Nurturing The Reflective Practitioner

In Sights

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RGS PeRL Publication

RAFFLES GIRLS' SCHOOL

RGS PeRL
Centre for Pedagogical Research and Learning
Uncovering Wisdom Through Pedagogy

PeRL

Centre for Pedagogical Research and Learning

A school-based research centre, set up in January 2010, which seeks to engender a culture of informed practice by nurturing the reflective practitioner who constantly strives to refine his or her craft.

Ultimately, its goal is that the pupil – the purpose behind our practice – should learn better. With RGS as a test-bed for a host of pedagogical strategies and approaches aimed at high-ability Asian girls, PeRL wants to build an inclusive network of like-minded educators interested in theory and evidence-based educational practices, as well as cutting-edge programmes and innovative curricula.

Through our in-house publication**, INSIGHTS**, we share our research findings and evidence-backed pedagogical strategies and approaches with the larger educational fraternity. Similarly, we would like to invite educators from other educational institutions to share their pedagogical research and innovations in our subsequent issues of INSIGHTS.

Editorial Team

Lucille Yap
Masturah Binte Abdul Aziz
Jarina Peer

who collaborated in producing this publication

PRINCIPAL'S FOREWORD

Since its inception in 2010, RGS PeRL has grown from strength to strength, expanding its role within the school and the education fraternity. This year, to accurately reflect its increased responsibility in teacher professional development, it has adjusted its name to "Centre for Pedagogical Research and Learning", encapsulating its function in harnessing the energy of the Senior Teachers to enhance mentoring and professional learning within the school. Also through the on-going Academic Research carried out by the Teacher Specialists and Practitioner Inquiry by interested teachers, PeRL has continued to champion teacher professionalism, encouraging thoughtful reflections and research-backed recommendations from the teachers, and informing practice in the school.

A highlight of this year's work is the RGS PeRL Symposium that was held on 21 July 2014. This is an inaugural symposium aimed at bringing together like-minded teachers in the fraternity to share their action research and to learn from one another. A total of about 200 teachers attended the conference, while some fifty teachers from other schools took time off their teaching schedules to visit our –classrooms held in the morning. The latter, helmed by 16 RGS teachers, was well-received by other schools, the Ministry of Education and the media, as it was deemed by many as the way forward for practitioners to hone their craft through the "deprivatisation of the classroom".

We at RGS are therefore very excited to bring to you this second issue of Insights, which captures the heart of pedagogical research and innovations in our school. Teachers from the various departments have worked with the PeRL officers to explore effective teaching strategies, and these range from drama techniques and game-based activities to the flipped classroom model. To role model the way on reflective practice and review, PeRL Specialists have also conducted a case study on Teacher Readiness in embarking on Practitioner Inquiry. This is to ensure that RGS continues to create the right environment for teacher reflection, exploration and experimentation.

Moving forward, PeRL will play a critical role in supporting our school's second strategic thrust on "Staff and Students with a Strong Sense of Purpose in Serving Nation and Community". It will be instrumental in raising teacher professionalism among the teachers, not just within RGS, but also in the community, through sharing of research techniques and findings, and advocating open classrooms for professional critique. It will also venture into professional knowledge creation that will serve our teachers and students well. All these will contribute to the larger RGS mission to serve the nation and community.

Filiae Melioris Aevi

Mrs Poh Mun See
Principal

DIRECTOR'S FOREWORD

In this 2nd edition of Insights, we witness again the depth of inquiry and learning demonstrated by our teachers who embarked on school-based research.

Teacher effectiveness has been consistently shown to be the main determinant of student progress (Sanders & Horn, 1998). What contributes to this effectiveness is reflective practice, grounded on evidence-backed standards. As teachers reflect on what works in the classroom, we engage more deeply and responsibly in the learning environment we create for our students.

Our findings are always shared with the larger fraternity because as professionals, we want to be a part of the consensus on professional practice standards. Not only do we gain professional satisfaction from such sharing, but importantly, we learn from others in the field. My particular conviction is in nurturing an Asian discourse on pedagogy, sharing our educational innovations confidently as a school and nation, while critically querying Western classroom norms and practices and their application to our classroom.

My vision is that within RGS itself, we intuitively harness the knowledge of practice that our teachers generate. For instance, this year, our Head of Learning Resources and Technologies harnessed a teacher's Practitioner Inquiry project on Bring Your Own Device, to review RGS' 1:1 learning. If we do this collectively and consistently, we stand to scrutiny as a school that pulsates within a culture of informed practice.

On behalf of the PeRL editorial team, I applaud our teacher-contributors who have demonstrated clout, reflective thinking, pride and artistry in their craft: qualities we seek to develop in our girls.

