

## Our Objectives

1. to encourage, foster and promote close relationship between the Postgraduate Institute of Science and her alumni and among the alumni themselves;

2. to ensure that alumni programmes are initiated and developed for the benefit of the alumni;

3. to provide and disseminate information regarding Science Education programmes to the alumni;

4. to pursue any other objectives which are in conformity with the above aims and the objectives of the Association

SEAA News Vol. 4 Issue 01 December 2015

## AGM – 2014

The annual general meeting of the SEAA was held on 21<sup>st</sup> of December 2014 at the Roof Top of PGIS.



Had a good time.. After the AGM.... The Elle Match...

### Science Education Alumni Association

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### SEAA - Executive committee - 2015

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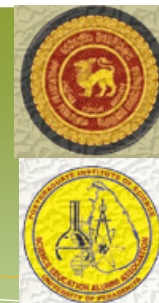
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01

December  
2015

Science  
Education  
Alumni  
Association

# SEAA News



NEWSLETTER OF THE SCIENCE  
EDUCATION ALUMNI  
ASSOCIATION OF  
THE POSTGRADUATE INSTITUTE  
OF SCIENCE  
UNIVERSITY OF PERADENIYA



### Inside...

- Message from the SEAA President
- Message from the Director – PGIS
- Article 01– Use of cooperative learning in classroom
- SEAA at Central Provincial Science Day -2015
- Article 02 -Why have you chosen this profession?
- Membership Form
- Article 03 -Science Education: Is Sri Lanka sabotaging its future?
- School based teacher development program – ICT Workshop
- Short course on “Teaching Methodologies in Science Education”
- Announcements, Achievements, Future Plans...
- AGM - 2014

*For the betterment of the Science Education in Sri Lanka ....*

Science Education Alumni Association of the PGIS, PO Box 25, PGIS, University of Peradeniya.





Dr. T. M. Sakunthala Yatigammana Ekanayake President/SEAA

### Message from the SEAA President

I feel greatly honored and very humbled by the confidence and trust placed in me and for having appointed me as the President of Science Education Alumni Association (SEAA) of the Postgraduate Institute of Science, University of Peradeniya for the year 2015. I consider myself privileged to have had an extraordinary Executive Committee to work with. As a team we could plan and implement a considerable number of activities during this year. In the process of accomplishing these tasks fruitfully, the support and the cooperation of the other members of the SEAA is very much cherished. Please accept my warmest appreciation for your wholehearted commitment.

The main objective of the SEAA is to work towards the betterment of science education in Sri Lanka and SEAA executive team always strives to make this a reality. This year, the focus of SEAA was to enhance teacher quality. With the dedication of the SEAA EXCOM members we managed to plan and implement different activities to achieve our goal. Among them, a short course on 'Teaching methodologies in science education for grade 6 – 11 science teachers of the Central Province' was organized by SEAA with the collaboration of PGIS and the Department of Education of the Central Province. With the participation of 48 teachers, representing all the educational zones of the Central Province, the first short course was successfully completed in June 2015. The second short course programmed for 45 teachers is still ongoing and will be successfully completed by mid-February 2016. The resource persons for these short courses are academic staff members of the University of Peradeniya and I am proud to state that the majority of them are SEAA members.

With the guidance of the Patron of the SEAA, Director/PGIS, and while discussing with the Director of Education of the Central Province, we have already submitted a Proposal to conduct short courses to enhance Science Teaching-Learning Process in schools of the Central Province. This programme will be launched in March 2016. Furthermore, one of the SEAA executive committee members organized an IT workshop for teachers in Teldeniya Educational Zone under the School Based Teacher Development (SBTD) programme.

I am glad to inform you that SEAA members managed to contribute in enhancing students' science learning during the Science day programme organized by the Education Department of the Central Province and held at Gurudeniya Resource Centre. The contribution of SEAA members to this programme in successfully conducting a seminar in the Sinhala medium as well as in the Tamil medium for the students who were preparing for G.C.E (O/L) examination this December, is very much appreciated. Importantly, this model paper was developed by one of the SEAA executive committee members.

As in the past years, we continued fund raising activities through a raffle ticket and selling pens. In addition, once again this year, SEAA executive committee designed a new SEAA t-shirt. I am sure that the funds we collected will be used wisely to meet the objectives of our society.

