

Do The Math, Please!

RAJA NERINA RAJA YUSOF^{1*},
SITI RAHAYU HUSSIN¹, HASLINDA HASHIM¹,
CHE NURUL KHAIRUNNISA CHE KADIR²
AND MUHAMAD TAJUDIN MUSTAFA²

ABSTRACT

This case focuses on HOME® Math, an enrichment center dedicated to developing mathematical minds. It tells the story of Nurul, the company's founder, and her husband Tajudin, who aspired to expand their business. Their opportunity arose when investor Dato' Anwar Sharil expressed keen interest in partnering with them. Nonetheless, HOME® Math had to demonstrate to Dato' Anwar that their HOME Math program was a viable and worthwhile venture for the future. This case study is particularly applicable for basic management, entrepreneurship, and strategic management courses.

Keywords: Mind development center; mathematics; entrepreneurship; growth strategy

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¹ School of Business and Economics, Universiti Putra Malaysia

² House of Mind Excellence (QC Group Sdn Bhd)

* Corresponding author: nerina@upm.edu.my

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AT THE ELEVENTH HOUR

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HOME® Meru Raya, Ipoh (Headquarters)

“Bye! See you this Friday, Ashraf. Please don’t forget to do your exercises at home!”

Nurul bid a final farewell, shutting the door behind her before making her way up the staircase towards HOME®'s meeting room. Inside, her husband Tajudin was engrossed in his laptop, and a quick glance at the wall clock confirmed it was 9:45pm. Exhausted, Nurul released a deep, weary sigh and settled onto one of the sofas.

“What are you working on dear?” asked Nurul.

“Oh... it’s the short proposal that Universiti Teknologi Petronas asked us to prepare. Before we can organize a Math seminar there, the administrative staff asked us to send them a brief proposal,” Taj answered, without taking his sight off his laptop.

Nurul nodded, indicating a remembrance of their meeting with the Deputy Vice Chancellor of Academics of UTP last week.

“I think we have a more pressing issue on our hands, dear.” *“Dato’ Anwar called me in the afternoon, and he wants us to produce a comprehensive report on our company’s progress and future growth strategies.”*

Taj abruptly stopped working and looked at Nurul, his eyes wide opened, as if in disbelief. *“But why do they need this report? They did not mention this before. When is it due?”*

“He said this report is important to justify to his company’s Board of Directors that we are a suitable company to be under their portfolio,” Nurul answered her husband. *“Deadline is end of this month, because their next BOD meeting will be held the first week of next month.”*

“Oooo... in that case we have to hurry dear. We have to ask our staff to start gathering relevant information to be analysed. We need to show Dato’ that we are ready,” said Taj, excitedly.

Nurul nodded once more, signifying her agreement. The first week of 2017 had just begun, and she was already experiencing fatigue. As the sole full-time manager and math trainer at HOME®, a center dedicated to developing mathematical minds, Nurul struggled to manage the growing workload. Balancing evening

classes and addressing administrative matters throughout the day, she began to doubt her ability to complete a comprehensive report by the looming deadline.

As if reading her mind, her husband interjected, *“Don’t worry dear, we will do it together. I’ll take some time off work. We should be able to meet the deadline. We NEED to. This is our chance to get investment for us to really grow.”*

QC GROUP SDN BHD

HOME® was under QC Group Sdn Bhd, a company established in 2004 originally as InTouch Enterprise. InTouch Enterprise focused on providing Motivation Programs, Team Building, Staff and Parenting Programs, as well as selling Teaching Aid and Information Technology equipment. In 2008, InTouch Enterprise changed to Qulhaq Resources, and another company was also established the same year, which was Qulhaq Consultancy. In 2014, both companies were put under QC Group Sdn Bhd.

