



ASSOCIATION OF SCIENCE, TECHNOLOGY & INNOVATION

ANNUAL REPORT 2017



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ASTI Annual Report 2017

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Message from the President

Science Education for the Child.

The Charles Dickens' novel, *A Tale of Two Cities* open with the phrase "It was the best of times, it was the worst of times..." which I think best describes the year we have had in 2017. It indicates how 2 contrasting opposites may seem to take place at the same time and place.

"It was the best of times" for ASTI for we had one of the best year ever in terms of projects, achievements and new collaborations. "It was the worst of times" since we have also had one of the worst year in terms of meeting our funding KPIs. These 2 contrast is difficult for me to phantom at first but I have grown to accept it as it is – there are things better left unanalysed.

There is an old story of a pilgrim who reaches an inn in the middle of the storm. The owner asks the pilgrim where he was going. "I'm going to the mountains," he answers. "Don't be stupid" the innkeeper replies, "it's too risky to climb, and the weather is dreadful." "No I'm still going up," answers the pilgrim, "since my heart is already there, so it is easy to follow it with my body."

This story signifies our journey with ASTI. We envisage the following year, 2018 to be more successful but equally more challenging. However, somehow I think we will get past that too – for it is easy for the body to follow when the heart is already there. We hope your heart is there with us too.

We finally like to thank all that has made our work meaningful – our amazing teachers – we owe you a great debt. Our partners – your support is our underlying strength. Our volunteers – without you we never would see success. Our funders – your continued backing is our ultimate endorsement. Our staffs – your commitment is our greatest asset. Our members and committee – your presence is the pillar which stands tall.



To all our stakeholders, The Ministry of Education, The Ministry of Science Technology and Innovation and many others – your approvals and backing has brought us to great heights. But finally, to all the young students who do take part in our efforts – Your participation gives us immense meaning. Please do accept our apologies for any shortcomings of the past, do help us to rectify them.

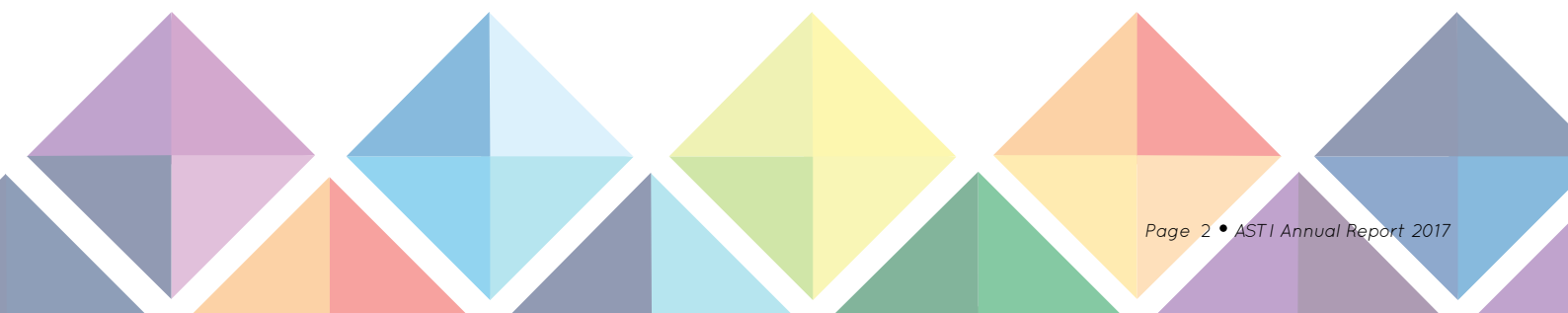
This is the path I have chosen,
Hoping in coming years it will continue to strengthen,
On the coming years until the day I have fallen,
The final day I hope to say that I was not mistaken,

With every second not belittled,
And every minute always delivered,
For every hour and day not squandered,
Until the months and years are all gathered,

So I can truly say to the most precious “Ye I have not forsaken”,
In my heart be it active although it may appear latent,
And in my mind may it always be awaken,
In my short journey - a good one hopefully taken.

Dr. Mohamed Yunus Bin Mohamed Yasin
President

Association of Science, Technology and Innovation





Executive Summary

ASTI, Association of Science, Technology and Innovation, champions the role of science in the community and inspires the young generation of our nation to join and excel in the world of science. ASTI has conducted events and taken up projects in 2017 to play its role in encouraging the use of science in almost everything in our everyday life.

ASTI's first and largest project is Science Fair for Young Children (SFYC) held in Tamil schools across the country. In 2017, SFYC was held at 3 levels, namely School Level Science Fair (SLSF), Zone Level Science Fair (ZLSF) and National Science Fair for Young Children as in previous years. In 2017 we trained teachers from 415 schools in 10 zones across the country to prepare them for the science fairs. SLSF 2017 was held from March 2017 till September 2017 with the participation from 282 Tamil schools. This year, the experiments were divided into 2 categories, Category A and B. Subsequently, from April till May 2017, ZLSF 2017 was held in 10 zones with a total participation of 370 teams from 326 schools. This is the largest number of participation since SFYC's inception. The National Science Fair for Young Children (NSFYC) 2017 was held on 12th and 13th August 2017 (Saturday and Sunday) at German Malaysian Institute, GMI, Bangi. A total of ten schools and fifty eight schools took part in Category A and Category B respectively in this year's 2 day event.

The Young Inventors Challenge (YIC) 2017 is a competition held for secondary school students and it was open to all students. We did online training for the teachers and students this year. A total of 372 proposals received from 480 registrations and 117 teams were shortlisted, whereby 102 teams took part in the Grand Finale including teams from Malaysia, the Philippines, Singapore, Thailand and Indonesia. The event was held on the 30th of September 2017 at CIDB Convention Centre, Cheras, Kuala Lumpur.

Creative and Critical Thinking Camp (CCT) is a camp for the young to encourage them to think both in a creative and critical manner. This year the camp was conducted at Agro Resort Semuji, Pahang. It was held for 3 days for primary school students. ASTI's representatives were also trainers at camps organised by Malaysian Community & Education Foundation (MCEF) called CCT - ILHAM Camp. This CCT- ILHAM Camp was a one day event held in North, Central and South zones. This camp was opened for Form 2 students. A total of 147 students took part in these 3 CCT- ILHAM Camps. Besides that, there were other CCT workshop/camp that was done for school students such as UPSR motivational camp, Malaysian Muslim Youth Club (MMYC) workshop, Abdul Kalam Science Association (AKSA) CCT Science Workshop and finally, Inspirasi Muhibah India Muslim Malaysia (IMIM) 2-day workshop.



Science Film Festival (SFF) is a celebration of science communication. ASTI was the organising partner for Science Film Festival 2017 with the Goethe-Institute, the German-Malaysian Institute (GMI), the Malaysian Nature Society (MNS), the Ministry of Education Malaysia and the PASCH Schools. Science Film Festival 2017 is the 7th Science Film Festival organised in Malaysia and was held on the 12th October 2017 at GSC Pavilion, Bukit Bintang, Kuala Lumpur. ASTI's involvement in this event was in the Opening Ceremony, Distribution of SFF School Packs, screening and discussion of movie. ASTI also organised a special screening of the award winning film "Chasing Corals" at the Khazanah Nasional office at KLCC.

ASTI Leap Challenge (ALC) is a new pilot project funded by Yayasan Hasanah conducted by ASTI this year. This project was completed in 2 regions, the Northern Region (schools from Penang & Kedah) and Southern Region (schools from Johor). This project involved PT3 students in 2016 for Northern Region schools and Form 4 students in 2017 for Southern Region schools. The schools that participated in this pilot project are from band 4 and 5 schools. In the Northern Region, 17 schools participated in the training and 12 in the final competition. Meanwhile in Johor, 25 schools participated in all the 3 trainings and the final competition.

For "Wings of Fire" Teachers Training held in collaboration with the World Conservation Society, on using conservation to teach English for teachers have been completed batch 1, 2 and 3 of trainings In Sarawak. The workshops were held in March, April and November 2017.

Other collaborative projects that ASTI has taken up for the year is International Science Drama Competition done with Petrosains. Various outreach programs were also completed, for example ASTI put up a booth to exhibit science experiments for young people for Hari Hasanah held in Kuala Lumpur and Johor. ASTI's president was also appointed as one of the Ambassador to the NICE Expo 2017 (National Innovation And Creative Economy Expo 2017) organised by the Ministry of Science Technology and Innovation, MOSTI.





1 INTRODUCTION

The Association of Science, Technology and Innovation (ASTI) is an association of educators, scientists, industry representatives and individuals who are committed in advancing the role of the scientific community in inspiring youths of the nation to join and excel in the field of science.

The members aim to help revolutionise the teaching, understanding, and awareness of the vital role science, technology and innovation, STI, plays in fulfilling the economic, health and environmental requirements of the world's population. Members also seek to mentor and encourage youths to seek new innovative methods and technologies that will enhance the learning of science and understanding.

In addition, ASTI tries to use science, technology and innovation, STI for the advancement of mankind and protection of the environment that nourishes all. ASTI believes that science, technology and innovation, STI is part of the wider realm of knowledge such as arts, history, language and others.

ASTI was set up by the founders of Science Fair for Young Children (SFYC) on 25th October 2012.

1.1 ASTI's Vision Statement

To be the premier association in Malaysia for the promotion of education and understanding of scientific knowledge, technological advancement and innovative projects, both locally and internationally.



1.2 ASTI's Mission Statement

The Association of Science, Technology and Innovation (ASTI) provides leadership in scientific education and technical support to improve and grow awareness in all areas of the science through the generation, dissemination and exchange of information and services.

1.3 ASTI's Objectives

- To stimulate the discovery, application and dissemination of knowledge.
- To create an atmosphere in which various segments of the scientific community can freely exchange knowledge and expertise for the betterment of the community.
- To provide encouragement and support to the younger generation, in particular students, through a variety of activities which are able to help develop creative, inventive and innovative results in science, technology and innovation.
- To recognise outstanding personal achievement in science, technology and innovation within the community.
- To sponsor programmes for challenging and developing youths for leadership responsibilities.
- To undertake projects which contribute towards the development of science, technology and innovation.
- To provide training and solutions to organisations and institutions in the area of science, technology and innovation.



1.4 ASTI's Core Values Statement

The members of ASTI are guided in everything we do by the following core values:

Alignment to the Nation's Vision

To support the country's vision to transform Malaysia into an innovative nation.

Commitment to Youth

Our youth are our most important resource. Therefore, we encourage continuous learning and development to help empower all youths to be innovative in reaching their full potential.

Honesty and Integrity

We demonstrate integrity every day by practising the highest ethical standards and by ensuring that actions follow our words.

Communication

We promote a culture of open-mindedness, where we actively listen, communicate openly, respect the views of others, and encourage all to participate by expressing their thoughts and ideas.

Teamwork

Success centers on inclusiveness and all involved working together and sharing information and resources to achieve common goals. We value each member and remain united in our successes and failures.

Respect

We are dedicated in ensuring that everyone is treated with dignity and respect, differences are valued and individual abilities and contributions are recognized.




Social Responsibility

We are obligated to secure the sustainability of the environment for future generations.

Wisdom

We cherish wisdom in all our actions drawn from our own traditions and that of others.

1.5 ASTI's Guiding Principles

-  Long-standing commitment to enhance science education through our association's structure which gives equal attention to science, technology and innovation.
-  Building and maintaining a relationship with likeminded societies.
-  Building and maintaining synergistic partnerships for the advancement of science, technology and innovation through education and training.



1.6 ASTI's Core Activities

Currently, ASTI organizes Science Fair for Young Children (SFYC), Young Inventors Challenge (YIC), Creative and Critical Thinking (CCT), ASTI Leap Challenge (ALC) and “On the Wings of Fire Series” as its core activities. It also runs regular outreach programmes such as Science Film Festival with Goethe Institute,...

Raising Awareness, Promotion & Training in the field of science

ASTI's membership uses its expertise to conduct training and workshops at various levels on areas related to science, technology and innovation as well as for related subjects. This will be two pronged. One, ASTI will prepare its own training and workshop modules and two, it will also prepare custom training and workshops for specific stakeholders. The training and workshop sessions may be charged to help in raising funds for ASTI.