As the president/SEAA for the year 2015, I take this opportunity to thank the Director of the PGIS, Prof. H.M.D. Namal Priyantha, and the Chairperson of the Board of Study in Science Education (PGIS), Dr. H.M.S.P.M. Weerasinghe, for their continuous support and guidance without which the SEAA would not be able to reach the expected targets. As always, sincere thanks go out to the members of the executive committee. Resulting from their volunteer work, invaluable suggestions/ideas and absolute support, I could, with ease, accomplish my task. I also like to express my sincere appreciation to all the members of SEAA for their valued contributions to the different activities we organized during the year 2015.

My best wishes accompany the future activities of the SEAA and I pledge to give my fullest support to making them a successful reality.

**Dr. T. M. Sakunthala Yatigammana Ekanayake – President/SEAA**

### Announcements

- SEAA membership has Initiated Prof. Sunethra Karunaratne Gold Medal Award for the best performance in Postgraduate Diploma in Science Education, PGIS.

### Achievements

We happy to inform you that...

- Dr. W. D. Chandrasena (SEAA member), Senior Lecturer at the Science Education Unit, Faculty of Science, University of Peradeniya, Sri Lanka has received a "COMMENDED PhD AWARD" at the **Eighth SELF Biennial International Conference - 2015** in Leibniz Institute for Science and Mathematics Education at the University of Kiel, Germany.
- A number of SEAA members published journal articles and conference papers.
- Some of the SEAA members have started to read for their PhDs/ MPhils
- Some of the SEAA members have been appointed as Directors (Sri Lanka Education Administration Service) and as Lecturers (Teacher Educator Service)

### Future Plans..

- Conducting workshops for teachers with the collaboration of the Provincial Education Departments and PGIS.
- Conducting workshops for school children and Teachers at rural areas

### Fund Raisings..

Raffle Draw Campaign  
Will be drawn at the 2015-AGM



T-Shirts Campaign  
All sold out successfully



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SEAA Member



“Education

Is not the

Learning of

Facts,

but the

Training of the

Mind to Think.”

- Albert Einstein

### Short Course on “Teaching Methodologies in Science Education for Grade 6 - 11 Science Teachers in Central Province”

With the objective of enhancing teachers' knowledge, skills and attitudes in teaching methodologies while special focus on teaching of science, two workshops were organized by the SEAA with the collaboration of PGIS and Education Department, Central Province. The first short course was for the 48 secondary level science teachers from 17<sup>th</sup> April to 29 May, 2015. The second workshop already started on 15<sup>th</sup> of December and still going on till February 2016.



### Message from the Director, Postgraduate Institute of Science (PGIS), University of Peradeniya, Sri Lanka



It is with great pleasure that I provide this message to mark the Annual General Meeting of the Science Education Alumni Association (SEAA) to be held on 29<sup>th</sup> December, 2015. The Postgraduate Institute of Science (PGIS) takes a keen interest in the development of the national education system in Sri Lanka.

In this context, the PGIS offers Ph.D., M.Phil. and M.Sc. degrees, and Postgraduate Diploma in Science Education. Additionally, the PGIS offers various short-term training programmes to promote science education in Government schools in the country. The SEAA, initiated in 2012, has taken several measures in uplifting science education through various activities. The membership of the SEAA has been expanding since its inception. The present President, with the support of its members, has initiated many programmes for the development of the SEAA. I have no doubt that the SEAA will evolve as a leading alumni association of the PGIS. I congratulate the SEAA, and wish all the best for its future activities.

Professor Namal Priyantha  
Director/PGIS  
Chairman, Board of Study in Environmental Science and Senior Professor in Chemistry

#### Editorial Board

- Advisors : Dr. T.M.Sakunthala. S.K. Yatigammana Ekanayake  
Dr. W. D. Chandrasena
- Chief Editor : Mr. Darshana R.B Ekanayake
- Editors : Ms. P.Wanniarchchi  
Mr. Cletus Rodrigo

#### SEAA Executive committee Meeting..



Best Wishes From



**PEOPLE'S BANK**  
THE PULSE OF THE PEOPLE



People's Mobile Banking enables you to get the personal, business as well as development related banking services at a touch of a button, giving banking an all new meaning in terms of convenience and efficiency.