The Director of QC Group Sdn Bhd was Madam Che Nurul Khairunnisa bt. Che Kadir. She received her secondary education in Sekolah Menengah Agama Marang and a Diploma in Islamic Studies from Kolej Universiti Islam Selangor (KUIS). Nurul, who was also an ex-school teacher, was continuing her studies in the Open University Malaysia (OUM) in Psychology. Nurul was assisted by her husband, Mr. Muhamad Tajudin bin Mustafa, a certified counsellor, possessing a degree in Education (Guidance and Counselling) from the Universiti Pendidikan Sultan Idris (UPSI). Taj was also a registered member of the Counsellor Board of Malaysia. He was attached to the Teachers Education Institute in Ipoh, Perak.

QC Group Sdn Bhd operated throughout Malaysia, targeting government institutions, private organizations and entities, as well as society as a whole. The company’s vision, mission and slogan were “To be the initiator to knowledge expansion”, “To help develop human capital that are true, loving, respecting each other, influential, disciplined, knowledgeable and visionary” and “Respect Each Other”, respectively.

Qulhaq Consultancy started off with the first module “Bijak Sifir Kaedah Sifu Taj” (Smart Multiplication Approach by Instructor

Taj) in 2010. The first module was taught through seminars and short courses, and the number of participants was encouraging. Around 30,000 people participated, however, from the outcome of the courses, they saw that many had difficulties understanding the program as a whole. Upon their investigation, they found that the difficulties were rooted from the participants' lack of basic comprehension in addition. That was when Asas Bijak Campur (Fundamentals in Smart Addition) module was created and later promoted. However, that module managed to only be delivered three times in seminars when Taj and Nurul realized that the ABC module needed to be taught regularly, and not in a one-off setting, like in seminars and short courses. When regular classes were held, the learners' minds would have continuous exercises and their progress could be tracked systematically. That type of setting was also conducive for all modules to be applied – addition, multiplication, subtraction and division – in the class according to students' progress and readiness. That was when the idea of a mind development center - focusing on Maths- surfaced in the figure of HOME®.

HOUSE OF MIND EXCELLENCE (H.O.M.E®)

HOME®, or House of Mind Excellence, was a mind development learning center established in 2012, focusing on mathematics for children aged 4 to 17. Its main objective was to change the mindset of children about mathematics – from disliking it to loving it. Aligned with its motto “Where A Thinkers Are Bred” HOME® offered various programs catering to different needs of the children – HOME® Math, HOME® Kids, HOME® BeST, HOME® G2ST and HOME® CS (refer to Table 1). The name HOME® was also chosen to depict the aspiration of the company to provide a ‘home-like’ atmosphere where tutors/trainers had close relationships with both students and their parents.

Table 1: Programs Available Under HOME®

Program	Description
HOME® Math	With the slogan “No Child Left Behind”, HOME® Math was a program in the shape of Maths therapy which utilized counselling and psychological approaches as a platform to help kids who had challenges in mathematics. HOME® Math targeted kids from 8 to 17 years old. HOME® Math learning started with strengthening students’ basic mastery in Mathematics first, which are addition, multiplication, subtraction and division.
HOME® Kids	HOME® Kids was an early preparation program for kids at the stage of entering school for them to master the basic concepts of Mathematics and those taught in school.
HOME® BeST	<i>Bijak Sifir Kaedah Sifu Taj</i> (Smart Multiplication Approach by Instructor Taj) Workshop or better known as BeST was an exercise program to help kids with their multiplication table without memorization. Other than assisting kids in this area, the program also had the aim to change the perception of students that Mathematics was a difficult subject.
HOME® G2ST	<i>Gerak Gempur Sifu Taj</i> (Shock Action Sifu Taj) was a preparation program for kids facing examinations such as UPSR (Evaluation Test for Primary School), PT3 and SPM (Evaluation Test for Secondary School). Learning started with ingraining mastery of multiplication of 0 until 12 and then the application into learning syllabus in schools. The program uses the same concept as HOME®. At the end of the program, participants are targeted to master multiplication of 0 until 12 without memorization before moving forward to the examination subjects.
HOME® CS	Many specially arranged programs for kids’ learning activities continue even during the school holidays. The aim of the program was to maintain the kids’ momentum to learn and be prepared to face a new school session.