Conceptualization, Design & Implementation

ASTI will act as the Secretariat for all projects initiated under ASTI's umbrella. As the Secretariat, it will provide all administrative needs to each project. The expenses incurred by the Secretariat will be funded by the respective project. ASTI will advise the project's Working Committee on the amount of funds to be allocated in the budget for administration and management costs. ASTI may also become a member of other associations for projects not initiated by ASTI, where ASTI is not the Secretariat.

Advisory & Consultancy

ASTI will use the expertise of its members and supporters to raise awareness on ASTI by taking on advisory roles for projects in the field of science, technology or innovation. To help raise funds for ASTI, it will also promote itself as a Consultancy Provider for a fee. If needed, ASTI may set up a company to do this work. ASTI may also work with other companies or organizations to deliver these outputs.

Stakeholder Management

ASTI will also use its funds to help sponsor viable projects or research. The decision to do so will be made by ASTI's Committee. The Committee can only approve sponsorship/funds up to RM 10,000; anything above this amount will require approval from the AGM. The funding can be in the form of:

-  seed money (Social Enterprise)
-  sponsorship
-  loan (Social Enterprise / Project Funding)

The Committee will also decide on the role ASTI should play in these projects if funding is given by ASTI.

ASTI will act as Funding Advisor to all projects initiated by ASTI. ASTI will also act as Funding Advisor for third parties for a fee in order to raise funds.



2 STRUCTURE AND ORGANIZATION

2.1 Membership

In order for ASTI to maintain a high level of expectancy from both members and the public it deals with, membership will be strictly controlled and kept at an optimal number.

2.2 Committee

President	: Dr. Mohamed Yunus Mohamed Yasin
Vice-President	: Dr. Subramaniam Gurusamy
Secretary	: Ms. Umahsankariah Muthunaikar
Assistant Secretary	: Ms. Vanitha Vasu
Treasurer	: Mej. Dr. Vikneswaran Munikanan

Committee Members :

- 1) Dato' CM Vignaesvaran Jeyandran
- 2) Mr. Nadaraja C. Kalimathu
- 3) Mr. Saravanan Vimalanathan

2.3 Honorary Auditors

- 1) Mr. Suresh Ramasamy
- 2) Mr. Anandan Shanmugam





As required by ASTI's Constitution, the auditors have dutifully examined ASTI's annual accounts for the Financial Year 2016/2017 and approved them.



2.4 Advisory Panel

The ASTI Committee shall invite person(s) to be a member of ASTI's advisory panel. ASTI's advisory panel is made up of community leaders independent experts in the Industry field.

The role of the advisory panel is to advise ASTI on:

-  developing professionalism and leadership in its area of work
-  the implementation of its projects
-  the further development of existing and future projects for ASTI
-  to help resolve potential disagreements within ASTI when required

In addition to the above, ASTI hopes that its advisors will also be ambassadors for ASTI in order to facilitate the achievement of the association's mission and objectives.

ASTI's advisory panel consists of the following members:

Honorary Advisor:

- 1) **YB Datuk Seri Panglima Wilfred Madius Tangau,**
Minister of Ministry of Science, Technology and Innovation, MOSTI
- 2) **YB Datuk Dr.Abu Bakar Bin Mohamad Diah,**
Deputy Minister of Ministry of Science, Technology and Innovation, MOSTI
- 3) **YB Dato' P Kamalanathan P. Panchanathan,**
Deputy Minister of Education

Advisors:

- | | |
|--------------------------------------|---|
| 1) Y. Bhg Datuk Florence Goh | 10) Dr. Shanmuga Siva |
| 2) Mr. Ve. Elanjelian | 11) Mr. Shanmugam VKS |
| 3) Prof. Kurunathan Ratnavel | 12) Y. Bhg Datuk A.Sothinathan |
| 4) Mr. Mohan Menon | 13) Captain Suresh Emmanuel Abishegam |
| 5) Mr. Naidu Appanan | 14) Mr. Suresh Thiru |
| 6) Prof. Rajah Rasiah | 15) Captain Surendran Menon |
| 7) Mr. S.T. Rubaneswaran | 16) Y. Bhg Prof. Dato' Dr. Tamilselvan Muthusamy |
| 8) Y. Bhg. Datuk B. Sahadevan | 17) Mr. Thiagaraja S. Rengasamy |
| 9) Mr. Sathish Ramachandran | |

International Advisor

Mr. Mohamed Al-Harthy

Former Chief Executive Officer at Oman Society for Petroleum Services

Trustee

Datuk Tharumah Rajah Kathiravelu





3 PROGRAMMES AND ACTIVITIES

3.1 Science Fair For Young Children (SFYC)

3.1.1 History of SFYC

Science is the systematic study of nature and there is much knowledge to be gained and while scientific facts are important, if the methods employed to discover or learn them are incomplete it could hamper scientific progress and understanding.


We use our five senses to see, taste, smell, feel, hear, and to explore the world around us. As Edwin Hubble, the American astronomer who first demonstrated the existence of galaxies outside the Milky Way once said, “equipped” with his five senses, man explores the universe around him and calls the adventure Science. Our senses are the gateway to the world of science.

Students learn science with great interest when it is more ‘hands-on’ or experimental, where they are led on a path of discovering scientific truths as they seek to satisfy their curiosity.

Science Fairs are ideal in this sense as they give students an opportunity to learn a scientific concept in greater depth, while simultaneously allowing them to:

- use scientific methods to develop an understanding of scientific skills;
- take an open and creative approach to problem solving;
- to create/increase awareness, interest, motivation in the study of Science in school;
- sharpen their writing skills, and their ability to work, to plan and execute tasks and to work as a team;
- develop their soft skills such as public speaking, when they present their projects to their schoolmates and to judges;
- improve their own learning process in critical thinking based on experience and project;
- compete and be recognised for academic achievement and the judging process also provides students with the invaluable experience of developing poise and thinking on their feet.

In 2003, a team was set up to organise the Young Scientific Explorers, and a group of volunteers visited schools to demonstrate simple yet exciting projects to students followed by a trip to the National Science Centre. Upon its success, and recognising the benefits of a science fair, we initiated the SFYC in 2006.



A team of scientists and educationists was formed and tasked with developing the concept, materials and the supporting structure to implement pilot projects. The following year in 2007, the first SFYC was held at Dewan Tunku Canselor, Universiti Malaya and it was a big success with 49 teams from Selangor and Wilayah Persekutuan taking part. The enthusiasm shown by the participating students was simply electrifying!

The SFYC was then expanded nationwide in 2008 with 197 teams from eight states participating. The final event was held at the National Science Centre, and was graced by the then Chief Secretary of the Education Ministry, Tan Sri Dr. Zulkurnain bin Haji Awang.

In 2009, a total of 207 teams participated in the State Level Science Fairs and the best 60 teams were selected for the national event which was staged at Kelab Kilat (TNB Hall), in Kuala Lumpur.

The following year, 285 teams successfully took part in the state level events held in 9 states nationwide and the national event was held at the AIMST University with the participation of the best 60 teams. The state level science fair in 2011 and 2012 was held in 9 states nationwide with 274 and 269 schools taking part respectively. In 2013, 282 schools participated in the state level science fair in 9 states. The national event of 2011, 2012 and 2013 was held at the German Malaysian Institute (GMI) with 60 top teams taking part.

In 2014, a total of 261 schools successfully participated in the state level science fairs in 9 zones. The national event was held at Dewan Raja Muda Musa, Shah Alam as a one day event. Meanwhile in 2015, 221 schools participated in the state level science fair held in 9 zones nationwide. And the national event for 2015 was held at Manipal International University, Nilai with 60 schools participating in a one day event.

In the year 2016, a total of 258 schools took part in state level science fairs held in 9 zones. The National Level Science Fair was held on 16th and 17th July 2016 at German Malaysian Institute as a two day event where 60 top teams from the entire country were selected for the national event.

This year, 10 schools participated in Category A and 58 schools participated in Category B in National Science Fair for Young Children which was held on 12th and 13th August 2017 at German Malaysian Institute. Just like in 2016, it was a 2 day event.

Objectives of SFYC 2017

SFYC 2017 had the following objectives:

1. To organise a national level science fair for the best 60 science projects.
2. To encourage the students to participate in National and International Science Competition / Exhibitions / Fairs.
3. To encourage schools to organise School Level Science Fair.
4. To train science teachers from schools on 'hands-on' science, science project and to encourage them to organise School Level Science Fair in their schools.
5. To empower zone co-ordinators to organise the Zone Level Science Fair.

3.1.2 School Level Science Fair (SLSF)

In 2017, each school that confirmed its participation in the School Level Science Fair, SLSF, by sending their proposal to the zone coordinators were provided prizes such as medals, certificates and story books for the event. Each school was given 50 story books, 50 medals and certificates of participation for all the students.

The schools were given from February 2017 until September 2017 to organise School Level Science Fair in the schools. This year a total of 305 schools out of 524 Tamil schools nationwide organised School Level Science Fairs in their schools.

3.1.3 The Zone Level Science Fair (ZLSF)

Over the years, the participation of schools in the Zone Level Science Fair has been on the rise. The Zone Level Science Fairs were held in April and May 2017 in ten zones. The shortlisted schools were given sufficient time to improvise their experiment for the National Level Science Fair. A total of 370 teams from 326 schools participated in the Zone Level Science Fair in 2017.





3.1.4 The National Science Fair for Young Children: Event Summary

12th August 2017, Saturday

The event began on 12th August 2017 with the Registration. Registration started from 7.00 am till 9.00 am. A goodie bag, containing T-shirt, Tag, Guidebook, Souvenir Book, 2016 Science Fair for Young Children Report, 2015 ASTI Annual Report and 2016 ASTI Annual Report, was given to each school during registration. Each school was given tokens for transportation and accommodation on the second day of the event. The Hands-On Experiments session was held from 9.00 am till 11.00 am. It was compulsory for all the selected 68 schools to participate in this event. Students were given questions and apparatus to carry out an experiment within the given 2 hours.

While the students were at the main hall, the judges arrived at 7.00 am to get started with their judging task. They had their lunch break from 1.00 pm to 2.00 pm. After lunch break, the judging Session continued from 2.00 pm until 4.30 pm. Tea and refreshments were served for the judges at 5.00 pm. The judges were given a certificate and a “goodie” bag as a token of appreciation for their service.

Teachers Sharing Session was held from 9.30 am to 4.30 pm. Mr. Rohn Rajan was invited to give an activity based talk and Dr. Subramaniam Gurusamy from ASTI gave a talk on 21st Century Education. Judging Sharing Session was conducted by National Chief Judge, Mr. Rajeswara Rao. In this session, Mr. Rajeswara Rao explained the judging criteria for the Scientific Paper Presentation, Booth Judging and Hands-On Experiment. A discussion was also held between ASTI and the teachers. The session ended with teachers given certificates and a set of books was given for each school.

The Opening Ceremony began at 4.30 pm. The guest of honour for the opening ceremony was Dr. Mohamed Yunus Yasin, President of ASTI, Dr. Subramaniam Gurusamy, Vice President of ASTI, Mejar Dr. Vikneswaran Munikanan, Treasurer of ASTI, Mr. Selvendran J. Thanapal, Project Director of SFYC 2017, State PST & MGB Chairpersons and Zone Coordinators. The Welcoming Speech was given by Mr. Selvendran J. Thanapal. SFYC Mascot, Arivan, was invited to place the Challenge Trophy on the stage. After the opening ceremony, Scientific Paper Presentation began at 5.30pm until 7.00pm. 5 shortlisted schools did their presentation. Other schools watched the presentation. During this time PST – MGB Forum was held. The forum was held to discuss the current issues concerning of the Science Fair and the future of Science Fair.

13th August 2017, Sunday

The second day of NSFYC began at 8.00 am with breakfast. Breakfast was given to all the participants from 8.00 am until 9.00 am. After breakfast, the 2nd Round Judging session began. It was held from 9.00 am until 11.00 am. Public viewing was held simultaneously from 9.00 am to 12.30 pm. Lunch was served from 12.00 noon till 1.00 pm for the participants.

Closing & Prize Giving Ceremony began at 2.00 pm and ended at 3.45 pm. There were 3 categories of winners: Innovation Category, Conference Paper Presentation and NSFYC Winners. The top 3 winners of the Innovation Category received certificates and cash prizes worth RM700, RM500 and RM300 respectively. The top 3 winners of the Conference Paper Presentation also received certificates and cash prize of RM500, RM400 and RM300 respectively. The Platinum winner for Category B received a trophy, certificates and cash prize of RM2, 000. The 5 Gold winners for both Category A and B received trophy, certificates and cash prize of RM1, 500 each. Meanwhile, the Silver and Bronze winners took home trophy and certificates. All the NSFY participants went back home with medals, certificate of participation and T-shirts as souvenir. The volunteers were given certificates and T-shirts.

