Session Code P21

Presenter(s):	1.Lim Yen Peng Linda
	2.Tan Mei San
School:	Chongzheng Primary School
Title:	Using Flipped Classroom Approach in the Teaching of Light and Heat to Increase the Depth of Learning in Science
Subject Area:	Science & ITC

Synopsis: This mixed methodology study comprising both causal and qualitative research was conducted in 2015. The post-test between-group causal research investigated the effectiveness of the flipped classroom approach in increasing the Science results of the Primary 4 middle-progress and high-progress pupils while the qualitative research examined the pupils' experiences with the flipped classroom approach. The intervention for the causal research consisted of a series of ten one-hour lessons that spread over a period of 10 weeks. The subjects in this study were 154 Primary 4 middle-progress and high-progress pupils. There were 77 high-progress and middle-progress pupils in the experimental group and 77 high-progress and middle-progress pupils in the control group. The quantitative data for this study was collected through post-test while the qualitative data was collected via focus group discussions. The effect of the flipped classroom approach was measured by comparing the combined Light and Heat post-test scores of the control and experimental groups. The pupils' experiences with the flipped classroom approach were derived from the data of the four focus group discussions.

Session Code P22

Presenter(s):	1. Lee Swee Choo Joanne
	2. Evelyn Ng
	3. Natdia Faranaz Bte Shokat
	4. Nazli Bte Adnan
School:	Loyang Primary School
Title:	Comprehension Strategies in a P2 class-Think Aloud, Annotation by Drawing and CUB
Subject Area:	English Language

Synopsis: The research seeks to find out the efficacy of using 3 learners' strategies, namely Think Aloud, Annotation by drawing and CUB in comprehending texts in a P2 class. A pre-test is given, followed by 4 teacher-prepared passages that are in line with STELLAR units. Teachers model the various strategies before pupils practice collaboratively and finally complete the answers on their own. A post-test is given at the end of the intervention and both qualitative and quantitative analyses are made. In addition, there is a further analysis of specific errors that pupils make in comprehending texts.

Session Code P23

Presenter(s):	Poh-Lim Shir Pei
School:	Ngee Ann Primary School
Title:	An Action Research Study on Using Elegant Task Approach for Primary One Students to Learn Art
Subject Area:	Arts

Synopsis: This action research explored the use of Elegant Task approach for thirty primary one students who were seven year-old from a neighbourhood Primary School to learn Art.
Elegant Task approach is a student-centered Art pedagogy in which students learn about a technique/skill/concept through the experience of solving an open-ended task. The concept of Elegant Task originated from Sandra Kay (1998) who defined it as an open-ended problem which will elicit 'creative thoughts' and 'elegant' or 'aesthetically meaningful' solutions from the students.
Students learn both thinking strategies and domain knowledge when this approach is used to frame the lesson. The teacher will present an authentic and meaningful task to the students, the students will then work with the materials in groups or individually to explore, experiment and discover for themselves the solutions to the task. Thus learning becomes more fun, active and engaging. In addition, this approach has also developed a strong sense of ownership and pride in the students as witnessed from their presentation of their artworks at the end of each elegant task topic.

Session Code P24

Presenter(s):   1.Xu Haiying
                 2. Eugene Chin
                 3. Wong Wenna
                 4. Toh Chiew Hoon
School: Poi Ching School
Title: Enhancing Students' Higher-Order Thinking   and Comprehension Skills Using
                 Bloom's Taxonomy
Subject Area: Chinese Language

Synopsis: A group of Primary 4 teachers from Poi Ching school embarked on a collaborative project which explored the use of Article structure/Mind map and customised comprehension package in their Chinese classes to enhance students' comprehension and higher-order thinking skills. The use of Article Structure/Mind Map enables students to have a better understanding of the passage which leads to a greater success on students' part when attempting the comprehension questions. The comprehension questions were designed in cognizant of Bloom's Taxonomy of Cognitive Learning. It was noted that there was an increased participation rate among the students when these effective strategies were applied in classroom teaching. Not only boosting students' confidence in attempting higher-order thinking questions, but also creating a student-centred classroom which encourages independent learning to take place.

The presenters will share details on the design and development of these strategies in enhancing students' learning. Participants will take away ideas of how they could adopt these strategies for their classroom teaching.

