9,94	\$89,98	1
Burrard Inlet 3, BC (CSD)	62	\$116.618,00	32,59%	12,48%	\$15,10	\$185,77	14
Mission 1, BC (CSD)	33	\$48.919,00	12,04%	1,18%	\$8,60	\$70,55	2
Capilano 5, BC (CSD)	108	\$49.490,00	9,56%	12,58%	\$5,98	\$46,98	12
Barnston Island 3, BC (CSD)	0	\$0,00	0,00%	0,00%	\$0,00	\$0,00	0
Musqueam 4, BC (CSD)	0	\$114.690,00	100,00%	0,00%	\$15,84	\$192,19	0
Seymour Creek 2, BC (CSD)	8	\$58.245,00	15,63%	0,00%	\$13,47	\$179,02	1
Katzie 2, BC (CSD)	0	\$0,00	0,00%	0,00%	\$0,00	\$0,00	0
McMillan Island 6, BC (CSD)	5	\$78.610,00	17,86%	0,00%	\$19,59	\$255,09	0
Matsqui 4, BC (CSD)	19	\$43.406,00	2,75%	0,00%	\$7,04	\$81,45	0
Katzie 1, BC (CSD)	22	\$65.064,00	20,51%	0,00%	\$11,60	\$123,70	2
Langley 5, BC (CSD)	0	\$0,00	0,00%	0,00%	\$0,00	\$0,00	0
Whonnock 1, BC (CSD)	0	\$0,00	0,00%	0,00%	\$0,00	\$0,00	0

Subdivisions [in red] which were excluded from the analysis.

## APPENDIX 3: HOUSEHOLD SIZE

Census Subdivisions in Greater Vancouver,  
BC (CD)

Households by Size of  
Household | Average Number of  
Persons In Private Households,  
2015

Langley (District municipality), BC (CSD)	2,74
Langley, BC (CSD)	2,12
Surrey, BC (CSD)	3,04
White Rock, BC (CSD)	1,85
Delta, BC (CSD)	2,82
Richmond, BC (CSD)	2,73
Greater Vancouver A, BC (CSD)	2,41
Vancouver, BC (CSD)	2,23
Burnaby, BC (CSD)	2,49
New Westminster, BC (CSD)	2,10
Coquitlam, BC (CSD)	2,73
Belcarra, BC (CSD)	2,30
Anmore, BC (CSD)	3,12
Port Coquitlam, BC (CSD)	2,62
Port Moody, BC (CSD)	2,57
North Vancouver (District municipality), BC (CSD)	2,70
North Vancouver, BC (CSD)	2,07
West Vancouver, BC (CSD)	2,40
Pitt Meadows, BC (CSD)	2,59
Maple Ridge, BC (CSD)	2,63
Tsawwassen, BC (CSD)	2,44

# APPENDIX 4: BRANDING & ADVERTISING DETAILS

The details of the costs to reach \$CAD 19500 of investment come from the following items:

Logo and brand build (*)	2000
Storytelling video production	8000
Whiteboard video production	2500
Blog set-up	500
Social Media set-up	1500
Printings	5000

(\*)

## LOGO AND BRAND BUILD

Any new business requires a strong brand and overall design that effectively represents what you do. The Singapore Math Vancouver learning centres will be a Rasul Learning Group product. However, they will require a strong, independent brand to represent the method, the centres and what they can do to strengthen a child’s ability to learn mathematics over conventional teaching methods.

Curve works with a team of top graphic designers who can take your thoughts and ideas and implement them in a way that directly targets your ideal audience. The process usually begins with a discussion (brainstorming meeting) about your likes and dislikes and what your goals are moving forward. From there, our team will provide you with concepts to help you create a fresh, stylish brand that appeals to both children and their parents.

In our initial meeting you mentioned Kumon as one of your competitors. The Kumon logo, with the “thinking face”, is something that people of all ages can relate to. We recommend something fun and creative for the Singapore Math Vancouver centres since they will be offering a “thinking outside the box” method of teaching. Singapore Math has an existing logo that is a registered trademark. The logo is quite corporate. We recommend moving away from creating a similar type of logo as it will not help your brand stand out from other after-school/alternative learning centres.



At Curve, we ensure consistency of your brand across all platforms – from your website and social media accounts to brochures, landing pages, online and traditional advertising.