வகுப்பறையில் இணைந்து கற்றல் செயற்பாட்டின் பயன்பாடு

**USE OF COOPERATIVE LEARNING IN CLASSROOM**

பல கல்வியலாளர்களும், உளவியலாளர்களும் பாரம்பரிய ஆசிரியர்மைய வகுப்பறைச் செயற்பாடுகளிலும் பார்க்க மாணவர்களின் இணைந்து கற்றல் செயற்பாடுகளுக்கு அதிக பெறுமதி அளித்திருக்கின்றனர். உளவியலாளரான பியாஜே கற்றலில் சமூக இடைத்தொடர்புகள் (மாணவர்களின் இடைத்தொடர்புகள்), காரணரீதியாகத் தர்க்கித்தல் ஆகியவற்றை வலியுறுத்தியிருக்கின்றார்.ஸ்ராஸ்.J.R (1996)இணைந்து கற்றல் செயற்பாடு பற்றி பின்வருமாறு குறிப்பிடுகின்றார். இணைந்து கற்றல் செயற்பாடு வெறுமனே குழுமுறைக் கற்றல் எனக் கூறிவிட முடியாது. அதனையும் தாண்டி சிறந்த கற்றல் உபாயத்திற்கு வழிகோலுகிறது.இணைந்து கற்றல் செயற்பாடு எனும் பதத்தில் கற்றலில் ஒருவருக்கொருவர் உதவியாக இருத்தல், ஏனையவர்களுடன் தமது எண்ணங்களை பங்கிடுதல், அதன்மூலம் பாடவியங்களில் தெளிவு பெறல் போன்றன அடங்குகின்றன. இணைந்து கற்றல் செயற்பாடு தொடர்பாக மத்தியமாகாணத்தில் உள்ள பாடசாலை ஒன்றில் தரம் 7 ஐச் சேர்ந்த மாணவர்களிடம் விஞ்ஞான பாடம் தொடர்பாகஇணைந்து கற்றல் செயற்பாடு மாணவர்களிடம் எவ்வாறு இடைத்தொடர்புகளை ஏற்படுத்துகின்றது? எவ்வாறு மாணவர்களின் கற்றல் நேர்மனப்பாங்குகளை அளவிட உதவுகின்றது? எனும் ஆய்வு வினாக்களுக்கு விடைகாணும் முகமாக தரம் 7 விஞ்ஞான பாடத்தில் அலகு 5 தெரிவுசெய்யப்பட்டு அவற்றில் ஐந்து பாடக்குறிப்புகள் தயாரிக்கப்பட்டன. இப்பாடங்கள் இணைந்து கற்றல் செயற்பாட்டு முறைகளில் ஒன்றான STAD(Student Team Achievement Division) முறையில் கற்பிக்கப்பட்டன. இதன்போது சேகரிக்கப்பட்ட தரவுகள் அளவறி, பண்பறி (Quantitative and Qualitative) முறைகள் மூலம் பகுப்பாய்வு செய்யப்பட்டன.

குழு வேலைகளில் பங்கெடுத்தல், ஏனையவர்களுடன் கருத்துகளைப் பரிமாறல், தமது அபிப்பிராயங்களை வெளிப்படுத்தல், ஏனையவர்களின் கருத்துகளுக்கு மதிப்பளித்தல் ஆகிய பண்புகள் விருத்தி அடைந்திருப்பது வெளிப்படுத்தப்பட்டிருந்தது. நேர்காணலில் பெறப்பட்ட தரவுகள் மாணவர்கள் இணைந்து கற்றல் செயற்பாட்டினூடே கற்க அதிக ஆர்வத்தையும், விருப்பையும் வெளிப்படுத்துவதையும், இம்முறையை ஆசிரியர்களும் விருப்புடன் ஏற்றுக்கொள்வதையும் உறுதிசெய்கின்றது. இம்முடிவு பென்லி, வாற்ஸ்(1992) என்பவரின் கூற்றுடன் உடன்படுகிறது. இவரின் கூற்றானது பின்வருமாறு அமைகிறது. இணைந்து கற்றல் செயற்பாட்டின் மூலம் மாணவர்கள் தமது கற்றலையும், பிறர் கற்றலையும் மேம்படுத்துவதுடன் குழுவாக இணைந்து வேலையாற்றுவதற்கான விருப்பு மனப்பாங்கையும் கொண்டிருக்கின்றனர். மேலும் இக்கற்றல் முறைமூலம் மாணவர்கள் தன்னம்பிக்கையுடன் கூடிய சௌகரியமான கற்றலை அனுபவிக்கின்றனர்.



படம் - 1: தரப்பட்ட பதார்த்தங்கள் வெப்பத்தைக் கடத்துகின்றனவா என சோதித்தறிகின்றனர்



படம் - 2: மகிழ்ச்சியுடன் கருத்துகளைப் பரிமாறுகின்றனர்

T.Sakeetharan  
SEAA Member

**School Based Teacher Development Program  
Conducted by SEAA member Mrs. B. Chamanthi ADE-ICT  
coordinator, Theldeniya Educational Zone**

The program was focused on "Developing basic ICT skills to enhance Teaching - Learning Process"



"விடிவை"

செட்டர்ஸின் விடிவை

உன் ஹோடல் சிஸ்டம் டீ

காணொலி உரைப்பை

கூடுதலான அபிவிருத்தி

தெரிசீ செய்து கொள்ளு

உருவம் மன உறுதியை

அதி அபிவிருத்தி அடி,

கை உலக உலக உலக,

கூடுதலான உலக உலக,

"விடிவை" மீது கவனம் ...?