HOME®’s specially arranged programs were focused to treat the problems associated with learning Mathematics such as no interest and focus in studies, phobia towards numbers and calculations, as well as weak mastery of the subject matter. Since HOME’s approach combined counselling with mathematics, HOME’s founders believed in every child’s potential, aligned with Carl Ransom Rogers’ theory, the Person-Centered Approach. Thus, HOME® focused in identifying children’s potential first and then proceeded to work with them to explore and expand the potential. Those approaches were reflected by the principles held by HOME’s Math Tutors/Trainers towards students, which were to be 1. Congruent and Sincere, 2. Unconditional acceptance, and 3. Empathy.

In order for HOME® to consistently produce better modules, Taj and Nurul had been working closely with HOME®’s advisor, Associate Professor Dr. Mat Rofa Ismail from Faculty of Science, Universiti Putra Malaysia (had since retired in early 2017). They also

referred to two other experts in the field, Mr. Abdul Halim bin Amat@Kamaruddin, a senior lecturer in Faculty of Science and Mathematics, Universiti Pendidikan Sultan Idris (UPSI) and Ir. Bekti Hermawan, Director of Islamic Science and Institute. They had been the advisors and reference for HOME for over 10 years (please refer to Appendix A for details of Workforce for QC Group).

HOME® MATH

HOME® Math Therapy Program was initiated when parents who attended their seminars demanded for continuation of the Math learning process for their children. Even though Taj and Nurul advised them the appropriate methods, parents were not able to execute them on their own. Coincidentally, at the same time, both founders were also searching for a better business model to develop a more sustainable income for their company. Organizing seminars in different locations every time were energy and time consuming, and they found themselves having to do continuous promotion to get participants for each event. On that realization, they pursued an idea to develop a learning center where their programs and modules could be applied continuously and the impacts on students could also be monitored more effectively.

Thus, HOME® Math Therapy Program was established to focus and expand on students' potential, to be highly motivated, free and proactive. Nurul and Taj believed that Mathematics was the foundation to the mastery of other subject matters. Hence, HOME® Math offered personal guidance by qualified Math Tutors or Math Trainers in grasping and further improving the mastery in Maths according to the level of each student. It started off offering a class once a week, and later on received more responses for classes twice a week.

In HOME® Math, every student was asked to embrace these concepts:

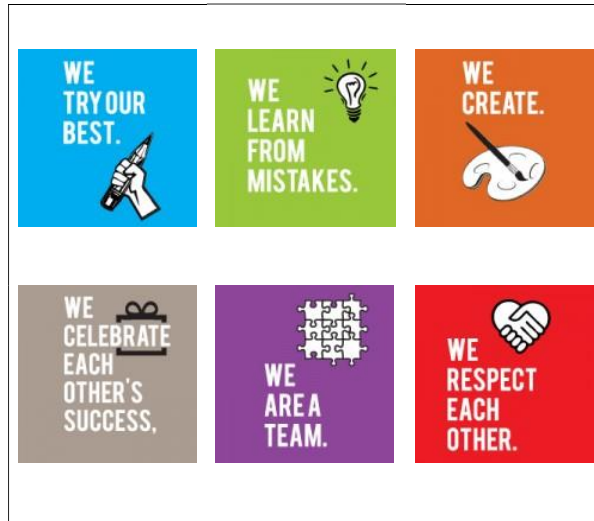


Figure 1: HOME's Concepts

Modules

In HOME® Math, there were three main modules available for students, depending on their needs. Most frequently, students would start with the Therapy Module, which consisted of 4 different modules which concentrated on:

1. Basic addition – to cover until the end of module and finishing with a Final Exam in Addition
2. Basic multiplication – to cover until the end of module and finishing with a Final Exam in multiplication
3. Basic subtraction - to cover until the end of module and finishing with a Final Exam in subtraction
4. Basic division - to cover until the end of module and finishing with a Final Exam in division

The second module was the Consultancy Module. That module focused on the application of the basics into the syllabus that students learned in schools. Since HOME® was registered in the Ministry of Education as a ‘mind development center’ and not a tuition center, HOME® Math could not use the word ‘syllabus’ in its modules because their focus was on mind development and therapy on the subject matter, and not solely on exam oriented as

needed in schools. HOME® Math Therapy Center was initially established because Taj had the qualification as a counsellor and wanted to integrate it with the learning process.