Mrs Mary George Cheriyan
Director, Centre for Pedagogical Research and Learning

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A Case Study on Teachers' Readiness in Embarking on Practitioner Inquiry

(by PeRL Research Team: Ms Tan Yen Chuan, Ms Masturah Abdul Aziz and Dr Jarina Peer)

Abstract

This is a case study to investigate the factors influencing teachers' readiness in embarking on practitioner inquiry. The school in this study set up the Centre of Pedagogical Research and Learning to support the teachers through an in-house research ecosystem and to cultivate a culture of informed practice.

To examine how teachers are responding to this ecosystem, focus group interviews and one-to-one interviews were conducted with teachers who were involved in practitioner inquiry. A Needs Analysis on Teacher Readiness in Practitioner Inquiry was used as supporting evidence. The data sheds light on the benefits and challenges faced within this ecosystem, enabling further refinements to it.

This study emphasizes the value of reflective practice for enhanced student learning.

Introduction

The purpose of this study is to develop an understanding of the factors that influence teachers' readiness in embarking on practitioner inquiry by investigating the motivations, benefits, challenges faced by them and the support system in place.

The school in this study is an independent secondary school in Singapore for high ability learners. To meet the needs of high ability students, the school seeks to ensure that the professional standards and pedagogies are evidence-backed, enhancing the credibility of the teaching standards.

Thus, this school set up the Centre of Pedagogical Research and Learning (PeRL) in 2010 to promote inquiry as a stance that is integrated in the teaching environment; and improving teaching and learning by analyzing the data collected within the classrooms (PeRL, 2012).

Practitioner inquiry is defined as systematic, intentional study of one's own professional practice in their own school and classroom work in an attempt to improve teaching and student learning (Cochran-Smith & Lytle, 1993; Dana, 1999; Hubbard, Shagoury, & Power, 2003)

In the past, the teachers' role was compared to a technician where they simply implemented the research findings of academic experts, who were unfamiliar to the happenings in classrooms (Shulman, 1986). Thus the improvement in teaching and learning process of teachers was limited.

Nowadays, it is widely acknowledged that teachers are the best researchers of their own classrooms because they are the ones who understand their pupils and the classroom activities taking place there and this will promote teacher learning (Davis & Krajcik, 2005; Hargreaves, 2003; McNiff, 2013; Stenhouse, 1975). This will help develop a sense of ownership in the construction of new knowledge for real and meaningful change to take place in the classroom (Nancy Fichtman Dana, 2001).

The above literature shows evidence of teacher learning due to practitioner inquiry. However, there are also various factors that play a part in the building of the culture.

The ability to do research has traditionally not been a core competency of an effective classroom teacher while the experienced ones often have sufficient tacit knowledge to be able to reflect and improve their pedagogy without research. Teachers may also not have the necessary research knowledge.

Hence, for the school to work towards realizing the vision of establishing a robust research culture that strengthens the theory-practice nexus for effective teaching and meaningful learning, the Centre provides support

such as the research protocols. It is now timely to examine the factors that influence teacher readiness in embarking on a practitioner inquiry.

Based on extensive literature review, the following research questions guide the inquiry:

The overarching research question is "What are the factors that influence teacher readiness in embarking on practitioner inquiry?"

The research questions guiding this study are as below:

1) What are the motivations, benefits and challenges faced by teachers on embarking on practitioner inquiry?

2) What are the infrastructure and system in place to support a culture of informed practice?

Method

The methodology used in this research is the case study approach. Data was collected through focus group discussions, interviews and document analysis to provide an in-depth understanding of the factors influencing teachers' readiness in embarking on practitioner inquiry.

The document analysis was conducted using the school's learning and development policy, the PeRL's research policy handbook and needs analysis survey. Next, 3 separate focus group discussions were held, after which, 2 one-to-one interviews were conducted to explore in-depth perceptions of practitioner inquiry. The participants were teachers who have embarked on practitioner inquiry. 20 teachers were invited to participate in the study voluntarily. There were four participants in each focus group discussion.

Finally, the needs analysis survey was used to triangulate the data analyzed in this study. The needs analysis survey was conducted to understand the teachers' interest level in practitioner inquiry and their needs for relevant research skills training.

Miles and Huberman's Framework guided the thematic analysis process (Miles & Huberman, 1994). In this study, the coding framework was created based on the factors that were investigated (motivations; benefits; challenges; support). The emergent themes came to represent the factors that influenced teachers' readiness in embarking on practitioner inquiry.

Results

The results indicated that the PeRL Research Office is essential in facilitating research initiatives, providing strategic and operational support, maintaining a full and accurate record of research activities and development, as well as administering research compliance and overseeing the dissemination of the research. The Research Office also provides professional development in terms of research skills and competency. The teachers have more platforms to share their findings and research experiences, so that valuable learning is widely disseminated.