## APPENDIX 5: WAGES COSTS STRUCTURE

### 1st month running

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Facilitator (1st teacher)	6908,25	6908,25	6908,25	6908,25	6908,25	6908,25	6908,25	6908,25	6908,25	6908,25	6908,25	6908,25
Academic Head (2nd teacher)		4196,08	4196,08	4196,08	4196,08	4196,08	4196,08	4196,08	4196,08	4196,08	4196,08	4196,08
Teacher assistant (3rd teacher)			2704,33	2704,33	2704,33	2704,33	2704,33	2704,33	2704,33	2704,33	2704,33	2704,33
IT & Marketing expert	6635,17	6635,17	6635,17	6635,17	6635,17	6635,17	6635,17	6635,17	6635,17	6635,17	6635,17	6635,17
Operations Manager	5520,17	5520,17	5520,17	5520,17	5520,17	5520,17	5520,17	5520,17	5520,17	5520,17	5520,17	5520,17
Administrative assistant				3740,58	3740,58	3740,58	3740,58	3740,58	3740,58	3740,58	3740,58	3740,58
Auxiliary assistant				3740,58	3740,58	3740,58	3740,58	3740,58	3740,58	3740,58	3740,58	3740,58
<b>Salaries</b>	<b>19063,6</b>	<b>23259,7</b>	<b>25964,0</b>	<b>33445,17</b>	<b>33445,17</b>	<b>33445,17</b>	<b>33445,17</b>	<b>33445,17</b>	<b>33445,17</b>	<b>33445,17</b>	<b>33445,17</b>	<b>33445,17</b>

**Sum months:**  
**369293,75**



### Plus 1 teacher assistant

#### Plus 1 teacher assistant

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Salaries	369293,75	401745,75	434197,75	434197,75	434197,75
Payroll expenses (**)	55394,06	60261,86	65129,66	65129,66	65129,66
<b>Wages</b>	<b>424687,81</b>	<b>462007,61</b>	<b>499327,41</b>	<b>499327,41</b>	<b>499327,41</b>

(\*\*) 15% Mark up for Canadian companies (Potts, 2015)

## APPENDIX 6: GANTT CHART FOR THE IMPLEMENTATION

Activity	Responsible / WEEKS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<b>Corporate activities</b>	<b>RLG</b>																				
Project Approval	RLG	█																			
Financial sources	RLG	█	█	█																	
Leader and parties definition (RLG involvement)	RLG		█	█	█																
Facilitator, IT & Marketing and Operations Manager recruitment	RLG				█	█	█	█													
Intellectual Property (IP issues)	Lawyer - RLG					█	█	█	█	█											
Marketing Agency hiring	Project Leader										█	█									
Logo Design Development	Marketing agency										█	█	█								
Logo Design approval	Project Leader												█								
<b>Academic Plan Development (Children &amp; Teachers)</b>	<b>Facilitator</b>																				
Research	Facilitator																				
Touch with Marshall Cavendish Education (travel to Singapore)	Lawyer-Facilitator																				
Methodology development and curriculum	Facilitator																				
Definition of the additional resources to use	Facilitator																				
Delivery of the content to be edited in the Technological platform	Facilitator																				
Certification issues	Facilitator																				
<b>Technological Solution development (platform)</b>	<b>IT &amp; Marketing specialist</b>																				
Starting of solution with the webpage development	IT & Marketing specialist																				
Learning modules Development (Child-parent and teachers)	IT & Marketing specialist																				
Administrative modules Development	IT & Marketing specialist																				
Integration of the applications	IT & Marketing specialist																				
<b>Learning center set-up</b>	<b>Operation Manager</b>																				
Lease Contract for the center (Approved by RLG)	Operation Manager																				
Permits and patents	Operation Manager																				
Lay-out design	Operation Manager																				
Works on construction and ornament	Operation Manager																				
Administrative model development	Operation Manager																				
Delivery of the content to be edited in the Technological Platform	Operation Manager																				
Staff recruitment	Operation Manager																				
Purchases (supplies, merchandise, etc)	Operation Manager																				
<b>Communication plan</b>	<b>P. Leader- Marketing agency</b>																				
Promotion and Diffusion	P. Leader (IT support)																				
Coaching of Teachers	Facilitator																				
Personnel Training (administrative)	Operation Manager																				
Launch event	RLG - all the staff																				