The third module was the Supervision Module. That module was developed to assist students to apply the basics learnt to the Mathematics examination papers as prepared in schools. It was called supervision because in that module a Math Trainer or Math Therapist would only observe and assist students in the application process.

However, to identify each student's level of mastery in Mathematics, potential students were given an Identification Test. Based on the test results, the appropriate module was recommended to them to solve problems faced by the students. Once or twice per week sessions would be booked at the nearest branch available. Each session was one hour, and would comprise of exercises in Mathematics according to the modules, alternating with mind games to further develop their brain.

Math Teachers

Since the nature of HOME®'s business was education services, one main ingredient for the company was its human resources. HOME®'s founders were very particular on the selection of their teachers, whom they called MTs, depending on their level of expertise. There were five types of MTs in HOME, and they were Math Trainee, Math Tutor, Math Trainer, Master Trainer and Math Therapist.

A Math Trainee was a newcomer to the organization, having passed the initial screening tests and possessing the appropriate qualifications. Only after going through 12 hours of training with HOME®'s Master Trainer and Math Therapist (based in Ipoh, Perak) could the Math Trainee start to have their own students. However, a Math Trainee was still considered a person under probation. If he or she had problems in teaching, he or she should consult a Math Tutor, and if the Math Tutor could not solve it, they need to consult a Math Trainer, and so on until the highest MT. For a Math Trainee to be promoted to a Math Tutor, he or she should undergo another training session in HOME®'s HQ for two days to cover another set of module. HOME would then present a certificate to the Math Trainee recognizing his or her qualifications as a Math Tutor.

Subsequently, a Math Tutor could be promoted to a higher level which was a Math Trainer. A Math Trainer was a person having the qualifications and ability to open up his or her own branch or center under HOME® Math. In other words, each branch or center should have at least one Math Trainer present. A Master Trainer in HOME® was at the time only one person, which was Nurul, and the same for the Math Therapist, which was Taj.

In the initial stages, Nurul and Taj found it difficult to recruit, select and maintain their potential MTs. They did not have proper criteria and procedures for recruitment. Thus, that resulted in them recruiting people who lacked commitment, honesty and control. To the founders, HOME® trainers should possess good self-control, in addition to control over the children that they taught. Communication and patience were also sought because most of the students that they taught were weak in the subject of Mathematics, hence the trainers should be supportive and encouraging so that they could do better.

However, after a while, they decided on a proper Standard Operating Procedure (SOP) that helped them employ people who were more suitable for that type of career (please refer to Appendix B for details). The SOP entailed the candidates to undergo two types of profiling tests: a psychometric and a personality test. Both tests were developed by Taj himself as a counsellor. However, despite the fact that the SOP was in place, they still found it hard to find suitable candidates. Once they even went to a Career Center in Aman Jaya, Perak for recruitment purposes. Among the approximately 100 candidates who applied, only six passed the tests, and only two were still with the company until 2017.

Business Operations

When HOME® Math started, the founders agreed that the way forward was to offer that program to other individuals who shared their passion. In other words, they licensed off their program to others to make it exposed quickly to other parts of the country. At that point of time, both the founders did not implement any conditions, rules or regulations in terms of who could or could not join their company as a licensee. Nurul and Taj's intention were to share their knowledge and help as many kids possible through their modules and programs. The licensed business could even be

implemented in a business premise as well as in their (licensees') own home.