Discussion

One major factor that influences teacher readiness in embarking on practitioner inquiry is to have a shared vision that practitioner inquiry is a viable solution to improve teaching and learning. Three themes are derived: a) **Middle Management Support**; b) **Infrastructure** and c) **Teachers' perception of practitioner inquiry**.

a) Middle Management Support

The middle management (such as the departments heads, subject heads, senior teachers, reporting officers) should undertake the role of instructional leadership to drive practitioner inquiry as a school-wide approach such that it becomes a collective responsibility. The needs analysis data also supports this notion, as 15% of the teachers who indicated interest in embarking on a practitioner inquiry mentioned they would like to consult their superiors before deciding to embark on a practitioner inquiry, which highlights the importance of the role that the middle management plays. Practitioner inquiry has to be acknowledged as a contribution to the school.

b) Infrastructure

A research framework is necessary to develop practitioner inquiry in the school, such as equipping teachers with the required skills, and also providing different tiers of practitioner inquiry, which is compatible to teachers' level of readiness.

Teachers conducting practitioner inquiry were able to approach the school's research personnel to attend needs-based training sessions on research. The school's research advisors act as a bridge between teachers embarking on practitioner inquiry and the Heads.

A feasible research timeline is two years.

c) Teachers' perception of practitioner inquiry

Some teachers may have an inherent interest or aptitude in conducting practitioner inquiry while others perceived practitioner inquiry as a platform to attain achievements in their professional and career development as teachers are able to learn and experience new things, which in turns improves teaching and learning. Teachers' perception towards practitioner inquiry is a very important factor influencing teacher's readiness in embarking on practitioner inquiry.

The results show that the school's senior management values practitioner inquiry and ensures that necessary infrastructure is in place to support a culture of informed practice. Data also shows that the middle management support is necessary to build a culture of practitioner inquiry in a school. More recognition and support are needed from the school middle management to influence teachers' perception that practitioner inquiry contributes to teaching and learning.

Data shows that the three key reasons why teachers would embark on a practitioner inquiry is to a) improve teaching and learning, b) to advance their professional development and/or c) to pursue their own personal interest.

Teachers will be more willing to consider doing practitioner inquiry or follow up on their practitioner inquiry if they enjoy colleagues' support and participation.

Teachers believe that practitioner inquiry allows them to achieve greater confidence in teaching. When findings from the practitioner inquiry can be directly harnessed to improve students' learning, teachers are motivated to want to make curriculum changes across their departments or on a school-wide level, closing the loop of educational change.

Barriers include teachers having to cope with the heavy workload and administrative work. This will impact teachers' capacity and willingness to reflect constructively on their practice. Teachers often have sufficient tacit knowledge to be able to reflect and improve their pedagogy without research; hence they might not have sufficient intrinsic motivation to embark on a practitioner inquiry.

Recommendations

Based on the findings which informed the areas of improvement of the school practice, it is recommended that the school management articulates this shared vision of promoting a culture of practitioner inquiry for knowledge creation and sharing in a world-class institution in the school's new strategic map from 2014 onwards.

The study also recommended a revision to the research office's protocol. Any teacher, who wants to embark on practitioner inquiry, should inform the Head of Department (i.e. his /her reporting officer) so that: (a) their effort could be supported and acknowledged; (b) the Head of Department could ensure the application of the findings, if relevant and (c) the practitioner inquiry would become a collective effort of the department to address the identified gaps.

Another recommendation would be to improvise the current research structure to provide the teachers the necessary scaffolding and differentiation based on their research competency and readiness. Based on feedback, the role of a research advisor should be more streamlined so that more guidance is given to the classroom practitioner. Professional learning space should also be introduced to create the time needed for reflection.

Conclusion

In conclusion, the recommendations proposed attempts to address the barriers and challenges found in the data analysis. It is hoped that this shared vision and the new initiatives will eventually shape an enduring positive perception of the teachers that boosts teachers' readiness in embarking on practitioner inquiry. In the long run, it is also hoped that the initiatives will contribute to the development of a robust professional learning community that promotes evidence-backed pedagogies and curriculum innovations and shapes educational policies.

Benefits/ Reflection

This study is distinctive as it is the first such study in Singapore. The findings of this study has informed the school management on how to shape the professional development structure in this school, plan strategies to increase teacher involvement in practitioner inquiry and provide teachers with the relevant skills and knowledge required to carry out practitioner inquiry. The school has embraced a strategic objective, "staff and students with a strong sense of purpose in serving nation and community", in the new strategic map for 2014 to 2018. This strategic objective emphasizes the importance of serving the educational fraternity through knowledge creation and sharing.