The list of the winners for NSFYC 2017 winners is as follows:

Category B – Platinum Award



SJK (T) Kinrara

Category B – Gold Award



SJK (T) Nilai



SJK (T) Permatang Tinggi



SJK (T) Taman Permata



SJK (T) Permas Jaya

Category A – Gold Award



SJK (T) Port Dickson

Innovation Challenge



Champion:

SJK (T) Taman Tun Aminah



1st Runner Up:

SJK (T) Permas Jaya



2nd Runner Up:

SJK (T) Permatang Tinggi

Scientific Paper Presentation



Champion:

SJK (T) Tun Aminah



1st Runner Up:

SJK (T) Taman Permata



2nd Runner Up:

SJK (T) Permas Jaya

3.1.6 Conclusion

In 2017, 305 schools successfully organised School Level Science Fairs in their schools. Zone Level Science Fairs were held in 10 zones and a total of 326 schools took part in Zone Level Science Fairs this year. After school level and zone level science fairs, the national level event was held on 12th and 13th August 2017 at German Malaysian Institute, Bangi. Our survey results show positive response from all stakeholders. A special research and development report will be released separately detailing this and other information on the effectiveness of SFYC.



3.2 Young Inventors Challenge (YIC)

3.2.1 Background

Science Fair for Young Children (SFYC) is a project designed for primary Tamil school students, and about 200,000 participants have taken part in this project at the school, zone and national level. Following SFYC's success, a competition at a more advanced level was proposed in the form of the Young Inventors Challenge (YIC).

YIC requires teams of up to 5 members to put their minds together and come up with an invention. The pilot programme was held in 2013. The Young Inventors Challenge 2013's (YIC 2013) theme was "**GREEN INVENTIONS: IDEAS ON SUSTAINABILITY**". A total of 12 teams from all over the country participated in this pilot project, showcasing their green inventions.

In 2014, YIC was open once again to secondary school students aged 13 to 17 years old and we encouraged the teams to be in groups of 3-5 students of different races to come together in the inventive process. The purpose of the programme is to build and encourage the creative and inventive capability of young people. The theme for YIC 2014 was kept the same "**GREEN INVENTIONS: IDEAS ON SUSTAINABILITY**."

For 2015, ASTI expanded the competition and the theme was "**INVENTIONS TO HELP A MILLION: TO MAKE THE WORLD A BETTER**

PLACE." A total of 145 proposals from various teams were received and 63 teams were shortlisted to participate in the Grand Finale. The final competition was held at Sunway University on the 19th of September 2015. 52 teams from all over the country attended the Grand Finale.

In 2016, the theme of the competition was "**INVENTION TO SERVE...**". In total we received 204 proposals from 292 registrations. Meanwhile, 67 teams participated in the final event on 15th October 2017 at Sunway University, Selangor.

This year, the theme was "**INVENTION TO SERVE**"... and the project was implemented in 3 phases as below:

Phase One: Student's Proposal Submission. We received 372 proposals from 480 registrations from 5 countries which include Malaysia, Indonesia, Singapore, Thailand and Philippines. We shortlisted 117 teams to participate in the Grand Finale.

Phase Two: Online Students Training. The training was conducted from May - June 2017.

Phase Three: Final Competition. The Finale was held at CIDB Convention Centre, Cheras on 30th September 2017.



3.2.2 Objectives and Learning Experience

The aim and objectives of YIC are:

- to develop future inventors
- to give an opportunity to young and future inventors to develop and showcase their inventions
- to help young inventors to experience the inventive cycle, from conceptualisation to product/prototype
- to introduce the idea of “using inventions as a tool to make a positive change in the society”
- to give opportunities to young people who are inventive to promote their ideas to the outside world.

By participating in YIC, the participants would also:

- produce an original invention and receive recognition for showcasing it
- meet and network with other inventors who share similar passion
- develop creative and innovative thinking skills
- develop teamwork dynamics to solve problems
- use resources such as the internet, library and experts to hone their research skills
- learn to document their invention project
- enhance their self-esteem and confidence
- acquire public presentation and writing skills.

3.2.3 Training for Shortlisted Teams

The shortlisted teams receive the following online training:

- YIC 2017 Online Training Video 1: Introduction to ASTI and YIC
<https://www.youtube.com/watch?v=QcHbBbMyoEY&t=38s>
Published on 8 May 2017
- YIC 2017 Online Training Video 2: Invention and Intellectual Property
<https://www.youtube.com/watch?v=OQLQaUxkqY&t=1s>
Published on 22 May 2017
- YIC 2017 Online Training Video 3 : Project Management and Report Writing
<https://www.youtube.com/watch?v=g85qxGfa18U&t=11s>
Published on 29 May 2017
- YIC 2017 Online Training Video 4 : Judging Criteria and Report Structure
<https://youtu.be/5WVfM7oV-eY>
Published on 5 June 2017
- YIC 2017 Online Training Video 5 : Mentoring
<https://www.youtube.com/watch?v=d-u0N4EEifc&t=29s>
Published on 15 May 2017

3.2.4 Event Day Summary

Arrival, Registration and Breakfast

The Grand Final for YIC 2017 was held on 30th September 2017 at CIDB Convention Centre, Cheras. The event started at 7.00 a.m. with the arrival and registration of the participants. This was followed by breakfast. A total of 102 teams registered themselves for the competition. After the registration and breakfast session, the participants were allowed to setup their booths and models.

Booth Setup, Model Setup, Opening Ceremony and Judging

Once the booths and models were setup, the Opening Ceremony was held at 9.30 a.m. Next on the agenda was the briefing by the Judging Team at 9.45 a.m. More than 60 judges were present to judge the inventions and they mostly comprised of university lecturers, engineers, environment consultants, and intellectual property specialists.

Mentor Seminar Session

While the judging and cross judging process was on going, Mentor Seminar Session took place at the Dahlia Seminar room from 10.00 a.m. till 1.30 p.m. Mentors attended this seminar session. Below was the agenda of the Mentor Seminar Session:

Time	Topic of Discussion	Speaker
10.00am to 10.15am	Introduction to ASTI and YIC	Dr. Mohamed Yunus Yasin
10.15am to 10.55am	ALC as School Level YIC	Dr. Mohamed Yunus Yasin
10.55am to 11.35am	Innovation In Empowering Teachers	Ms. Aishah Parkes (100% Project)
11.35am to 12.15pm	How Educational Systems Can Incorporate Community Building and Start-up related community event	Ms. Gwen Yi Founder (Tribeless)
12.15pm to 12.55pm	Structuring a Unicorn	Mr. Mohammad Yusuf Mohammad Jaafar (Head of Social Enterprise Ventures (SEV) in Malaysia)
12.55pm to 1.10pm	Judging Feedback by the Chief Judge	Mr. Mahamed Faizal Noor Batcha, Chief Judge YIC 2017
1.10pm to 1.30pm	Mentor Sharing Session & Certificate Presentation	Mr. Anandan Shanmugam

Table 1: Agenda of Mentor Seminar Session

Public Viewing and Certificate Presentation

At 1.00 p.m., the hall was opened for public viewing. Public Viewing session was closed at 3.00 p.m. All the teams that participated were presented with Certificates of Participation by our special guests at their respective booths.



Prize Giving Ceremony

Our Guest of Honour YB Dato' P Kamalanathan, Deputy Education Minister II of Malaysia, arrived at 2.30 p.m.

The VIPs who attended the event were:

Prof. Madya. Dr. Ramzah Dambul, Deputy Secretary General of Ministry Of Science, Technology and Innovation, MOSTI,

Dr Mohamed Yunus bin Mohamed Yasin, President of ASTI,

Major Dr Vineswaran Munikanan, Treasurer of ASTI,

Mr. Anandan Shanmugam, Project Director of YIC 2017,

Mr. Faizal Noor Batcha, Chief Judge 1 of YIC 2017,

Mr. Velavan Sengodan, Chief Judge 2 of YIC 2017,

Mr. Yoshiaki Okabe, Director and International Cultural Exchange (ICE) Committee Chairman, Jactim Foundation,

Mr. Kazuki Kimoto, Secretary General, Jactim Foundation,

Datuk B.Sahadevan, Managing Director of National Land Finance Co-Op Society Limited, NLFCS,

YBhg Datuk Florence Goh, President of Care United,

Ms. Sumitra Nair, Vice President Talent and Digital Entrepreneur, Malaysia Digital Economy Corporation, MDEC,

Ms. Aneita Abdullah was the host for the Closing & Prize Giving Ceremony.

Before the Prize Giving Ceremony, few of our dignitaries gave their speeches. Mr. Anandan Shanmugam was the first dignitary to give his opening remark. He said the teams that have participated in YIC in the past have won competitions at international level such as in Hong Kong. He added that this event should not be the end and the students should continue their inventing journey.

After the speech by Mr. Anandan Shanmugam, the guest of honour, Deputy Education Minister II of Malaysia, was called upon on stage accompanied by Dr. Mohamed Yunus Yasin to deliver the keynote speech and give out Tokens of Appreciation. The recipients of the Token of Appreciation were, Mr. Yoshiaki Okabe, Director and International Cultural Exchange (ICE) Committee Chairman, JACTIM Foundation, and Ms. Siti Kamariah, Vice President Education of Yayasan Hasanah, who were the funders of YIC 2017.

Mr. Velavan Sengodan was called on stage to give the judges feedback. He said that the judges had a tough time judging the participants. He added that the judging was done based on creativity, innovation, presentation skills and safety features showcased by the participants.

After that, Dr. Mohamed Yunus Yasin gave his thank you speech in which he encouraged the participants to continue their inventive journey. He also thanked everyone involved in YIC 2017 including the volunteers in making YIC 2017 a success.

The winning teams for Invention Pitch Video Competition, Project Paper Writing Competition, Bronze Award, Silver Award, Gold Award and Platinum Award were announced. The details of the winning teams are as below:

Platinum Award

SMK Seri Kota Puteri 2, Johor



Gold Award

Princess Chulabhorn Science High School Trang, Thailand
Philippines Science High School Cordilera Administrative, Philippines



Silver Award

SMK St. Michael, Penampang, Sabah
Princess Chulabhorn Science High School Mukhadan, Thailand
Kharisma Bangsa School, Indonesia



Bronze Award

SMK Mengkuang, Pulau Pinang
SMK Pekan Telipok, Sabah
SMK Bukit Mewah, Negeri Sembilan
SMK Taman Mount Austin, Johor



Invention Pitch Video Competition

The participating teams were requested to come up with a 3 minute video to pitch their invention, but it was not compulsory. Thirty four teams participated in this competition and submitted their videos on time. The details of the winning teams are as below:

Champion

Philippine Science High School, Soccsksarge Region Campus, Philippine



1st Runner-up

SMK Kubang Bemban, Kelantan



2nd Runner-up

SMK Rosly Dhoby Sibul, Sarawak



Project Paper Writing Competition

The participating teams were requested to come up with a 3 page project paper but it was not made compulsory. Thirty two teams participated in this competition and submitted their paper. Judging teams marked the papers and selected three best project paper. The details of the winning teams are as follows:

Champion

School Of Science And Technology, Singapore



1st Runner-up

SMK Rosly Dhoby Siby, Sarawak



2nd Runner-up

SM St. Michael, Penampang, Sabah



3.2.5 Conclusion

YIC 2017 was a huge success. The competition attracted multiracial teams from various parts of Malaysia, Singapore, Indonesia, Thailand and the Philippines as well. We received 372 proposals which is the highest number of proposals received so far since YIC started in 2013. A total of 117 teams were shortlisted. From the 117 teams shortlisted, 102 teams participated in the Grand Finale. Even the number of participating teams is the highest so far.

Our survey shows a high satisfactory level of all of our stakeholders. We believe that this competition can be a platform for young creative and inventive students to showcase their talent and possibly build their career in this area.







3.3 Creative and Critical Thinking (CCT) Camp

3.3.1 Background

In recent years, young people have become more of spectators rather than participants in their individual 'learning journey'. We are causing this by overwhelming them with theories and "facts & figures" which they have to memorize for tests and exams and soon forget afterwards. The relevance of some of these lessons to their future is not contextualised.