Session Code P25

Presenter(s):   1.Zahira Mohamed Sedik
                 2.Andy Ng Ding Xuan
School: St. Hilda's Primary School

Title: Enriching learning of gifted pupils through overseas collaboration, leveraging on
                 Information Communications Technology (ICT)

Subject Area: General

Synopsis: This research outlines the journey that we have taken in Gifted Education Department, St Hilda's Primary School (SHPS) in the implementation of our strategic project, entitled GLOBE. GLOBE stands for Global Learning Online beyond Borders Exchange. It is aimed at developing pupils in their capacity for enriched learning and cultural understanding, through overseas exchanges and collaborations. We leveraged on the boundless possibilities of ICT to enable a borderless learning environment by embarking on one-to-one computing, whereby each pupil used a personal device such as a tablet or a laptop, for this ubiquitous learning. A case study approach was adopted to find out the impact of such collaborations on the learning of pupils in the area of cross-cultural understanding. This was done in specific reference to one such overseas collaboration; collaboration between St Hilda's Primary School Grade 5 pupils and Waggrakine Primary School Grade 6 pupils. We approached the development of pupils' cultural understanding with two main pedagogical strands: collaborative learning (CoL) and self-directed learning (SDL) in a cross-cultural context, leveraging on ICT using the online platform of Edmodo.

Session Code S21

Presenter(s):	1.Lian Xue Li Jasmine 2. Koh Shu Hui Sharon 3. Siti Aisyah Mustapha
School:	Bedok View Secondary School
Title:	Deepening Students' Understanding in Biology Using Learning Study
Subject Area:	Biology

Synopsis: The research project focused on using learning study as a pedagogical tool to deepen students' understanding about the cardiac cycle. Learning study is a collaborative action research approach that enhances students' learning and inquiry. Teachers collaborated and created effective lessons using Variation Theory as the basis, which created awareness of how teachers help students construct their knowledge. Data collection was conducted through pre/post interview and pre/post quiz, which gave the team a better understanding of students' alternative conceptions and strategies to overcome them. Students participated in activities and discussions over 2 periods to construct their concept on blood flow in the heart and the workings of the valves.

Session Code S22

Presenter(s):	1. Phoa Chye Hou Desmond 2. Ji Yu
School:	Bedok View Secondary School
Title:	To enhance the learning of vocabulary by applying vocabulary in context
Subject Area:	Chinese Language

Synopsis: The teachers realize that the students have problem in using and applying vocabulary (through Survey and FGD with students). We decided to read up on ways students can learn vocabulary (Taba model etc). We designed a series of lesson to enhance the students' learning of vocabulary. Three areas of focus that help us to determine our area of focus are (a) to improve the students' communication skills, (b) to enhance the students' learning of vocabulary and (c) to create opportunity for the students to apply their learning.

Therefore our research's focus is to enhance the learning of vocabulary by applying vocabulary in context. Our lesson plans shall allow students to apply vocabulary in a given context and we will also incorporate collaborative learning strategies to enhance the effectiveness of acquiring vocabulary.

Session Code S23

Presenter(s):	1.Rossana Ros 2.Norhayati Hassan 3. Chong Wensheng
School:	Damai Secondary School
Title:	Enhancing students' critical thinking in SBQ through think-aloud approach.
Subject Area:	History/ Social Studies

Synopsis: Some of our students find Humanities a difficult subject to study as we move towards inquiry-based learning. For those who are dependent on notes or being spoon-fed, the new assessment mode proves to be a daunting task. They cannot regurgitate answers from the textbook especially for SBQ section features unseen sources that requires deep thinking. The students would now need to transfer their knowledge to a new domain which requires them to be equipped with the skills to interpret, analyse and evaluate historical sources.   Hence, students could no longer be passively listening to instructions but rather be actively engaged in discussion or dialogues with the teacher and peers in making meaning.

Session Code S24

Presenter(s):   1.Chiew Huey Ching
                   2.Syed Mustafakamal Alsagoff
School: Junyuan Secondary School
Title: Journaling as a tool enhances learning in PE lessons.
Subject Area: Physical Education

Synopsis: This Lesson Study-cum-Action Research project explores the use of journal writing as a tool to enhance students' learning in Physical Education lessons. The module chosen for the conduct of this study was Badminton. The journals provided a medium for students to reflect their understanding of the lesson through the option of recording down what they had learnt in words or drawings. Their reflections were based on questions in the journals which helped them to assess their learning and to surface difficulties they might face. There were also lesson-specific questions which focused more on the skills or concepts being taught during the lesson. Students' learning was assessed through their understanding of concepts which was captured through the journal and the execution of skills during lessons. Students were able to evaluate their own progress as well as identify ways in which they were able to improve.