The revised research office's protocol would allow for greater efficiency and effectiveness in addressing the concerns of the discipline as the Head of Department, who has an oversight of the research projects and their related findings, could lead the way in effecting the change.

There are two tiers in the research structure, namely "practitioner inquiry" and "academic research". Research advisors are now deployed to teachers embarking on practitioner inquiry to provide guidance. Teachers will also be allowed to conduct an academic research, instead of a practitioner inquiry, depending on their level of readiness.

Implementation of the recommendations has led to the formation of a Professional Learning Community. The culture of practitioner inquiry in the school should be re-visited to track improvements. Hence, a further study on Professional Learning Community may shed some findings on the feasibility, viability and sustainability of it.

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Teacher Belief and Effective Use of Technology in Teaching and Learning

(by Mr Alvin Tan, Assistant Head, Learning Technologies, Humanities Department and Dr Jarina Peer, Head, Research, PeRL)

Abstract

Schools have heavily invested in ICT, thus necessitating practitioner confidence and proficiency in using technology in the classroom. ICT use in schools ultimately aims to increase the effectiveness of teaching and thus improve students' learning. As the teacher plays a primary role in implementing ICT, teachers' beliefs towards technology use and gaps (if any) with their extent of ICT use should be examined. This study used a mixed method research approach with a sample size of 90 teachers and three forms of data collection: questionnaire, document analysis and open-ended reflection. The results of the research show that the teachers lack awareness of the different ICT tools, their affordances and their use for various instructional strategies that enhance teaching and learning. The results also show the lack of peer leadership in planning and implementing ICT use. Following the analysis of the results, this study will also present some recommendations.

Introduction

Technology integration in schools continues to gain importance, suggesting the need for teachers to develop higher levels of confidence and proficiency in using technology in their classrooms (Kay, 2006). Singapore's education system has heavily invested in information and communications technology (ICT) for use by teachers and pupils to increase the effectiveness of teaching and thus improve students' learning. The Ministry of Education (MOE) has introduced many initiatives since 1997. This study investigates

- Teachers' beliefs towards their personal lives, in the classroom and their capability and context beliefs towards ICT.
- The association between teachers' personal and professional ICT use and their competencies, confidence and beliefs
- The impact of teachers' competencies, confidence and beliefs on ICT integration with pedagogy and use for teaching and learning

Given that the teacher plays a primary role in implementing RGS 1:1, teacher beliefs towards technology use need to be ascertained, along with the gap (if any) between teacher belief and the extent of use of ICT.

Research question

How do the teachers' beliefs of technology affect how they use it for teaching and learning?

Guiding Research Question(s)

1. What are teacher beliefs towards ICT in their personal lives and in the classrooms?
2. What are our teachers' capability beliefs and context beliefs towards ICT?

Method

This study employed a mixed methods research approach with three forms of data collection: questionnaire, document analysis and teacher reflection. The study had a sample size of 90 teachers.

The questionnaire comprised 4 sections: a) the learning environment, b) the use of ICT tools for teaching and learning, c) the competencies, confidence and beliefs of teachers integrating ICT with pedagogy and d) the personal usage of ICT. The documents analyzed in this study are the school By(i)tes report (2013 and 2012) and the RGS 1:1 concept paper.

The other source of data came from the 'Teachers' reflection: use of ICT to enable differentiation. This data emerges from departmental discussions on three aspects of ICT use:

- What have you done well in terms of ICT use as a department/subject this year?
- What are the areas you think you can improve on in ICT use?
- What steps can you take to enable more effective use of ICT in terms of enabling differentiation?

The various departments/ subjects provided 21 responses. Data from the document analysis and teacher reflection were used to triangulate the data analysed and obtained from the questionnaire to develop a holistic picture of the research topic.

Results

Teachers' ICT Use in the classrooms

The purpose of using ICT tools and the use of different tools was analysed and the results are shown below.

Table 1: Purpose of using of ICT tools

Purpose	Collaborative Learning	Self Directed Learning	Critical thinking	Creative thinking	Problem solving	Communication	Research
Mean no of teachers	39.36	25.82	20.09	14.45	15.00	38.09	19.09
% of respondents	**43.74**	28.69	22.32	16.06	16.67	**42.32**	21.21

The most common function of ICT usage is for collaborative learning and communication. However, the percentage of respondents who use ICT tools for any of these purposes remains below 50%. This data points to significant opportunities to increase purposive use of ICT in teaching and learning, matching with the department-based teacher reflections.

The analysis also shows that teachers use collaborative tools, presentation tools and social media tools most frequently. The teacher reflections similarly show that the various departments have been using ICT tools for

'group discussions and immediate feedback', 'asynchronous collaboration', 'assessment of/for learning' and for 'peer assessment'.