True education must help students awaken and expand their creative and critical minds. It must empower the learners to take charge of their understanding of the world around them. Subjects and topics should be just tools used to nurture this new independent thinking mind. Thus, any subject, be it science or the arts, if 'delivered' properly it must be able to create this ultimate goal.

Creative and Critical Thinking (CCT) camp/workshop was initiated with this in mind, coordinated by a team of experts who have extensive experience in the field of Science, Technology and Innovation as well Youth Engagement. This camp aims to introduce the concepts of thinking creatively and critically, using logical & empirical reasoning to solve problems and using competitive & collaborative methods to produce an outcome when making choices in any aspect of the participants' lives. These principles are conveyed to participants via indoor and outdoor lessons and fun activities in a "camp" environment.

3.3.2 Objectives of CCT

- To empower the young to think in both creative and critical manner; it consists of presentations that emphasises activities and a 'hands-on' method to help the young build this capacity.
- To build effective resources, guides, and know-how to make this a recurring camp for young people across the country.
- To train the young to produce positive outcomes when making choices by using competitive and collaborative methods.
- To help the young realize that learning is fun, not just memorizing facts but by understanding what they learn.

3.3.3 Benefits of CCT Camp

- A medium to introduce the concept of thinking creatively and critically when making choices in life and introducing innovative problem-solving techniques.
- Participate in exciting workshop sessions under the guidance of skilled facilitators and instructors.
- Fun outdoor and indoor activities that will help the participant to realize his or her creative and critical thinking capabilities.
- Use competitive and collaborative methods to produce positive outcome when making choices and performing tasks.



3.3.4 Target Groups and Type of Camps

Ideally, there will be 3 different target groups, namely the primary school, secondary school and university students getting involved in two different types of camps which are the Project Camp and the Exclusive Camp.

The different types of camps are as below:

1) Project Camp

Students have to send an application to the CCT Committee who will chose the participants. The facilities such as accommodation and food will be organised by ASTI-CCT for the participants.

2) Exclusive Camp

ASTI will provide the training modules, camp materials and trainers upon request by the organisers. The participants' selection and logistic arrangements will be done by the organisers.

3.3.5 CCT 2017 Summary

1) Creative and Critical Thinking (CCT) Project Camp 2017

Creative and Critical Thinking (CCT) Project Camp 2017 was a three day event which started on Friday evening ended on Sunday afternoon for primary school students. A total of 37 students participated in the 3 day camp. This camp was held mainly for Orang Asli students. The details of the camp are as below:

Date: 27th October 2017 - 29th October 2017 (3 days 2 nights)


Venue: Agro Resort Semuji, Pahang.

DAY ONE – Friday 27 October 2017. The day started at 4.30pm with the arrival of the participants at the hall. Participants received their nametag, camp groupings, camp schedule, safety outlines, and T-shirt upon the arrival. There was a short briefing on Camp safety, rules & regulations as well as a briefing on the programme for Day 1. The programme started in the hall at exactly 4.45pm with the participants seated according to their groupings.

There was an Ice-breaking session conducted for the participants which was to set the tone for the camp to think out of the box. It provided them with a taste of what was to come. After ice-breaking, there was a short tea and prayer break which was followed by the second session of the day: Boosting Your 5 Senses. The participants were then given time to freshen up and dinner was served at 8.00pm.

After dinner, the participants took part in the evening session which was Problem Solving (CSI)-Part A. Day one sessions were thus over and the participants had their supper and retired for the night. After this, the Event Committee continued with the discussion of the day's event followed by the set-up preparations for the following day.





DAY TWO – Saturday 28 October 2017. The day's activities started at 6.30am with morning prayers after which the participants were led in an exercise routine before settling down for breakfast. The first session of the day was held outdoors and involved the Flying Fox activity. After an exhilarating start to the day, the participants were given a morning break followed by the next session, Boosting Your 10 Intelligences which continued until lunch time.

After lunch and a quick warm-up game, the sessions continued with 5 Reasons Why Humans Are Capable of Genius and Short Term Memory Tips before breaking for tea and prayers. That evening, we continued on with a practical version of the previous night's session titled Problem Solving (CSI)-Part B which was highly enjoyed by the children. After that fun filled activity, we switched gears and continued with a session on Relaxation and Concentration.

The participants then returned to the hostel at around 7.00pm, relaxed and had dinner. The evening session continued at 8.15pm with the Expressing Your Creativity module. The participants then retired for the night after having their supper at 10.30pm.

DAY THREE – Sunday 29 October 2017. On the final day, the participants, after another morning exercise session, gathered in the cafeteria for breakfast. Then, the sessions continued with another outdoor based activity which was Eco Explorace which ended at 11.00am. This was followed by a session on Lateral Thinking.

The Camp ended at 1.30pm with the Camp Closing Ceremony during which a Certificate of Participation was presented to each participant.







2) Creative & Critical Thinking –ILHAM

ILHAM was launched by MCEF in 2008, and has trained 914 scholars as of December 2014. This project is fully funded by MCEF.

Project ILHAM is meant for Tamil school students who have performed exceptionally well in their Standard 6 UPSR examination. The number of Tamil school students who are doing exceptionally well in the UPSR examination have increased especially in the last few years with over 1,000 students out of 16,000 sitting for the UPSR in SJKT scoring 7As.

However, it has been noted that the performance in a proportion of these students had declined in the secondary school. We theorise that perhaps the students lack in sufficient exposure. They require more guidance and coaching at the Secondary Level in order to realise their excellent potential. Thus, ILHAM is designed to help and empower the high achievers to perform well and be competitive in secondary school and beyond.

The details of the camps are as stated below:-

Region	CCT - ILHAM 2017 – 1-day workshop			No. of Participants
Northern	20 March 2017, Monday	Form 2	AIMST University Jalan Bedong - Semeling, 81000 Bedong, Kedah	50 Students
Central	20 March 2017, Monday	Form 2	Kem Bumi Jati, Shah Alam, Selangor	47 students
Southern	20 March 2017, Monday	Form 2	Sri Sakthi Ashram, Lot 133, Jalan Bekoh, 84900 Tangkak, Johor	50 Students

3) Creative & Critical Thinking Camp 2017 (CCT) -IMIM

Inspirasi Muhibah India Muslim Malaysia (IMIM) and UMAIRAH organised a two day ‘day-camp’ for 32 students who ranged from 10 to 12 years old. The day-camp was held at Wisma PERMIM on the 21st and 22nd October 2017 (Saturday and Sunday). ASTI-CCT once again collaborated by providing the training force behind the event.

DAY 1- 21st October 2017

The camp kicked off with the registration of the participants followed by breakfast. During the registration, participants received their nametag, camp groupings, T-shirt and Camp bag.

At 10.00am, there was an Ice-breaking session conducted which aimed to set the tone for the camp as well as to help the participants warm up and feel more comfortable with their group mates. The first training session that day was Boosting Your 5 Senses. This was followed by lunch and prayers.

In the afternoon, the sessions continued with the Expressing Creativity module and the day concluded with the first part of the Problem Solving - CSI module which was received enthusiastically by the children.



Day 2 – 22nd October 2017

The second day started with breakfast at 9:00am after which the module Healthy Body & Healthy Mind was conducted. This was followed by the second part of the Problem Solving – CSI which was again a hit with the participants.

At 12.30pm, we had our lunch break and prayers. The afternoon session continued with the Mind Mapping module which was thoroughly enjoyed by the children. The last module of the evening was 5 Reasons Why Humans Are Capable of Being Genius.

Before concluding the event Dr. Mohamed Yunus Yasin also gave a briefing on Young Inventors Challenge and opened the applications to the participants.

4) UPSR Motivation Camp

On 26th January 2017, a one day camp was organised for Standard Six students in Shivanandashram, Batu Caves. The purpose of the camp was to motivate students who would be facing the UPSR that year. Our trainer, Ms Noorul Huda spoke to them on an array of topics which included the CCT modules of Brainstorming and Mind Mapping. A total of 30 students attended this camp.

5) Creative and Critical Thinking-University Malaya

On 3rd April 2017, our founder and president, Dr. Mohamed Yunus Yasin was invited to give a talk on Creative and Critical Thinking to a group of students in University of Malaya. The talk focused on exposing and cultivating stronger thinking skills in students.

6) Malaysian Muslim Youth Club (MMYC) 9th Teen Camp

On 21st May 2017, MMYC organized a camp titled “9th Teen Camp”. CCT-ASTI was invited to conduct one of the sessions during the camp which was held at Kalumpang Resort & Training Centre. Our trainers, Ms. Noorul Huda and Mr. Mohamed Hassan went through the CCT module Critical Thinking in Conversation with the participants which numbered 80. The session which ran from 10.30am to 12.00pm was very well received.

7) Education Bring Righteousness (PERMIM) – IPTA/ IPTS Briefing for SPM Leavers

Federation of Malaysian Indian Muslim Associations (PERMIM) organised a talk for high school leavers focusing on application and entry to public and private universities. The talk was held on the 26th of February 2017 (Sunday) at Wisma PERMIM. ASTI-CCT was invited to conduct one of the sessions in this talk. Our trainers, Ms Noorul Huda and Mr. Mohamed Hassan went through the CCT Module, Critical Thinking in Conversations, with the participants which numbered 100 teenagers. In addition to this, they also shared their knowledge on the university admission and experience here in Malaysia throughout the day.

8) Abdul Kalam Science Association (AKSA) CCT Science Workshop

A Creative and Critical Thinking Science Workshop was organised by Abdul Kalam Science Association (AKSA) and ASTI was invited to be trainer at the workshop. The workshop was held on 20 May 2017, Saturday at Dewan Persatuan Taipu, Klang from 9.00

am till 4.00 pm. A total of 43 students participated at the workshop. Ms. Noorul Huda, who is the Project Director for CCT Camp was the trainer for the workshop, and conducted three modules, Boosting Your 5 Senses, Brainstorming and Mind Mapping.

3.3.6 Conclusion

We hope in years to come we will reach more students and would be able to instil the valuable skills and qualities through Creative and Critical Thinking Camp.





3.4 ASTI Leap Challenge (ALC)

3.4.1 Background






Association of Science Technology and Innovation ASTI, ran a pilot project, ASTI Leap Challenge (ALC) which was fully funded by Yayasan Hasanah for Band 4-5 secondary schools (by invitation). ASTI Leap Challenge (ALC) hopes to prepare the students from these schools to participate in higher level competitions including in ASTI's Young Inventors Challenge (YIC).

The project comprised of 3 trainings and a competition in the initial year. This pilot project was done in 2 regions, northern and southern region. Schools from Penang and Kedah participated in the northern region and schools from Johor participated in the southern region. We started with the trainings in the northern region in 2016 and successfully completed 3 trainings and a competition in the northern region on the 8th April 2017. A total of 17 schools participated in the trainings in the northern region. Whereas, in the southern region we started with the 1st Training in Johor on 13th July 2017 and successfully completed 3 trainings and held the final competition in Johor on the 10th September 2017. A total of 25 schools participated in the trainings and took part in the final competition in the southern region.

3.4.2 Objectives and Learning Experience

The main objective of ASTI Leap Challenge was to give young people an introduction and to experience the world of invention and innovation. By participating in this event the students will enhance their creative and critical thinking skills and be able to solve a complex problem which is expressed by 'doing'.

Project objectives:

-  enhance problem solving skills among participants
-  develop communication skills among participants
-  encourage team work among participants
-  develop "out of the box" thinking among participants
-  develop 'hands-on' learning methods for the participants

The programme also prepares and encourages the students to participate in various National and International competitions with various inventive ideas with self-confidence.

Upon participating in ASTI Leap Challenge, the schools should be able to conduct the competition in their schools as an annual event which will involve more students. The schools should also continue to participate in various national and international invention competitions. After the completion of the project at the regional level, for the following phase, we aim to encourage and provide seed funding for the schools to conduct their own ASTI Leap Challenge at the school level (if funded by Yayasan Hasanah). This way more students will benefit from the project.




Northern Region Competition



Southern Region Competition





After participating in ASTI Leap Challenge, the participants were also be able to:

- produce an original invention or solution and receive recognition for participating in the event
- meet and network with other young people who share similar passion
- develop creative and innovative thinking skills
- develop teamwork dynamics to solve problems
- use resources such as the internet, library and experts to hone their research skills
- learn to document their invention project
- enhance self-esteem and confidence
- acquire public presentation and writing skills

3.4.3 Target Group

ASTI Leap Challenge is a project meant for PT3 students in 2016 and Form 4 students in 2017. We focused this project to Band 4 and Band 5 schools. Since the schools fall under Band 4 & 5, there are fewer activities and opportunities given to them to participate. ASTI would like to conduct a more “hands-on” ASTI Leap Challenge which will prepare them to participate in higher level competitions.