சூப்பர் லைவ் லைவ்

SEAA Member



## Science education: Is Sri Lanka sabotaging its future?

Science focuses on meeting basic human needs by laying the necessary foundation in diverse fields such as agriculture, medicine, other chemical industries (e.g., polymer, glass, steel, electric, electronic, stationery etc.), and transportation. Hence, science understanding is an increasingly precious resource throughout the world. As science underpins the development of technology, we cannot expect the development of technology without science. Despite the recognised need for better science education, many students (and their parents) consider science irrelevant to their personal interests and goals and are unaware of how many jobs require this knowledge. Why do they believe this?

The numbers of students pursuing science post-schooling continue to decline internationally. Moreover, irrespective of the economic effects, the decline of interest in science is a serious matter for any society trying to raise the level of its scientific literacy, given that such literacy has so many applications in daily life.

Leading academics have warned that we will not have the technical workforce to compete in the global marketplace because nothing is being done to tackle a shortage of scientists. It is said that school science is often difficult and discouraging. It is true that science can be seen by many as a difficult subject. But it can also be an exciting subject. The number of students taking science in Year 11 and 12 in Australia has been falling steadily since 1976, and the proportion doing physics has almost halved. A similar type of situation has been experienced in other developed countries such as USA, UK, and Germany.

Some research has shown that the decline in science enrolments is related to many interrelated factors such as students' academic abilities, teaching methods, the absence of motivation to study science, and a lack of interest in science subjects. Currently research is conducted that aims to identify the barriers to undertaking science for secondary students. A number of perceived barriers have been raised surrounding issues of: the difficulty of the subject matter, deficiencies in quality teaching, lack of positive attitudes among students towards science, a notable absence of stories in the media that promote the benefits of science, and the limited perceived career opportunities available in science.

Thus, it is not suggested that every student should want to be a scientist, but we need to encourage our students (tomorrow's leaders) to at least consider the benefits of pursuing a science career. As such, many issues must be addressed, and can be addressed, to ensure science is advanced in this country. Preparing now can save us from repairing in the future.

**Dr. W. D. Chandrasena**  
 Science Education Unit  
 Faculty of Science  
 University of Peradeniya

## SEAA at Central Provincial Science Day -2015

The Central Province Science Day was held on 21<sup>st</sup> and 22<sup>nd</sup> of September 2015 at the Centre for Education Development, Research and Training (CEDRAT), Gurudeniya. Many events were conducted on these two days. The exhibition was the main event including an exhibition. An important contribution was done by the SEAA of University of Peradeniya during the Provincial Science day. They conducted a seminar for grade 11 students both in the Sinhala Medium and the Tamil Medium. The seminar was held on 22<sup>nd</sup> of September. 50 Sinhala Medium Students from Gurudeniya vidyalaya and 50 Tamil medium students from Kotmale Educational Zone participated for this seminar. The Seminar was conducted in Sinhala medium by Miss Ruchira and Mr. Sumithra Wickramasinghe. Mr.Saseetharan, Mrs. Fathima Shiraza Nazeem Mohamed and Mr. Kandiah Balasritharan conducted the seminar in tamil medium. The SEAA had prepared the question papers aiming the oncoming GCE (O/L) Examination and it was a valuable opportunity for the students who participated in the event. Mrs D. M.M.N. Dissanayake (Provincial Coordinator- Science), Mrs. I.A.D.V.R.Iddamalgoda ( Nuwaraeliya Zonal coordinator- Science) and Mrs K.K.G.N. Kariyawasam ( Kotmale zonal coordinator- Science) gave their support



Students taking their own notes



Teacher always back-up the student



A student engaging lively with the teaching learning process



Some of the students at the workshop



Is the



Powerful Weapon



World



- Nelson Mandela



Spoon feeding

in the

long run

teaches us

nothing

but the

shape of the

spoon

- E.M Forster  
(1879-1970)

**You.....?**

Once you are so lovely  
You bring me sweet smell  
You embrace me smoothly  
You make my soul heal

Once you become rude  
You make me misery  
You hurt me badly  
You reduce everything to ashes

I was confused  
How lovable is Science  
It softly explains me  
How you occur..... fast .... slow

So I never curse you  
I love to witness how you move  
And how you touch me and others  
Really no survival without you

You are indispensable  
The breeze.....The wind.....  
The gale.....The storm.....You are everything  
Science makes us nature lovers,  
And to tolerate you forever

R.M.N. Rajapaksha  
SEAA Member



**Why have you chosen this profession?**

Dearest Teachers...