However, the infrequent use of other tools reflects that though teachers perceive various benefits in using ICT for teaching and learning, they require greater exposure to the tools and their affordances. The teachers' reflections support this finding, as some mentioned that they needed:

- 'To know which tool to use for which teaching strategy';
- 'To learn and discover more effective ICT tools'; and
- 'More training or sharing of different ICT platforms'.

The research also reflects a low usage of creative tools (15.87%). The school adopted the Mac in part for the ease of use of its built-in creative tools (iLife suite). The low usage suggests several causes: Lack of familiarity with the tools; Lack of time to plan and execute such lessons; Lack of clarity, confidence, or time to integrate such tasks into existing practice; and Low context and capability beliefs.

Teachers' ICT Use in their personal lives

The data from Section D related to the use of ICT for personal use showed that all respondents own a laptop and / or smartphone, and above 90% of the teachers surveyed used ICT for personal communication (95.6%) and search (91.1%). More than 70% of respondents also used ICT for leisure (83.3%), references (78.9%), entertainment (73.3%), personal productivity (72.2%) and navigation (70%).

Teachers' capability and context beliefs

The combination of context and capability beliefs result in personal agency belief (PAB) patterns (Ford, 1992), patterns which form the basis for people's level of motivation toward goal attainment (Figure 1). Each PAB pattern results in a different motivation characteristic. The most effectively functioning people exhibit robust, tenacious, and modest patterns (Barden and Ford, 1991). Less functional patterns include accepting, antagonistic, and vulnerable patterns, while people who struggle with effective functioning often display fragile, discouraging, and self-doubting patterns.

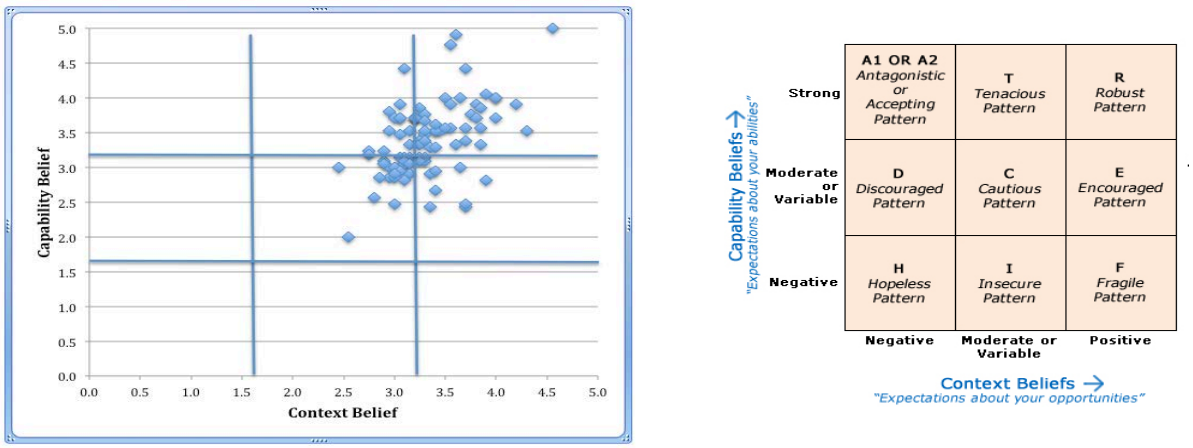

Figure 1: Scatter graph of capability beliefs vs context beliefs

The research data shows that many of the respondents displayed robust, tenacious or encouraged PAB patterns. The PAB patterns of the sample provide an assessment of the teachers under study and supports the necessity of professional development focusing on teachers' variable context beliefs.

Discussion and Conclusions

The findings show that the teachers in this study understand the importance of learning ICT skills and using them in teaching and learning. However, they use a limited range of ICT tools due to a lack of awareness of different ICT tools and their affordances. The findings also show a need for hands-on exposure to such tools and their affordances, as well as lesson exemplars to demonstration their application in the classroom.

The finding also indicates teachers' need for exemplars of instructional strategies using ICT, in particular strategies enabling differentiation, to effectively integrate instructional strategies and the affordances of the ICT tools. The third major finding relates to a lack of peer leadership in planning and usage of ICT. Peer leadership requires collaborative cultures where teachers can be involved in professional activities.

By focusing on the findings and providing the necessary professional development will enable to increase the capability and context beliefs of the teachers and thus result in better use of ICT for teaching and learning.