We targeted 20 schools from Penang and Kedah in the northern region and another 20 schools from Johor in the southern region. The students eligible to participate in this programme are the schools’ Form 3 students in year 2016 in northern region and Form 4 students in 2017 in southern region. Each selected school from the northern region sent a team of 5 Form 3 students and 2 teachers who will participate throughout the whole programme. Meanwhile in Johor each team sent a team of 5 Form 4 students and 2 teachers who will then participate throughout the whole programme.

3.4.4 ALC Summary

ASTI approached Jabatan Pendidikan Negeri Pulau Pinang and Kedah to provide us with the list of band 4 and band 5 schools in their respective states. Jabatan Pendidikan Negeri Kedah selected the schools from Kedah and took the initiative to send an invitation letter to the schools encouraging them to participate in ASTI Leap Challenge. Whereas Jabatan Pendidikan Negeri Pulau Pinang provided us with the list of the schools and we sent an invitation letter to these schools. Just like Jabatan Pendidikan Negeri Kedah, Jabatan Pendidikan Negeri Johor also took the initiative to send an invitation letter to the schools encouraging them to participate in ASTI Leap Challenge in Johor.

ASTI Leap Challenge’s northern region first training was held on the 22nd of October 2016 at Disted College, Penang. The second training for the programme was held on 19th November 2016. On 18th November 2016, we held the first training again at Disted College, Penang for schools that could not attend the first training on the 22nd October 2016. A total of 17 schools participated in the trainings held in northern region. The 3rd and final ALC Training in northern region was conducted on 18th January 2017 again at Disted College, Penang. Meanwhile, the ASTI Leap Challenge Final in the northern region was held on 8th April 2017 at Universiti Kuala Lumpur Malaysian Spanish Institute (MSI) in Kulim, Kedah.

Asia Metropolitan University (Johor) as the partner for ASTI Leap Challenge in southern region provided venue for all the 3 trainings held in Johor. The first training for southern region ALC was conducted on 13th July 2017. Meanwhile the 2nd and 3rd training in Johor was held on 27th July 2017 and 10th August 2017 respectively.

A total of 25 schools participated in all 3 trainings. The final competition was held on 10th September 2017 at Universiti Kuala Lumpur Malaysian Institute of Industrial Tehnology (MITEC) in Pasir Gudang, Johor. All the schools that took part in the trainings participated in the final event.

3.4.5 Event Day Summary

Northern Region

ASTI Leap Challenge 2017 was held on 8th April 2017 at Universiti Kuala Lumpur Malaysian Spanish Institute, Kulim (Kedah). Altogether 12 schools came prepared for the final event with their inventions. The theme for the final competition was 'Invention/Process To help your School be more Efficient'. The agenda of the event was as below:

Time	
7.30 am – 8.00 am	Arrival & Registration and Breakfast
8.00 am – 9.00 am	Booth Setup & Model Setup
9.00 am – 9.15 am	Opening Ceremony
9.30 am – 12.30 pm	Judging & Cross Judging
10.00 am – 1.00 pm	Mentor Seminar Session
1.00 pm – 2.00 pm	Lunch
2.00 pm – 2.30 pm	VVIP & VIP Arrival
3.00 pm – 4.00 pm	Closing & Prize Giving Ceremony
4.00 pm – 5.30 pm	Dismantle of Booths, Tea & Event Concludes

The event started at 7.30 a.m. with the arrival and registration of the participants. This was followed by breakfast. A total of 12 teams registered themselves for the competition. After registration and breakfast, the participants were allowed to setup their booths and models. Once the booths and models were setup, a simple Opening Ceremony was held at 9.00 a.m. ASTI's President, Dr. Mohamed Yunus bin Mohamed Yasin gave his speech during the opening ceremony. One chief judge and 14 judges were present to judge the inventions. The judges were from Silterra Malaysia Sdn. Bhd. While the judging and cross judging process was on going, Mentor Seminar Session took place at Lecture Theatre from 9.30 a.m. till 12.00 noon. The teachers-in-charge attended this seminar and sharing session. Games and quizzes were also held during the mentor session for the teachers.

The guests for the event were Hj. Mohd Hafiz bin Mohd Salleh (Penolong Pengarah Koakademik, Jabatan Pendidikan Negeri Kedah), Mr. Michael Raja a/I G. Rajagopal (Senior Manager, Northern Corridor Implementation Authority) and Dr. Nur Anuar Abdul Muthalib (Senior Vice President (Education) Yayasan Hasanah). The closing ceremony began at 2.45pm upon the arrival of the guests. The welcoming speech for the closing and prize giving ceremony was given by Dr. Nur Anuar Abdul Muthalib from Yayasan Hasanah. After the welcoming speech, medals & certificates were given to the participants. Next the Judges Feedback was given by Chief Judge Mr. Saravanan Manian. Mr. Anthony Fernandez who was one of trainers for ASTI Leap Challenge gave the thanking speech on behalf of ASTI. The winners of ASTI Leap Challenge 2017 (Northern Region) were announced and the event was officially closed.

Winning Teams of ASTI Leap Challenge 2017
(Northern Region)



Champion

SMK Sungai KOB

Received Trophy, Cash Prize of RM1,500.00 and Certificate



1st Runner Up

SMK Dato' Lela Pahlawan

Received Trophy, Cash Prize of RM1,000.00
and Certificate



2nd Runner Up

SMK Seri Badong

Received Trophy, Cash Prize of RM700.00 and
Certificate



4th Place Winner

SMK Teluk Bayu

Received Trophy, Cash Prize of RM500.00 and
Certificate



5th Place Winner

SMK Valdor

Received Trophy, Cash Prize of RM250.00 and
Certificate



Southern Region

ASTI Leap Challenge 2017 was held on 10th September 2017 at Universiti Kuala Lumpur Malaysian Institute of Industrial Technology (MITEC), Pasir Gudang (Johor). Altogether 25 schools came prepared for the final event with their inventions. The theme for the final competition was 'Invention/Process To help your School be more Efficient'. The agenda of the event is as below:

Time	
7.30 am – 8.00 am	Arrival & Registration and Breakfast
8.00 am – 9.00 am	Booth Setup & Model Setup
9.00 am – 9.15 am	Opening Ceremony
9.30 am – 12.30 pm	Judging & Cross Judging
10.00 am – 1.00 pm	Mentor Seminar Session
1.00 pm – 2.00 pm	Lunch
2.00 pm – 2.30 pm	VVIP & VIP Arrival
3.00 pm – 4.00 pm	Closing & Prize Giving Ceremony
4.00 pm – 5.30 pm	Dismantle of Booths, Tea & Event Concludes

The event started at 7.30 a.m. with the arrival and registration of the participants. This was followed by breakfast. A total of 25 teams registered themselves for the competition. After registration and breakfast, the participants were allowed to setup their booths and models.

Once the booths and models were setup, a simple Opening Ceremony was held at 9.00 a.m. ASTI's President, Dr. Mohamed Yunus bin Mohamed Yasin gave his speech during the opening ceremony. The judges for ALC were introduced to the participants during the opening ceremony. One chief judge and 13 judges were present to judge the inventions. Most of the judges in the judging team were from Universiti Tun Hussein Onn Malaysia, Johor. While the judging and cross judging process was on going, Mentor Seminar Session took place at Bilik Tutor from 10.00 a.m. till 12.00 noon.

The teachers-in-charge attended this seminar and sharing session. Mr. Charles J. Thomas, CEO of Hangout Malaysia, was invited for the ALC Mentor Seminar Session to conduct training for the teachers. The teachers were given certificates for their contribution and guidance in preparing their students in the Mentor Seminar Session.

The guests for the event were En. Maslizam bin Mohamed (Ketua Sektor, Sektor Pengurusan Psikologi dan Kaunseling, Jabatan Pendidikan Negeri Johor) and Dr. Nur Anuar Abdul Muthalib (Senior Vice President Education, Yayasan Hasanah). The closing ceremony began at 3.00pm upon the arrival of the guests. The welcoming speech for the closing and prize giving ceremony was given by Dr. Mohamed Yunus bin Mohamed Yasin. After the welcoming speech, the Guest of Honour, En. Maslizam bin Mohamed, Ketua Sektor, Sektor Pengurusan Psikologi dan Kaunseling Jabatan

Pendidikan Negeri Johor, was invited to give the honorary speech. Appreciation for the ALC participants were done by giving out medals and certificates for the students. Dr. Nur Anuar Abdul Muthalib from Yayasan Hasanah and Mr. Saravanan Vimalanathan from ASTI Committee were called on stage to do appreciation to 12 schools. After that, Dr. Sasitharan Nagapan, the Chief Judge for ALC and Dr. Subramaniam

Gurusamy, Vice President of ASTI were invited to give out medals and certificates to the other 13 schools that participated in the competition. Next the Judges Feedback was given by the Chief Judge, Dr. Sasitharan Nagapan. Dr. Subramaniam Gurusamy, ASTI Vice President gave the thanking speech. The winners of ASTI Leap Challenge 2017 (Southern Region) were announced and the event was officially closed.

Winning Teams of ASTI Leap Challenge 2017 (Southern Region)



Champion
SMK Seri Kota Puteri 2

Received Trophy, Cash Prize of RM1,500.00 and Certificate



1st Runner Up
SMK Taman Daya 2

Received Trophy, Cash Prize of RM1,000.00 and Certificate



2nd Runner Up
SMK Seri Kota Puteri

Received Trophy, Cash Prize of RM700.00 and Certificate



4th Place Winner
SMK Taman Mount Austin

Received Trophy, Cash Prize of RM500.00 and Certificate



5th Place Winner
SMK Puteri Wangsa

Received Trophy, Cash Prize of RM250.00 and Certificate



3.4.6 Conclusion

ASTI will keep in touch with the participants and update them with various national and international invention competition. Moreover, ASTI will encourage them to participate in other national and international competitions. Upon successfully completing the project in the first year, for the following year we will encourage and provide seed funding (should ASTI gets funding to do so) for the schools to conduct their own competition at the school level so that more students will benefit from the project. This will prepare and encourage the students to participate in various national and international competitions with various inventions ideas and self-confidence.

3.4.7 CCT-ALC SMK Sri Pantai

CCT ALC was held for the first time at SMK Sri Pantai for the schools's Form 3 students as a pilot project. The first training was held on 25th October 2017, 2nd training on 26th October 2017 and 3rd training was held on 31st October 2017. The trainings were held from 8.00 am till 1.30 pm. A one-to-one session was held with the students on 3 November 2017. The final competition was held on 17th November 2017.

3.5 “On the Wings of Fire” Series

“Wings of Fire” Teachers Training on using environmental conservation to learn English was held in Sarawak. Nine teachers completed the 1st batch of training. Four teachers completed both the 2nd and 3rd batch of training. The workshops were held at Swinburne University, Kuching. Dates of the trainings are as below:

1st Batch	:	20 – 23 March 2017
2nd Batch	:	10 – 13 April 2017
3rd Batch	:	27 – 30 November 2017

3.6 ASTI Media Engagement Programmes

3.6.1 Ariviyal Ulagam

As a continuation from last year, ASTI continued to write articles for Mayil, a monthly magazine, until October 2017. The articles were aimed at raising awareness of science, technology and innovation among the general public.

3.6.2 Promotion for Science Fair for Young Children

For Science Fair for Young Children 2017, the Public Relations (PR) Department managed the flow of information between the organisers of the Science Fair and the general public. Information about the Science Fair was promoted to the public via press releases and interviews over radio, facebook, live video and national television.

The flow of information between our internal and external stakeholders was reached through various levels such as the School Level Science Fair, Zone Level Science Fair and the National Level Science Fair. The Public Relations activities that were carried out to promote the Science Fair for Young Children 2017 are shown below:

1) SFYC Soft Launching

- Science Fair for Young Children 2017 Soft Launching was officiated by Datuk Dr Jeyaindran Tan Sri Sinnadurai, President of MyNadi Foundation on the 21st January 2017 at Grand Seasons Hotel, Kuala Lumpur.
- The event was published in the Tamil newspaper, Thai Molhzi.