At the height of their business, they had 56 branches all over Malaysia. However, their happiness was short lived when they faced many failed take-offs and unethical behaviours from their licensees. In many cases, licensees who have registered and paid the fees ended up not even starting the business due to their work commitment. There were also parents who were actually interested only because of their children, hence were not motivated enough to cater for other children. Since HOME® Math did not apply any conditions and rules at that time, there was even a time when a licensee created his own modules based on HOME®'s, rebranded it and used it as his own.

Thus, by 2014, due to the issues on licensees, the number of branches dwindled to around 21. From the 21 remaining branches, there were licensees who chose to shut down their HOME branch to set up their own brand name after reaching a comfortable Return on Investment (ROI). HOME® Math's brand name, logo and slogan were registered as trademarks, but because mathematics was a general subject, HOME®'s modules could not be registered as an intellectual property. The fact that the modules were all comprehensively arranged and written down made it easier for licensees to copy them and use them for their own business.

However, because of the economic slowdown in 2016, by end of that year the number of branches decreased to only seven branches. The branches were in Selangor (Sungai Buloh, Gombak, and Shah Alam), Perak (Ipoh and Ipoh Utara), Sarawak (Miri), and Kuala Lumpur (Sungai Besi) (please refer to Appendix C for branch details).

Marketing

In the earlier days, HOME® Math depended on using banners and buntings as their main marketing tool. However, they realized that not many people saw their banners and buntings, thus affecting the number of customers that they were able to recruit at that point of time. Not willing to give up, Nurul tried Facebook, and the responses that they received were overwhelming. In Facebook, Nurul set up HOME® Math's own FB page as well as paid FB advertisement slots to promote HOME® Math. In addition, HOME®

also utilized radio advertisements, buying ad slots during IKIM (Malaysia Islamic Development Institute) radio channel which targeted Muslim parents in Malaysia. HOME also created HOME Math's website, which made it easier for potential licensees and customers to seek information with regards to the program.

However, because the number of branches was not many across Malaysia, Nurul did not market extensively HOME® Math's program, because they were concerned that they could not accommodate the overwhelming demand from the public.

MIND DEVELOPMENT CENTERS IN MALAYSIA

In Malaysia, mind or brain development centers, also known as enrichment centers, especially for children, were growing rapidly. These centers were different from tuition, or learning centers, mainly because the latter focused on school syllabus and was supplementing the formal learning in schools, whereas the former emphasized more in developing long-term improvement and maximization of children's overall cognitive ability in specific areas or subject matters. It was reported by a Mastercard survey in 2013 that two-third of the Asia-Pacific parents were sending their children to enrichment and tuition classes.

According to reports, in 2013, South Korea, Taiwan, Hong Kong, Singapore and Malaysia were the main leaders in the enrichment classes industry, however, it was expected that Vietnam, Thailand, Indonesia and India to show significant growth in the near future. In 2017, there were many types of centers available, focusing on certain areas, such as foreign languages, public speaking, arts and craft, speech and drama, sports, mathematics and critical thinking, science and technology, music and movement, and many others. The increasing trend of enrolling children in enrichment class was in partly due to the younger generation parents who were more proactive and wanted a strong academic foundation at a young age for their children. They were also more attentive to the needs and wants of their children and were willing to try alternative ways of developing these in their children. It was also believed that by exposing children to those supplementary programs, children's brains would develop in such a way that also

improved their absorption of formal subject matters at school. Enrichment centers were also available through online, since there were subject matters that could be thought online or virtually such as Computer Programming and Coding, Public Speaking, and other specific courses. The emergence of Massive Open Online Courses (MOOC) also opened up the opportunity for the public to learn subject matters in a structured way for free.

The other type of learning center that was available for children in Malaysia was tuition classes. According to a survey by Mastercard in 2013, about 46 percent of Malaysian parents sent their children to after-school tuition centers, to receive personalized coaching and guidance of their formal education in schools. India had the highest percentage (54%), followed by Taiwan (52%) and Thailand (52%). Since tuition centers were largely available to students in the urban areas, in 2016, the Ministry of Rural and Regional Development Malaysia announced that they would set up 400 people's tuition centres throughout the country for primary and secondary school students sitting for the Ujian Penilaian Sekolah Rendah (UPSR) and Sijil Pelajaran Malaysia (SPM) examinations.