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Meningkatkan Keberkesanan Kembara Ilmu Berpandukan Pembelajaran Berasaskan Pengalaman '*Experiential Learning*'

(by Ms Nuraini A. Gapor, Ms Safiah Ani, Ms Norliza A. Hamid, Teachers, Malay Language, Mother Tongue Department)

Abstract

Program Kembara Ilmu dilaksanakan untuk pelajar-pelajar Bahasa Melayu Lanjutan berasaskan "Experiential Learning" dan Mesej Pendidikan Nasional. Fokus program ini ialah pembelajaran dan pengalaman melangkaui bilik darjah namun masih berteraskan kurikulum yang dilakarkan. Pelajar-pelajar dibawa berkunjung ke tempat-tempat warisan sejarah dan budaya Melayu di Singapura. Perkongsian ini melaporkan dapatan kajian kualitatif yang bertujuan menyelidik keberkesanan program-program yang dikendalikan berdasarkan hasil penulisan dan renungan pelajar. Kajian ini meneliti kemampuan program melibatkan pembelajaran yang aktif dalam suasana yang autentik lantas membantu pelajar membina jalinan yang mendalam dan bermakna. Kajian ini turut meneliti keupayaan pelajar mengaplikasikan pengalaman mereka dengan pengetahuan dan kemahiran yang diraih daripada kurikulum.

Introduction

Program Kembara Ilmu RGS dijalankan dengan matlamat meningkatkan kesedaran pelajar terhadap kepentingan tempat-tempat warisan dan kepentingan mengekalkan dan memuliharanya. Daripada pemerhatian rambang para guru pada tahun-tahun yang lalu, para pelajar memaparkan rasa seronok dan minat terhadap tempat-tempat yang dilawati. Setiap tugasan yang berkaitan dan maklum balas membuktikan peningkatan pengetahuan dan pemahaman. Namun, tahap kesedaran dan pengetahuan tidak dapat dibuktikan sepenuhnya. Ada sesetengah pelajar yang bersikap agak pasif terutama bagi lawatan yang disediakan pemandu lawatan. Tujuan kajian ini adalah menyelidik keberkesanan program Kembara Ilmu berpandukan Pembelajaran berasaskan Pengalaman. Menurut Dewey (1944), semua pengetahuan bermula dari pengalaman. Lantaran itu, Pembelajaran berasaskan Pengalaman merujuk kepada pembelajaran melalui pengalaman, tindakan, aktiviti, penemuan dan penerokaan. Pelaksanaan Pembelajaran berasaskan Pengalaman ini membantu perancangan yang lebih teliti agar melibatkan pembelajaran yang aktif dan membantu pelajar membina jalinan yang mendalam dan bermakna.

Method

Pelajar-pelajar Bahasa Melayu Lanjutan dari tahun 1, 3 dan 4 menjadi subjek kajian. Pelajar tahun 1 dibawa ke Makam Radin Mas dan Mt Faber. Fokus pembelajaran ialah kaitan tokoh-tokoh legenda Melayu dengan tempat-tempat warisan ini. Pelajar tahun 3 dibawa ke Kampung Glam sementara pelajar tahun 4 ke Geylang Serai untuk melihat kepentingan kawasan-kawasan ini dahulu, kini, dan masa depan. Kitaran Pembelajaran berasaskan Pengalaman (*Experiential Learning Cycle*) dijadikan panduan bagi aktiviti dan pembentukan instrumen kajian. Instrumen kajian terdiri daripada tinjauan pra-lawatan dan pasca-lawatan dalam bentuk soal-selidik, pembentangan hasil kajian secara berkumpulan, jurnal bergambar dan karangan untuk meninjau pengaplikasian ilmu yang diraih ke dalam aspek kemahiran yang dipelajari di dalam kurikulum. Karangan naratif (tahun 1), e-mel (tahun 3), dan perbincangan (tahun 4) dijadikan instrumen kajian. Kesemua data yang dikumpulkan dibahagikan kepada tiga aspek utama iaitu Pengetahuan, Tanggapan dan Perasaan. Untuk menganalisis aspek-aspek ini seberapa yang boleh digunakan Taksonomi Bloom (2001) sebagai panduan untuk menentukan ketinggian tahap pengetahuan dan pemikiran pelajar juga kedalaman pemahaman terhadap apa yang dialami dan dipelajari.

Results & Discussion

Dari aspek pengetahuan, tinjauan pra-lawatan menunjukkan bahawa tahap pengetahuan pelajar terhadap tempat yang akan dilawati amat rendah. Ada pelajar yang langsung tidak mempunyai sebarang pengetahuan, tidak pasti tentang maklumat, atau mempunyai sedikit maklumat namun ada yang tidak tepat. Jika pengetahuan mereka tepat sekalipun, maklumat yang diberikan bersifat umum dan tidak mendalam serta terperinci. Merujuk kepada Taksonomi Bloom (2001), pengetahuan pelajar hanya pada tahap Mengetahui dan Memahami. Data-data pasca-lawatan membuktikan peningkatan yang amat ketara. Berpandukan Taksonomi Bloom, peningkatan pengetahuan lebih mendalam apabila pelajar dapat Mengingat, Memahami, Menganalisis, malah dapat Menilai maklumat yang diraih.