2) School Level Science Fair 2017

- The press release for School Level Teachers' Training were published in Tamil newspapers such as Malaysia Nanban, Thai Molhzi and Makkal Osai.
- It was also promoted via SFYC Facebook and website.

3) Zone Level Science Fair 2017

- The press release for Zone Level Teachers Training and Zone Level Science Fair was done by the respective zone coordinators.
- ASTI Pamphlets were distributed to the coordinators for them to promote the Fair in their respective zones.
- Dissemination of information was done via SFYC and ASTI websites and newsletter.
- Dissemination of information was also done via SFYC and ASTI Facebook.

4) National Level Science Fair 2017

- Pamphlets were sent to VIPs, guests, funders and all well-wishers to provide information about the NSFYC.
- NSFYC 2017 invitations were sent to VVIPs, VIPs, guests, public and private university lectures, funders and well-wishers.
- A special invitation was sent to the public to attend the NSFYC 2017 through social media.
- Dissemination of information was done via SFYC and ASTI website and newsletter.
- Dissemination of information was done via SFYC and ASTI Facebook.
- The National Science Fair for Young Children 2017 press release was published in Makkal Osai, Malaysia Nanban, Tamil Nesan, Thai Molhzi and RTM 2.
- Facebook live event streaming which reached out to more than 10,000 people
 - Analysis of ASTI Facebook Pages as per on the event day
 - Number of Live Stream and Post=20
 - Highest View= 10,478
 - Lowest View= 267
 - Total View=43,475
 - Average View= 2,174 per post
- Promotional video published in social media, websites and WhatsApp

The School Level and Zone Level trainings, Zone Level Science Fair and pre and post National Event also received wide coverage in newspapers such as Malaysia Nanban, Tamil Nesan, Makkal Osai and Thai Molhzi.



3.6.3 Promotion for Young Inventors Challenge

- Traxx FM interview was attended by Dr. Mohamed Yunus Yasin on the 8th February 2017.
- A special invitation was sent to the public to attend the event through Facebook and ASTI Website.
- Promotional video was published in social media, websites and WhatsApp
- Facebook live event streaming which reached out to 2200 people
 - Analysis of ASTI Facebook Pages on the event day
 - Number of Live Stream and Post=35
 - Highest View= 2,228
 - Lowest View= 18
 - Total View=20,771
 - Average View= 593 per post

3.7 ASTI Collaborative Projects

3.7.1 Science Film Festival

The Science Film Festival, SFF, which was initiated by the Goethe-Institute in Thailand back in 2005 is a celebration of science communication and enjoys a unique position in Southeast Asia, North Africa and the Middle East.

The festival reached almost one million viewers in 16 countries in Southeast Asia, Africa and the Middle East in 2016 which further strengthens its position as the largest scientific film festival worldwide. There were 33,000 viewers in Malaysia. It is a celebration of science communication which enjoys a unique position in Southeast Asia, South Asia, Africa and the Middle East. Together with local partners it promotes science literacy and also awareness of contemporary scientific, technological and environmental issues through international film and television content. Since its first edition in 2005, it has become the largest event of its kind worldwide with almost one million visitors.

The festival partners in Malaysia are Association of Science, Technology and Innovation (ASTI), the German-Malaysian Institute (GMI), the Goethe- Institute Malaysia, the Malaysian Nature Society (MNS), the Ministry of Education (MOE) and the PASCH Schools.

Science Film Festival 2017 was successfully launched at the Opening Ceremony of the 7th Science Film Festival in Malaysia held on 12th October 2017 at GSC Pavilion, Bukit Bintang, Kuala Lumpur at 9.30am. Mr. Suresh Ramasamy from ASTI was in the pre-jury team for Science Film Festival 2017.

SFF-MALAYSIA 2017 prepared about 350 packs made up of a goodie bag, DVD, SFF MALAYSIA 2017 Booklet, SFF MALAYSIA 2017 Poster and writing/ scribbling pad. The packs were then distributed to schools and learning institutions across the country.

3.7.2 Khazanah Tea Talk

A special Khazanah Tea Talk was organised by ASTI on 17th November 2017 from 3.30pm till 5.30pm at Khazanah Resource Centre. A 2017 documentary film titled Chasing Coral was screened. It's a film about a team of divers, photographers and scientists who went on a thrilling ocean adventure to discover and to reveal the underwater mystery to the world. The film was directed by Jeff Orlowski and produced by Larissa Rhodes.

This Exposure Labs production took more than three years to shoot and is a result of five hundred plus hours spent underwater, submissions of footage from volunteers from 30 countries, and also the support from more than 500 people from various locations around the world. The film was recently screened at the Science Film Festival in Sri Lanka. The Science Film Festival is organised by the global non-profit cultural organisation, Goethe-Institute. Association of Science, Technology and Innovation (ASTI) is a partner in Malaysia and it is also one of the civil society partner organisations (CSPO) of Yayasan Hasanah. Programme Manager of Reef Check Malaysia (a CSPO of Yayasan Hasanah), Edmund Lau Chai Ming was at the Tea Talk who spoke that evening and answered some questions about coral reef conservation after the film screening.



3.7.3 International Science Drama Competition

This year, The International Science Drama Competition is organised annually by Petrosains in Malaysia. SK Bandar Baru Bangi won the second place in the primary school category at International Science Drama Competition held at Science Centre Singapore. Two actresses from SK Bandar Baru Bangi, Cahaya Kaseh and Lyra Kosai also jointly won the Outstanding Performers award. SK Bandar Baru Bangi was one of the top 10 favourite teams selected out of 20 entries and they eventually emerged as winners in the Malaysian Finals that was held on 13th May 2017. ASTI, as one of the partners, helped in the judging panel and also to reach out to schools.





3.8 ASTI Hi Tea 2017

ASTI successfully organised ASTI Hi Tea 2017 which was held on 29th April 2017 at Grand Seasons Hotel, Kuala Lumpur. It was a mini fund raising event which provided an excellent opportunity to get together and meet up with like minded people while contributing to a purposeful and noble cause.

High Tea – Income and Expenses

Total Income	RM19,300.00
Total Expenditure	RM3,750.00
Surplus	RM15,550.00

3.9 Team Buiding/ Vacation - Krabi

ASTI celebrated 10 years of Science Fair by having a Team building vacation at Krabi, Thailand for the secretariat and some committee members in January 2017 which was sponsored by 450 Movement. ASTI would like to thank 450 Movement for the recognition of the secretariat.

3.10 Hari Raya & Deepavali Open House

ASTI for the first time organised ASTI Hari Raya and Deepavali Open House at ASTI Office. ASTI Hari Raya Open House was held on 15th July 2017 and ASTI Deepavali Open House was held on 2nd November 2017. Those who came to the open house made the day a lot merrier and a day to be remembered.

3.11 ASTI Leadership Programme / Internship

3.11.1 Alumni

Over the years, the number of schools and students that have participated in Science Fair for Young Children, SFYC, Young Inventors Challenge, YIC, and Creative and Critical Thinking Camp (CCT) and now with the inclusive of ASTI Leap Challenge has increased. However as much as we wanted to, we have not been able to keep in touch with the students who had participated in these events. With this objective in mind, we have decided to start up an Alumni for all those who were part in our events in the past.

The participants of these events have been invited to be Member of the Alumni. By becoming a member of our Alumni, we will keep the members updated with all the latest developments of our events as well as interesting news and developments in science, technology and innovation.



3.11.2 Volunteering with ASTI

We are a group of volunteer science enthusiasts, who are trying, through our association, to bring the excitement of science, technology and innovation to a wider public. In doing so, we require a number of like-minded volunteers to help us with our task. It can be on an ad-hoc or more permanent basis.

The association has a range of volunteering opportunities available which are explained below:

Professionals

- Speaker - Public Lectures, University Campus, Multinational
- Companies - who are able to lend their support via their respective capabilities
- Training - to teach new knowledge and innovative methods
- Demonstrations - During road shows and training
- Writing - website articles, newspaper columns, proposals, etc.
- Fund raising / Finance - to help keep our projects running
- Mentoring - to help some of our participants reach greater heights
- General Volunteer - to help with various tasks and initiatives.

For young students at various levels, we provide training and opportunities to volunteers in:

University Students

- organizing events
- producing and realizing innovative ideas
- ability to do demonstrations
- the discipline needed for administration
- event participation / support
- IT / Website / Social Media expertise
- mentoring ability
- the adaptability of a General Volunteer

School Students

- IT / website / social media expertise
- organizing events
- innovative ideas
- organizing science week
- starting a science club
- event participation / support



3.11.3 Internship with ASTI

There is no doubt that interns reap tremendous benefits during their time with ASTI. Skills cultivated during their training such as leadership, organizational management, interpersonal communication, self-confidence, team work and work ethics rank as equally important as academic credentials. These skills will go a long way to help in their personal and career aims, simultaneously being a great service to their respective universities or organizations.

Objectives of the Internship

- enhance students' educational experience through practical hands-on experience and involvement in projects associated with science, technology and innovation
- provide students with supervised practical experience
- expose students to the working environment of an NGO focused on science, technology and innovation
- a better understanding of ASTI's aims and objectives

Functions / Duties and Output Expectations

Under the direct supervision of relevant ASTI staff or Committee Member, the intern is expected to perform the following tasks:

- complete a written paper on suggestions to improve the day-to-day work of ASTI
- provide support to ASTI committee during seminars, workshops, conferences, and any other ASTI related events where applicable
- provide daily updates through social media on experience of interning at ASTI and on a specific programme they are assigned to

At the end of the internship, the following output is expected:

- a final report detailing the intern's experience and work assigned in the different of ASTI focus areas
- a report detailing the outcome of the various seminars, workshops or conferences organized or attended

3.12 ASTI Outreach Programme

3.12.1 “Ceramah dan Bengkel Pembelajaran Abad Ke-21- Discovery, Invention & Innovation 2017”

A lecture and workshop for Tamil school teachers was conducted at Dewan Seri Melati IPG Kampus Ipoh, Ipoh on the 21st January 2017. Dr. Subramaniam Gurusamy, Vice President of ASTI, gave lecture on Discovery, Invention & Innovation 2017 to the teacher trainees who were present at the workshop.

3.12.2 NICE Expo 2017

NICE Expo 2017 (National Innovation And Creative Economy Expo 2017) is an event organised by MOSTI (Ministry of Science, Technology and Innovation). It was held from 12th October 2017 till 16th October 2017 at Technology Park Malaysia, National Science Centre & The National Planetarium. Dr. Mohamed Yunus Bin Mohamed Yasin, the President of ASTI was the ambassador for the event.

3.12.3 Hari Hasanah 2017

Hari Hasanah is one of the initiatives under Khazanah Nasional's (Khazanah) “Negaraku, Negara Kita” campaign, which celebrates and commemorates Malaysia's journey and progress as a nation. This year Hari Hasanah was held on 4th September 2017 at PPR Sri Semarak from 2.00 pm till 7.00 pm. ASTI collaborated and contributed by setting up a Science experiment booth for children.

ASTI showcased 5 experiments which were based on scientific concepts to the children. Besides that ASTI had another station with interesting puzzle sets for the children which tested their creativity, critical thinking and perseverance. We wanted to show the children that science is fun and learning can be fun and done through unconventional means as well.

In the spirit of having Hari Hasanah Bersama Rakyat, Khazanah planned to organize a series of this type of activities across Malaysia i.e. Sarawak, Sabah, Pahang, Penang and in conjunction with the Iskandar Festivals in Johor on the 25th – 26th November 2017. ASTI collaborated and contributed on these 2 days in Johor by setting up a science experiment booth for children.





We showcased 5 experiments based on scientific concepts to the children and then walked them through the experiments. The experiments that we showcased at the event were Presence of Air, Air Pressure, Density and Bernoulli's Principle. We also had another station with interesting puzzle sets for the children to build. This station was not only to attract childrens but to further highlight that learning can be fun and done through unconventional means as well. We conducted our stations for two days from 12pm to 6pm. Many of them expressed interest in the scientific concepts. We believe we have achieved the goal we set out for the event which was to peak the interest in science among childrens.

3.12.4 SFYC2017 Winners went to India

Students from SJKT Puchong were invited by Ministry of Education Malaysia to present in front of Higher Education Minister of Tamil Nadu at Anna University. The students who went to India for this purpose were Tivyan Moha, Ryasree Sreetharan and Villasheqa Vijayakumar.