Why have you chosen this profession? Definitely it's not the most reasonably paid occupation in the country. Is it because this was the only profession you could find in the competitive job market according to your academic performance or is it because of the three months holiday on full pay you are entitled to;

OR... is it really because you felt that you have a passionate heart to be dedicated and devoted to get equipped with skills and wisdom to guide the next generation of the mankind towards becoming the best they can be through a clear understanding about themselves and the world around them.

This is as serious as it sounds. Regardless of the reason you choose to be a teacher now you are given the most sensitive and serious task trusting you will fulfill it to your level best. Human capital as the most precious in today's world needs to be rich with true quality expected from human beings. Therefore, whether you are aware of it or not you are expected to play a major role in this mission of properly educating the next generation. Covering the syllabus within the allocated periods would be the least of your worries when thinking of the multiple roles you have to play as a teacher. The salary will never give the motivation which leads to the dedication expected from this profession. The driving force should be your passion and the self satisfaction you gain by becoming a real teacher. The moment you feel it, it will add a new meaning to your life and you will feel a continuous thirst to improve yourself as a better teacher.

When you walk in to a class you are given a set of mind seeds waiting to be grown. Though it's clearly not your decision to make what type of tree each seed should grow in to, you are the great big facilitator to make sure each of these mind seeds get the guidance, resources and the light of education to become creative enough to realize that it's their responsibility to grow in to the best possible tree in their unique way according to their potential.

It is your responsibility to teach them to understand the things around them, give them the skills and confidence to explore and inquire which will lead to discoveries and creations. Guide them to see themselves and try to understand others, the differences among themselves as well as everything within the world. Teach them to learn to respect the variety and see the beauty of this diversity. Let them be aware of the power of human capabilities but also make them realize how useless and dangerous it would be if it's not based on the emotional quality which humans should truly possess. Make them feel that education provides scaffolding for better living and that it's the art of understanding basically everything. However, teach them that it's not always written in books or taught by someone, in fact a whole lot of it is yet to be discovered by them in future, either by building upon the 'so far knowns' or challenging the 'already knowns'. Moreover, teach the way to look after themselves and others. Make them aware of threats which can weaken the human body or the threats that could poison the human minds. Teach them the importance of maintaining the physical and mental health. At the same time teach them that we are worth nothing unless we are a part of the nature. Make them realize a life will not be worth living even if we somehow become technologically capable of living without the greenery, natural resources or the big small creatures around us.

Most importantly, teach them that they should take the responsibility of their lives to know their destination and to determine even with all the uncertainty in life to keep on trying to have a goal to end up in a place where they can turn back one day and be proud about the way they have used the gift of the humanity they have.

This is just a bit of a long list you have to do... Please take this seriously as you can't afford to make mistakes when the future of mankind is in your hands.. Start the change from your classroom.. So dearest teachers, are you ready to try your best to facilitate to cultivate better human beings????

Poornima Wanniarachchi  
SEAA member



SCIENCE EDUCATION ALUMNI ASSOCIATION (SEAA)  
POSTGRADUATE INSTITUTE OF SCIENCE, UNIVERSITY OF PERADENIYA,

**APPLICATION FOR MEMBERSHIP**

- Name:Rev./Prof./Dr./Mr./Mrs./Miss.....**  
.....
- Male ..... Female .....**      **Date of Birth: .....Year/.....Month/.....Date**  
  
**NIC No:.....**
- Designation: .....**  
**Department: .....**  
**Place of Work: .....**  
**Address: .....**  
.....  
**Telephone: ..... Fax:..... Email: .....**
- Residential Address: .....**  
.....  
**Telephone: ..... Fax:..... Email: .....**
- Academic / Professional Qualifications. (Strike off what is not relevant).**

Year	Diploma/M.Sc/M.Phil/ Ph.D.	University	Field (Science/Maths)	Registration No if applicable

I solemnly declare that the information given above is true and correct to the best of my knowledge.

Date:.....

.....  
**Signature of Applicant**

(For office use only)

**Proposed by: .....**

**Seconded by: .....**

**Signature:.....**

**Signature:.....**

**Year of joining: .....**

**Membership No:**

**Life Member**     **Ordinary Member**     **Associate Member**     **Honorary Member**