Daripada tinjauan pra-lawatan aspek tanggapan, didapati bahawa pandangan pelajar-pelajar tahun 1 dan 3 bersifat umum dan dangkal. Berbeza daripada pelajar-pelajar tahun 1 dan 3, tanggapan pelajar-pelajar tahun 4 lebih luas dan mendalam. Data-data pasca lawatan menggambarkan perkembangan tanggapan pelajar daripada setiap peringkat. Setiap tanggapan lebih mendalam, lebih kukuh, lebih kritis dengan tahap pemikiran yang lebih tinggi khususnya di peringkat tahun 4, dan lebih bermakna. Mesej Pendidikan Nasional berjaya difahami dan dipaparkan dalam pelbagai dokumen. Respons pelajar membuktikan kepentingan tempat-tempat warisan ini dikekalkan dan dipulihara demi generasi akan datang. Pada masa yang sama, mereka turut menyatakan pentingnya peranan generasi muda untuk menyumbang kepada pemuliharaan ini.

Dari aspek perasaan pula, sebelum lawatan, pelajar-pelajar dari semua peringkat hanya menyatakan rasa gembira, seronok, berminat, dan teruja kerana dapat belajar di luar sekolah, dapat bersama rakan-rakan, dapat mempelajari sesuatu yang baharu. Kesemua pelajar tahun 1 dan 3 memberikan respons yang positif berbeza daripada pelajar tahun 4. Terdapat pelajar yang memberikan respons kurang positif dan neutral. Dapatan pasca-lawatan memaparkan gambaran perasaan yang keseluruhannya positif. Pelajar malah melahirkan perasaan yang lebih bermakna berdasarkan pemahaman dan kesedaran yang lebih mendalam. Perkataan-perkataan perasaan yang digunakan ialah gembira, seronok, teruja, bersyukur, bertuah, kagum, bangga, menghargai, sedih, simpati, prihatin dan bimbang contohnya perasaan bimbang akan kelunturan budaya dan pencemaran kawasan Kampung Glam.

Conclusion

Penerapan Pembelajaran berasaskan Pengalaman menjadikan Kembara Ilmu ini lebih bersifat holistik dengan menyentuh proses mengalami, merenung, berfikir, dan bertindak. Para pelajar dilibatkan secara aktif dari segi intelek, emosi, sosial, dan fizikal. Lantaran itu, ketiga-tiga aspek Pengetahuan, Tanggapan dan Perasaan dapat dijana daripada hasil penulisan dan pernyataan pelajar. Dapatan kajian telah membuktikan keberkesanan Kembara Ilmu berpandukan EL. Bukan sahaja pengetahuan pelajar ditingkatkan malah diperluas dan diperdalam. Berpandukan Taksonomi Bloom, pengetahuan dan daya fikir dari aras Mengetahui hingga ke aras Menilai telah ditunjukkan. Kembara Ilmu ini juga menjadi lebih bermakna kerana relevan kepada pelajar sebagai seorang Melayu, pengamal budaya Melayu, atau pelajar Bahasa Melayu. Yang utama, pelajar menunjukkan rasa cinta dan bangga kepada sejarah dan budaya Melayu dengan ketara sekali. Tujuan kajian yang kedua iaitu pengaplikasian hasil Kembara Ilmu dalam kurikulum Bahasa Melayu Lanjutan boleh dikatakan dapat dicapai. Karangan yang ditulis membuktikan bahawa pelajar dapat mengaplikasikan ilmu pengetahuan yang diraih serta mengolah tanggapan dan perasaan mereka ke dalam tulisan.

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Impact of Assessing Digital Writing on the Performance of High-Ability Students

(by Ms Jassie Lim Kia Yin, Senior Teacher and Ms Hasanah Alfie, Teacher, English Language Department)

Abstract

This case study aims to find out if the use of technology aids in improving the writing proficiency of high-ability students with varied language learning needs. It investigates the performance of 47 Grade 9 students in a blog writing task vis-à-vis their performance in a biography writing task and an exposition writing task. The results of this study will be useful to practitioners and teacher educators who intend to see the benefits of including technology in their language lessons.