Students from SJKT Ladang Kinrara were invited to present to Minister of Education in Tamil Nadu in commemorating 200 years of Tamil Education in Malaysia at Tamil Nadu, India. These students were accompanied by YB Datuk Seri Dr. S. Subramaniam and YB Dato' P. Kamalanathan. These students did their presentation at University of Madras, Chennai and Tamil University, Thanjavur. The event was held from 19 September 2017 till 22 September 2017.

3.12.5 Karnival Sains Kanak-Kanak 2017

ASTI in collaboration with Care United Johor Bahru, an NGO organised Karnival Sains Kanak-Kanak 2017 in Johor. The event which was organised for school students was held on 4 November 2017 at Taman Scientex, Johor.

3.13 Websites and Facebook



ASTI continuously updates its websites and facebook to give real-time information to the public about all of its ongoing events and projects. ASTI's websites and Facebook have been promoted heavily since they are used as a mean to disseminate information and stay connected with ASTI's various stakeholders.

3.14 Newsletter

ASTI continues its effort to produce monthly newsletter in order to update its members, stakeholders and friends with recent activities and projects' progress. The newsletter is designed to be read in less than 5 minutes, taking into consideration the busy schedule people lead these days. As of 31st December 2017, ASTI had published 12 newsletters. All the newsletters were emailed to ASTI's contact list and uploaded to ASTI's website and Facebook.





4 ASTI RESEARCH AND DEVELOPMENT

ASTI Research and Development Department together with 450 Movement is headed by Dr. Mohamed Yunus bin Mohamed Yasin. This year, the Research and Development Department had successfully prepared the following documents:

1. YIC 2017

- YIC 2017 Students' Manual
- YIC 2017 Mentor Manual
- YIC 2017 Training Presentations (Online)
- YIC 2017 Training Videos (Online)

2. CCT Camp 2017

- Module on Ice-Breaking
- Module on 5 Reasons Why Humans Are Capable of Genius
- Module on Healthy Body and Healthy Mind
- Module on Boosting Your 5 Senses
- Module on Problem-Solving (CSI)
- Module on The Movie and Review
- Module on Mind Mapping & Brainstorming
- Module on Relaxation & Concentration
- Module on Understanding Stories
- Module on Boosting Your 10 Intelligences
- Module on Lateral Thinking
- Module on Creativity & Expressing Your Creativity

- Module on Short-Term Memory Tips
- Module on Discover Yourself
- Module on Critical Thinking in Conversation
- Module on Living Earth
- Module on Understanding
- Module on Tinkering
- Module on Multitasking
- Module on Problem Solving
- Module on Brain Exercises
- Module on Thinking Skills
- Module on Logical Thinking

3. Reports of ASTI's projects

- Science Fair for Young Children Report 2017
- Young Inventors Challenge Report 2017
- Creative and Critical Thinking Camp Report 2017
- Science Fair for Young Children Research and Development Report 2017
- ASTI Annual Report 2017
- ASTI Leap Challenge 2017

4. Publicity Materials

- Monthly Newsletter
- Event Promotional Video



தேசிய இளம் ஆய்வாளர்களின்
அறிவியல் விழா 2017
NATIONAL SCIENCE FAIR FOR YOUNG CHILDREN 2017

**PLATINUM
AWARD
RM 2000**



5 ACCOMPLISHMENTS & RECOGNITIONS

In 2017, ASTI successfully organized three major projects which were Science Fair for Young Children, Young Inventors Challenge, and Creative & Critical Thinking Workshops and one pilot project ASTI Leap Challenge. Besides that, ASTI was engaged with the public through its Outreach Programme and Media Engagement Programme. ASTI has also been collaborating with various non-governmental organizations in order to successfully run our projects.

The overall participations of schools in Science Fair for Young Children and Young Inventors Challenge have shown continuous growth and more students are benefitting from these events. The winners of Science Fair for Young Children and Young Inventors Challenge have then participated in various national and international competitions and won prizes.

5.1 Accomplishments of Science Fair for Young Children

The progress of Science Fair over the last 11 years is as follow:

Year	Zone	No. of Schools Participated in SLSF	No. of Schools Participated in ZLSF	No. of Schools Participated in NSFYC
2007	Selangor and WP. Only	-	44	-
2008	National Level (6 Zones)	-	180	60
2009	National Level (6 Zones)	Pilot in Johor	188	60
2010	National Level (9 Zones)	82	263	60
2011	National Level (9 Zones)	256	274	60
2012	National Level (9 Zones)	365	269	60
2013	National Level (9 Zones)	423	282	60
2014	National Level (9 Zones)	338	261	54
2015	National Level (9 Zones)	327	221	60
2016	National Level (9 Zones)	308	258	60
2017	National Level (10 Zones)	305	326	68

In addition to the above, the participants of our National Level Science Fair for Young Children have participated in various competitions and shown tremendous presentation during their participation in the various competitions throughout the year.

Below are the competitions in which they have participated:

Competition	School Name	Achievement (Medal)
Young Inventors Competition	SJKT Buluh Akar	<ul style="list-style-type: none"> • Silver medal (overall) • Gold award (overall) from the Philippines.
The Malaysia Open Vex Championship 2017	SJKT Pulau Sebang	Participated in the competition which was open for primary school, secondary school and university students.
Malaysian Technology Expo 2017	SJKT Jalan Yahya Awal	2 teams won 2 silver medals in the International Asian Youth Innovation category.
International Invention, Innovation and Design Competition Johor 2017 (IIID Johor 2017)	SJKT Kangkar Pulai	1 Gold and 1 Silver
	SJKT Jalan Yahya Awal	2 Bronze
	SJKT Mentakab	1 Bronze
	SJKT Taman Tun Aminah	1 Bronze
Innovation Design Research International Symposium (IDRIS 2017)	SJKT Nibong Tebal	Gold
Penang Invention, Innovation and Design Research platform 2017	SJKT Ringlet	<ul style="list-style-type: none"> • Gold medal • Silver medal • Bronze medal
Innovative Research, Invention and Application Expo 2017 (I-Ria 2017) Competition	SJKT Ringlet	<ul style="list-style-type: none"> • 2 Gold medal • 1 Silver medal • 1 Bronze medal
ITEX 2017	SJKT Kajang	• 6 Golds, 2 Silvers & 3 Bronzes
	SJKT Ramakrishna	• 2 Golds
	SJKT Jalan Yahya Awal	• 1 Gold, one Silver & 2 Bronzes
	SJKT Jenjarum	• Gold
	SJKT Ladang Kinrara	• Gold
International Eureka Innovation Exhibition 2017	SJKT Ramakrishna, SJKT Arumugam Pillai & SJKT Ladang Pyre	won medals
Pahang State Robotic Competition	SJKT Ringlet	was awarded as Pahang State Robotic Competition Champion and won best mentor award. The rest of SJKT Ringlet team won 4th, 5th and 8th place respectively.
	SJKT Mentakab	won third place in State level robotic competition and also won best innovation award.
2017 International Invention Innovation Competition (iCAN 2017)	SJKT Mentakab	won silver medal at the iCAN 2017 Preliminary Round and was a finalist eligible to attend iCAN 2017 Finalists' Exhibition & Award Ceremony which took place on 26th August 2017 in Canada.
National Robotics Competition 2017	SJKT Ramakrishna	won Gold & Bronze in Robotic category Jen-2 Football

Competition	School Name	Achievement (Medal)
iindex 2017	SJKT Ringlet (4 teams)	1 Gold, 2 Silver & 1 Bronze
	SJKT Mentakab	Gold
	SJKT Ladang Blue Valley	Gold
	SJKT Ladang Shum Yip Leong	Silver
	SJKT Ladang Bee Yong	Silver
IYIA Jakarta 2017	SJKT Kajang	won 5 Golds & 1 Silver
	SJKT Puchong	1 Gold
	SJKT Taman Tun Aminah	1 Gold
	SJKT Mentakab	1 Gold
	SJKT Masai	1 Gold
	SJKT Jenjarum	1 Gold
	SJKT Kajang & SJKT Puchong	both won special award at the competition
TVET Innovation Competition	SJKT Kangkar Pulai	won silver medal for their invention "Smart Usage of Recycle Plastic Bags"
International Kuala Lumpur Engineering Science Fair 2017	SJKT Jalan Yahya Awal	5 Bronzes
	SJKT Kinrara	1 Gold and 1 Bronze
	SJKT Pasir Gudang	Gold
Melaka International Intellectual Exposition 2017	SJKT Ringlet	<ul style="list-style-type: none"> won 2 Emerald Award which was for Inovation and for Design Ringlet won two gold awards and a silver award for international innovation products
	SJKT Taman Tun Aminah	1 gold, 1 silver and 1 bronze

5.2 Accomplishments for Young Inventors Challenge (YIC)

YIC has seen a phenomenal growth in the last 5 years. The growth of YIC is shown in the graph below:

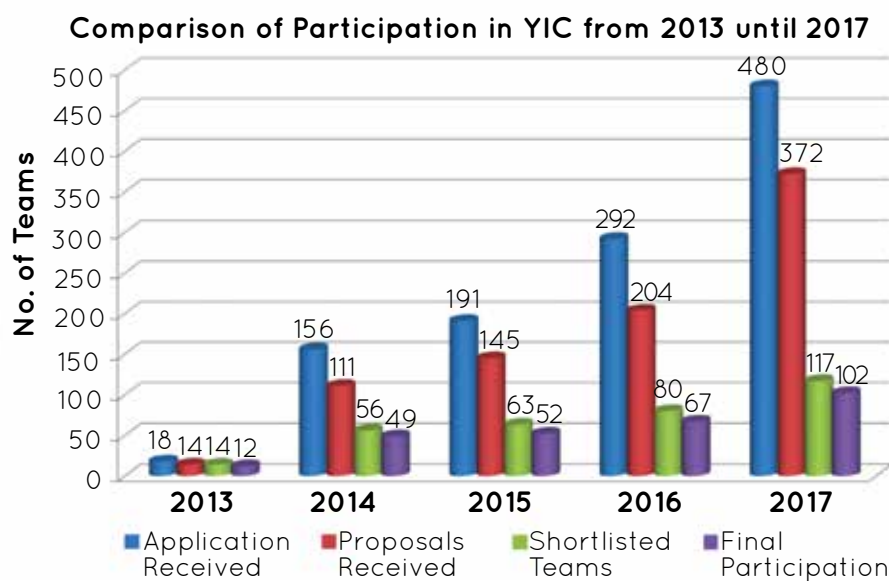


Figure 1: Comparison of Participation in YIC from 2013 until 2017

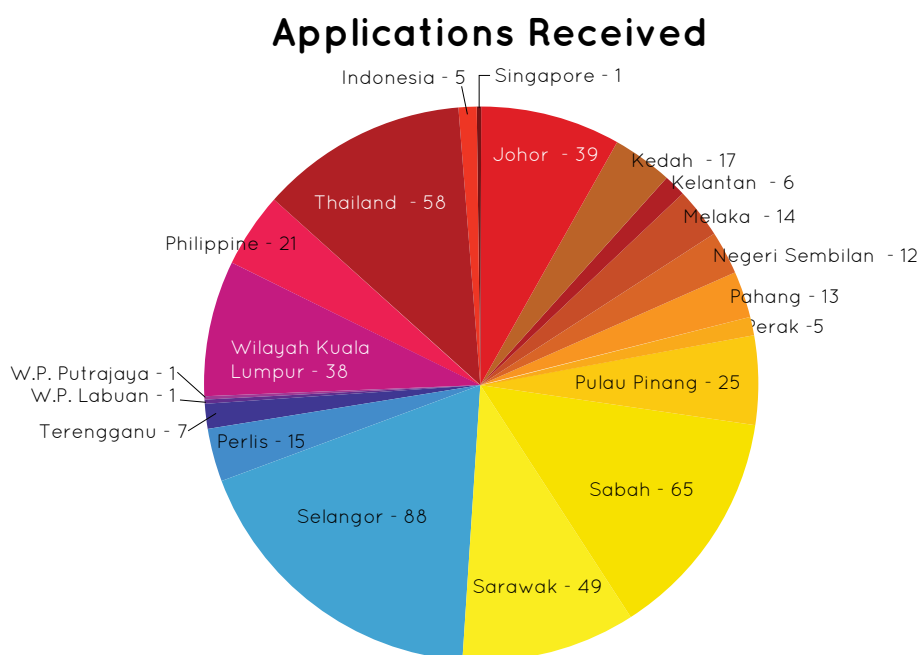


Figure 2: Number of applications received to participate in YIC 2017 (according to state and country)

In 2017, ASTI had teams from all the states in Malaysia, the Philippines, Singapore, Thailand and Indonesia participating in Young Inventors Challenge 2017.