Session Code S25

Presenter(s):   Teo Wee Seng
School: Loyang Secondary School
Title: Use of SOLO Taxonomy as a feedback tool to improve Students' Performance in
                   Design and Technology
Subject Area: Design and Technology

Synopsis: A common issue in teaching Design & Technology (D&T) is in getting students to respond well to teachers' feedback to improve the quality of content in their design journals. Without proper scaffolding, students often seem unsure how to conceptualise and develop ideas well, which is key to coming up with creative solutions within the design process. Previous research has shown how the use of SOLO taxonomy (Biggs, Collis & Edward, 2014) has been a useful strategy in helping students build up their understanding of concepts and ideas from basic to advanced levels.

This study seeks to find out if a teacher's feedback through the use of SOLO taxonomy has been helpful for students in coming up with ideas so as to improve their performance in the journal. The project was carried out across 5 weeks with a group of 9 students who are in a Secondary 3 express class. A rubric was designed to award marks for the different attainment standards within the 'idea conceptualisation' aspects of the D&T (7051) syllabus. Data on students' performance was captured before and after the implementation of the SOLO taxonomy, and was analysed through a one-tail paired sample t-Test.

Session Code S26

Presenter(s):   1.Lalitha d/o Ramasamy Mrs Gunasagaran
                    2.Mohamed Zain bin mohamed
                   3.Nur Ashikin Bte Sapri
                   4.Alena Bte Puhari
School: Tanjong Katong Girl's School
Title: To enhance students' skills in answering comprehension texts and questions using
                   effective reading strategies aided by graphical representation (infographics)
Subject Area: Malay and Tamil Language

Synopsis: Students often face difficulties in understanding and answering comprehension texts and questions. Within a given time-frame they have to accomplish the task of reading the text, understanding its contents and answering the questions. In-order to understand the contents and be able to answer the questions, they have to first understand the language of the text and the vocabulary used. Once they have mastered this step than only can they proceed on to answering the questions. Through lesson observations and studying students' performance in continual assessment and semestral examinations, the PLT team decided on using infographics as a teaching tool to "To enhance students' skills in answering comprehension texts and questions using effective reading strategies aided by graphical representation (infographics)".

Session Code S27

Presenter(s):   1.Wong Lai Ying
                  2.Janice Chua
                  3.Loh Sein Ling
School: Tanjong Katong Girl's School
Title: How Do We Know That Students Are Learning?
Subject Area: Character and Citizenship Education

Synopsis: TKGS plans LEGACY (Leading, Empowering, Guiding, Affirming and Challenging Youths) periods that integrated the teaching of character, values, cyberwellness, educational career guidance, sexuality and National Education. Between 2013 to 2014, we have made improvement and changes so that the rollout of MOE prepared curriculum is student-centric and values driven. Between 2014 and 2015, we focussed on infusing Assessment for Learning (AfL) in our lesson planning.

Our team of 8 teachers formed three groups to focus on tweaking a lesson in three respective levels. A consultant guided each of the three groups in the lesson planning and provided feedback after the lesson observations.

The following are our learning points and areas that we can work on for subsequent lessons:

•   Reduce the number of activities so that there is time to make students' learning visible. In so doing, AfL is infused and students learn to be critical thinkers who show empathy for others. This also allows for deep and meaningful learning of values.

•   Documentation of students' learning so that our teaching practices are evidence-based.

•   Model collaborative team teaching of LEGACY lessons.

Session Code JC21

Presenter(s):   Alan Joseph Varella
School: Temasek Junior College
Title: Use of the THINK Cycle© and 5 Es' Framework in Curriculum Design
Subject Area: Physics

Synopsis:

The curriculum design for the Integrated Programme for Temasek Junior College involves curriculum and pedagogical tools like UBD, Thinking skills, Think Cycle© approach and the 5 Es model. The THINK Cycle© is a novel problem-solving pedagogy which can be used for any subject at any level. It shifts the focus from content-based learning to ideas and content-creation, where students learn higher order skills and teamwork. The 5 E's model when incorporated with the THINK Cycle© framework will enable teachers to develop TLLM lesson plans that will enhance student inquiry, learning and engagement. Samples of worksheets created using the design for certain mechanics concepts will be given to participants.

Participants will be shown the results of the engagement surveys implemented before and after students at Sec 3 level were exposed to the lessons designed using the THINK package.