Industry Players

In Malaysia, there were several major players in the enrichment or mind development centers that focused on mathematics (details in Appendix D). KUMON and Eye Level (previously known as E.nopi) were among the main industry players which had strong brand images and many followers. KUMON had around 4,000 students located in 49 countries globally, while Eye Level had around two million students in over 22 countries.

KUMON, which originated from Japan, was developed by Toru Kumon, a high school Math teacher, initially for his son, Takeshi. His program was based on individualized learning method where students start at their level of understanding, and progress according to their pace. KUMON's facilitator's role was to guide students to acquire the self-learning ability. KUMON's method was based on worksheets, which were designed to progress in small steps so that students were able to progress smoothly according to their level. The completion of the worksheet was done at home as a daily routine, although students still need to regularly attend classes

in the centers (twice a week). That was where the support from parents was very important to ensure that students were motivated to continue the daily routine. Self-completion of the worksheet would teach students to solve problems by themselves, while inculcating confidence and self-esteem in them. If students were able to achieve advancement on their own, they would also be able to do the same in school.

KUMON offered two main programs, the Math Program and the English Program. In addition, they also offered one program called the Pencil Program, which focused to help young students to acquire the basic pencil control skills. In the Math Program, KUMON had 4,420 worksheets, expanding 20 levels. To start off in the program, each student would need to undergo a Diagnostic test for facilitators to determine the student's starting point. The appropriate worksheet would then be assigned for daily homework, and the completed worksheets would be submitted during class sessions where facilitators would assess and ask for revisions, when necessary. In 2017, KUMON centers were available in 13 states around the country.

Eye Level was previously known as E.nopi, and it originated from South Korea about 40 years ago. Catering to learners age 3 to 15, the ultimate goal of Eye Level was to nurture a lifelong learner, critical thinker and problem solver who would be empowered to succeed at every level of formal education and beyond. The Eye Level system featured colourful, fun learning materials such as blocks, mirrors and shapes. The program had an easy-to-implement modular learning system that can be arranged in function of each individual student. It enhanced children's critical and analytical thinking skills through the active use of the learning materials.

Eye Level offered two main programs, which were the Eye Level Math and Eye Level English, both for students aged 4 to 15 years old. The Eye Level Math Program was divided into two modules which were the Basic Thinking Math (to build stronger foundation) and Critical Thinking Math (problem solving, geometry, reasoning skills, etc). Apart from these two programs, Eye Level also offered programs such as Play Math (for ages 3-4), Happy Talk (conversational English for 5-9 years old) and Chinese (for 5-10 years old). Similar to KUMON, Eye Level also required students to undergo a Diagnostic test first before starting with a program.

Based on the results, the center instructor would identify the starting point and establish individual goals together with the student. That way, a customized individual program would be established according to the child's ability.

IT'S NOW OR NEVER!

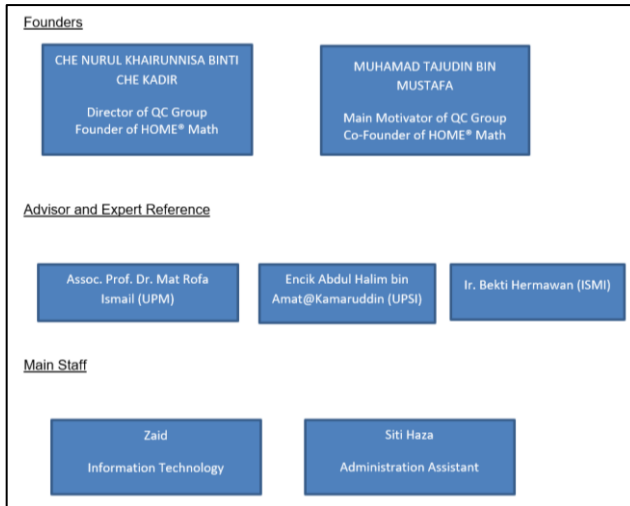
5 January 2017

HOME® Meru Raya, Ipoh (Headquarters)