5.3 Accomplishments for ASTI Leap Challenge (ALC)

The ASTI Leap Challenge winners had automatically qualified for Young Inventors Challenge 2017. Meanwhile the 1st Runner Up, 2nd Runner Up, 4th Place Winner and 5th Place Winner at ASTI Leap Challenge northern region and southern region were invited to submit their proposal to participate in the Young Inventors Challenge 2017 organised by ASTI. SMK Seri Kota Puteri 2 from Johor which won ASTI Leap Challenge 2017 in the southern region emerged as the winner of Young Inventors Challenge 2017. Meanwhile SMK Taman Mount Austin which was the 4th place winner at ASTI Leap Challenge 2017 in Johor won Bronze Award at Young Inventors Challenge 2017 and also participated in Pertandingan Inovasi Kreatif J-BIOTECH 2017 at “Expo Johor Berkemajuan 2017” and came out 8th placed at the competition with their invention XO-SWITCH.



5.4 Recognitions

Special Achievement Award 2017

Dr. Mohamed Yunus Mohamed Yasin, President of ASTI, was one of the recipients of the Special Achievement Award 2017 at the Perdana Young Indian Entrepreneur Award 2017 held at The Majestic Hotel, Kuala Lumpur on 2nd December 2017. The event was organised by Malaysian Indian Entrepreneurs Cooperative.

Merdeka Award 2017

Dr. Mohamed Yunus Yasin, the President of ASTI, was also nominated for the Merdeka Award 2017 in March this year. The Merdeka Award was established by its Founders, namely PETRONAS, ExxonMobil and Shell, in August 2007 to recognise and reward excellent individuals and organisations whose works and achievements have not only contributed to the nation's growth but have also inspired greatness in the people of Malaysia. It is a prestigious award that honours the nominees on their outstanding effort and role in living the 'Merdeka' spirit.

Outstanding Scientist Award

Mejar. Dr. Vikneswaran Munikanan, Treasurer of ASTI, received the Outstanding Scientist Award in the field of Environmental Engineering from the Centre of Advanced Research and Design, Venus International Foundation, India on 11th November 2017.

SPECIAL ACHIEVEMENT AWARD 2017 RECIPIENTS



President, Malaysian
National Cooperative Movement
(ANGKASA)



**YBhg Dato' Haji Abdul Fattah
Haji Abdullah**
Cooperative Leadership Excellence

CEO, Malindo Air



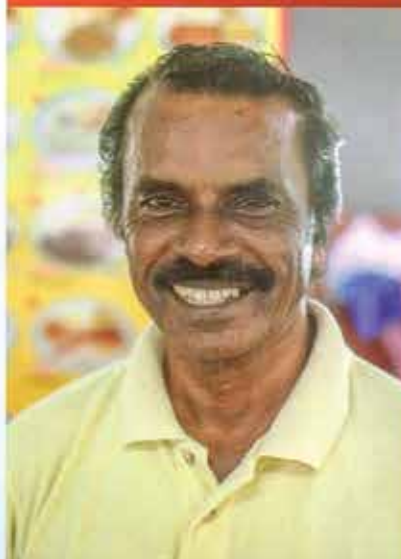
**Mr. Chandran
Ramamurthy**
Aviation Excellence

President, Association of
Science, Technology &
Innovation (ASTI)



**Dr. Mohamed Yunus
Mohamed Yasin**
*Science / Innovation
Excellence*

National Walker



Mr. V. Subramaniam
Sports Excellence

6 ADMINISTRATION AND FINANCE

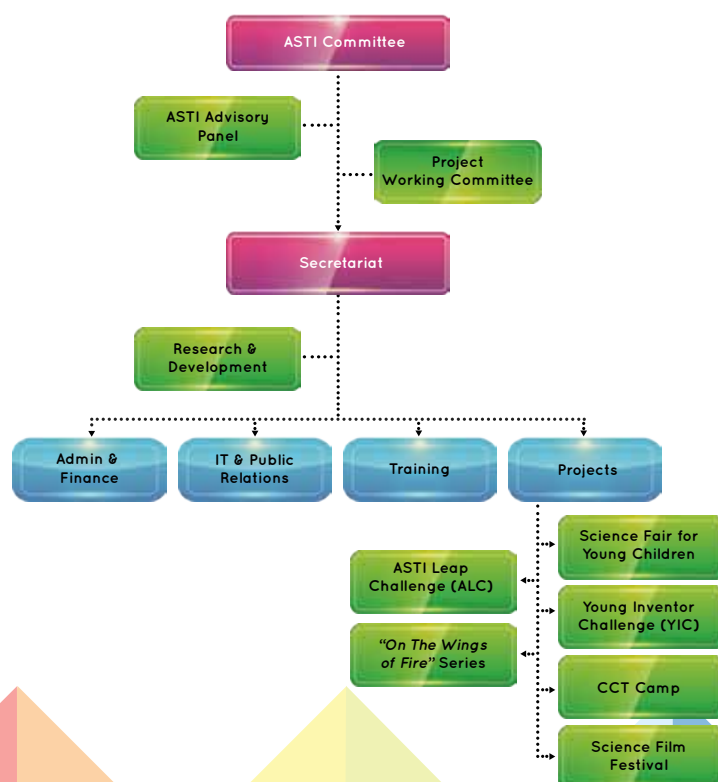
6.1 Administration

6.1.1 Premise

ASTI's office is located at No. 16A, Jalan 21/12, Sea Park, 46300 Petaling Jaya, Selangor Darul Ehsan. ASTI rents the premise on a monthly basis, renewable yearly. To ensure ASTI has a fixed place of administration, the rental is usually paid one (1) year in advance. This also enables ASTI to have a good relationship with the landlord. In addition, ASTI pays the utility bills monthly. All repairs are paid by the landlord.

6.1.2 Staff

In 2017, there were four full-time staffs who work on various projects such as Science Fair for Young Children, Young Inventors Challenge, Creative and Critical Thinking Camp, ASTI Leap Challenge, "On the Wings of Fire" series, ASTI Media Engagement Programme, Science Film Festival, and many more other projects. The organizational structure is as shown below:



6.2 Finance

The financial statements have been prepared in accordance with the historical cost convention and complies with applicable approved accounting standards in Malaysia.

Balance Sheet as at 31st October, 2017			
Assets	Notes	2017 (RM)	2016 (RM)
Non- current assets			
Property, Plant and Equipment	3 (e) & 4	6,648.89	11,229.22
Current assets			
Other Receivables		54,370.00	14,500.00
Deposits & Prepayment		1,139.57	300.00
Amount due from SFYC		-	11,654.02
Amount due from CCT		-	1,000.00
Amount due from ALC		7,500.00	-
Cash and Bank Balance	3(d) & 7	338,436.89	432,262.42
Fixed Deposit		-	50,000.00
		<u>401,446.46</u>	<u>509,716.44</u>
Total assets		<u>408,095.35</u>	<u>520,945.66</u>
Represented by:			
Accumulated Funds			
Accumulated Funds b/f		301,163.05	(107,172.78)
Surplus For the Year		68,349.71	408,335.83
Accumulated Funds c/f		<u>369,512.76</u>	<u>301,163.05</u>
Current liabilities			
Other Payables	3(c)&6	38,582.59	42,900.00
Amount due to YIC		-	176,882.61
		<u>38,582.59</u>	<u>219,782.61</u>
Total liabilities		<u>38,582.59</u>	<u>219,782.61</u>
Total Funds and Liabilities		<u>408,095.35</u>	<u>520,945.66</u>

*The annexed notes from an integral part on the Accounts.

**STATEMENT OF INCOME AND EXPENDITURE ACCOUNT FOR
THE YEAR ENDED 31ST OCTOBER 2017**

INCOME	Notes	2017 (RM)	2016 (RM)
Income	3(a) & 5	1,757,113.66	1,476,599.05
TOTAL INCOME		<u>1,757,113.66</u>	<u>1,476,599.05</u>
Less : EXPENDITURE			
Accounting Fee		1,000.00	2,400.00
Article Translation		-	1,076.00
Accommodation		900.70	150.00
Advertisement and Promotion		-	24,697.75
Design		2,950.00	5,482.00
Website		7,775.00	5,375.00
Audit Fee		2,000.00	2,000.00
Bank Charges		482.33	209.14
Car Rental		-	1,750.00
Cleaning Services		2,400.00	2,200.00
Depreciation	4	16,853.13	13,166.81
Donation & Sponser		5,088.00	10,054.60
Electricity and Water		7,556.85	7,314.86
EPF & SOCSO		19,492.10	31,127.40
Launching & Fund Raising		3,750.00	28,000.00
Insurance		4,836.10	7,291.00
Internet Charges		1,710.30	3,150.00
Honorium Expenses		200.00	5,400.00
Wings of Fire		17,347.75	-
Postage, Courier & Stamping		2,246.75	1,762.90
Printing & Stationary		28,581.10	9,009.54
Staff Salaries and Allowance		151,249.75	127,124.80
Staff Rewards		19,408.75	12,761.50
SFYC Project Expenses		739,140.77	482,137.13
YIC Project Expenses		331,398.69	160,974.84
CCT Project Expenses		30,092.19	42,075.87
ALC Project Expenses		240,366.78	9,624.64
Prizes & Souvenirs		-	11,212.95
Rental		18,000.00	18,000.00
Research & Development		3,208.00	-
Training		1,600.00	4,375.00
Telephone		2,331.10	3,370.00
Travelling & Transportation		8,418.56	8,853.48
Medical Fee		574.40	545.50
Other expenses		8,746.55	18,401.65
Repair and Maintenance		450.00	1,660.00
Food & Staff Refreshment		8,608.30	5,528.86
TOTAL EXPENDITURE		<u>1,688,763.95</u>	<u>1,068,263.22</u>
EXCESS OF INCOME		<u>68,349.71</u>	<u>408,335.83</u>
INCOME AND EXPENDITURE ACCOUNT			
Total Income		1,757,113.66	1,476,599.05
Total Rxpenditure		1,688,763.95	1,068,263.22
Surplus		<u>68,349.71</u>	<u>408,335.83</u>

*The annexed notes from an integral part on the Accounts.



7 FUTURE PROJECTS

Besides continuous improvement and expansion of its current projects, ASTI hopes:

- to partner with more organizations in order to develop more innovative projects for young kids
- to run a teachers conference to upskill teachers and to support them in any areas ASTI is able to

8 APPRECIATIONS

Finally, the ASTI Committee expresses its profound gratitude to everyone who has contributed in different ways towards the success of ASTI and its projects. We hope to continue to work with all relevant stakeholders to achieve our aims and objectives.



Contribution Form

<input type="checkbox"/> School Level Science Fair	RM 450 X	<input type="text"/>	Per School	RM	<input type="text"/>
<input type="checkbox"/> Zone Level Science Fair	RM 300 X	<input type="text"/>	Per School	RM	<input type="text"/>
<input type="checkbox"/> National Level Science Fair	RM 450 X	<input type="text"/>	Per School	RM	<input type="text"/>
<input type="checkbox"/> Young Inventors Challenge (YIC)	RM 300 X	<input type="text"/>	Per Team	RM	<input type="text"/>
<input type="checkbox"/> Creative & Critical Thinking Camp (CCT)	RM 500 X	<input type="text"/>	Per Student	RM	<input type="text"/>

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☐ **RM 5,000**      ☐ **RM 10,000**      ☐ **RM 15,000**      ☐ **RM 20,000**

Name of Donor : \_\_\_\_\_

Organization : \_\_\_\_\_

Contact Person : \_\_\_\_\_

Address : \_\_\_\_\_

Tel. No: \_\_\_\_\_ Fax: \_\_\_\_\_

H/P No: \_\_\_\_\_ Email: \_\_\_\_\_

☐ Cheque : **RM**  Cheque No.:

in favour of

**PERTUBUHAN SAINS, TEKNOLOGI DAN INOVASI**

(No. Pendaftaran : PPM-012-10-25102012)

**CIMB Account No. : 800 271 0841**

*\*Note: to receive an official Receipt, please fax this donation form & bank slip to 03 7872 9551*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

[www.asti.org.my](http://www.asti.org.my)







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