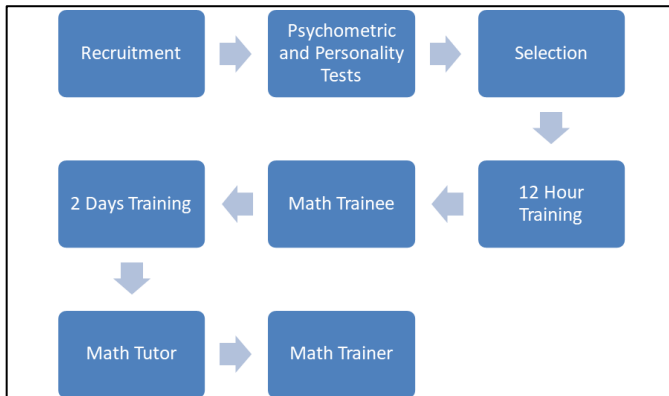
Looking around HOME® Math's buzzing activity on a Friday night, Nurul smiled to herself. It was somewhat satisfying to her to see the concentration and fun expressions on both the students' and trainers' faces. HOME®'s mission from the start was to help students who had problems in Mathematics. Malaysian students in particular, had been criticized by the global community because of their poor performance in the 2012 OECD Program for International Student Assessment (PISA). Results showed that Malaysian students were very weak in Mathematics, especially in critical thinking and problem solving areas. Nurul knew that Taj and she were in the position to help, in their own way, and that what was motivating them all these while. "This is our chance to grow." Her husband's words the day before kept ringing in her ears.

Do The Math, please!

APPENDIX A WORKFORCE FOR QC GROUP



APPENDIX B HOME® MATH'S STANDARD OPERATING PROCEDURE FOR TEACHING STAFF RECRUITMENT AND CAREER PATH



APPENDIX C
HOME® MATH BRANCHES IN MALAYSIA BY END OF 2016

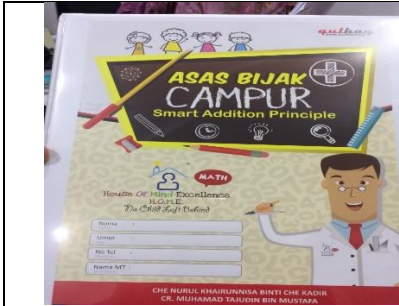
Branch	Location
HOME Meru Raya(HQ)	Ipoh, Perak
HOME Sungai Siput (Utara)	Perak
HOME Saujana Utama	Sungai Buloh, Selangor
HOME Seksyen U10	Shah Alam, Selangor
HOME Taman Selaseh	Gombak, Selangor
HOME Permyjaya	Miri, Sarawak
HOME Sungai Besi	Selangor

APPENDIX D
MIND DEVELOPMENT CENTERS (MATHEMATICS-FOCUSED)
IN MALAYSIA

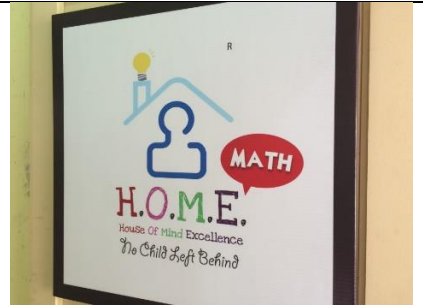
Mind Development Center	Country of Origin
KUMON	Japan
EYE LEVEL	South Korea
UCMAS Mental Arithmetic	Malaysia
HOME® Math	Malaysia
CMA Mental Arithmetic	Taiwan
ALOHA Mental Arithmetic	Unknown

Do The Math, please!

APPENDIX E



Asas Bijak Campur (Fundamentals in Smart Addition) module



HOME Math Logo and Slogan



A session in HOME's night classes for secondary school students



The physical environment in a typical HOME's center



A learning session with a Math Tutor



A class session in HOME Math