Introduction

Digital writing, unlike traditional writing, which is passive and solitary, facilitates interaction between reader, writer and the medium (Ferris, 2002). With the emergence of Web 2.0 communicative tools, there is a need for teachers to re-examine the way we have understood the construct of writing proficiency. The key research question of this study is that of how the assessment of digital writing impacts the performance of high-ability students in the following components: (i) Language use (ii) Craft[1] (iii) Metacognition and (iv) the Use of Visual Texts**.**

Methodology

This case study investigates the performance of 47 Grade 9 students in a blog writing task vis-à-vis their performance in a Grade 8 Biography writing task and an Exposition writing task in Grade 9. Firstly, the students were selected randomly based on their total scores for the Biography task, and categorised into three bands - low, middle and high. Next, their performance for subsequent writing tasks - Blog and Exposition - were tracked over a year for comparison purpose. In addition, focus group discussions involving both teachers and students were conducted to gather qualitative data on the Blog task.

Findings and discussion

Table 1. Language Use

	Biography	Blog	Exposition
Mean	79.47	79.26	79.26
Median	75.00	75.00	75.00
Mode	75.00	75.00	75.00
SD	12.12	9.50	12.39

Table 2. Craft

	Biography	Blog	Exposition
Mean	60.64	76.41	77.26
Median	58.33	75.00	75.00
Mode	50.00	75.00	75.00
SD	14.71	14.04	10.62

Table 3. Metacognition

	Biography	Blog	Exposition[2]
Mean	54.96	78.19	-
Median	50.00	75.00	-
Mode	42.00	75.00	-
SD	22.16	19.24	-

Table 4. Use of Visual

	Blog Total Score (With Visual)	Exposition Total Score
Mean	75.47	78.12
Median	76.39	78.57
Mode	61.11	71.43
SD	11.47	9.17

1. Language use

It is reasonable to assume that most students in this study have a firm grasp of language mechanics, and hence, the access to online spelling and grammar checks has a negligible effect on their language performance, where language accuracy is concerned. However, there is a significant difference in the standard deviation (Table 1), with a smaller spread of scores observed in the Blog task, compared to the Biography and Exposition tasks. Teachers in

[1] Understood in this study as the ability to select, organise and synthesise information

[2] The limited duration of 1hour 15minutes did not allow for the assessment of metacognition.

the focus group discussion suggested that while the simpler, more concise style of blog writing[3] may have helped students from the Low Band[4] to level up, the High Band students seemed to find the same style 'restrictive', and did not perform as expected. These observations have prompted the researchers to look beyond the assessment of language accuracy in digital writing tasks, to focus instead on the development of style and voice in students' writing.

2. Craft

It is unlikely that the use of the blog medium has contributed to the better performance in Craft in the Blog task when compared with the Biography task, since no significant difference was observed in the Craft scores when the Blog and Exposition tasks are compared; in fact, a wider SD is observed for the Blog task (Table 2). Students reported that they found it difficult to search for relevant information on the Internet and think that the Exposition task is 'fairer' since 'nobody has access to [external] resources'. The researchers recommend instruction that focuses on helping students make sense of the vast amount of information they encounter on the Internet. Ethics of online writing and academic integrity should also be included by providing clear instructions on how sources can be credited through the use of hyperlinks and reference lists.

3. Metacognition

Students' feedback reveal that their perception of an authentic audience, as well as the interactive nature of posting comments on an online platform, might have motivated them to be more cautious in checking the quality of the ideas in their posts, and to obtain better scores in the Blog task. While this strong social dimension has the potential to promote multiplicity of viewpoints, it can encourage predictability in response, as members of the online community parrot one another, in an attempt to maintain amicability. The researchers' recommendation is for a stretch of an online dialogue to be assessed, instead of a reflection journal entry. The assessment of the ebb and flow of a conversation would be more in accord with the interactivity that is inherent in social media platforms.

4. Use of visual texts

The mean and mode dropped significantly when the visual component of the Blog task is included in the comparison (Table 4). Students expressed their discomfort and frustration when using visual texts in their blog posts. Their dismal performance points to a lack of adequate instruction on the role played by visual texts in digital writing tasks. The researchers think that the teaching and assessing of digital writing will not be complete without the inclusion of a study of verbal text-image relationship, but due to the complexity of knowledge involved, it will be best to adopt a spiral approach for the details to be introduced with increasing complexity, over a few academic years.

Conclusion

This case study has shed light on how we should re-examine the way we have understood the construct of writing proficiency traditionally when teaching and assessing digital writing. We have seen how scores obtained for a digital writing task cannot be taken at face value because embedded within them are assumptions that we may have made about students' readiness for the writing task.

References

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[3] Digital writing is characterised by a concise style of writing that places a premium on simpler sentences and shorter paragraphs since the online reader, in general, has a much shorter attention span than the print reader.

[4] Typically in a writing task, students in the Low Band, with a weaker command of the language, present writing that lacks sophistication, and is characterised by a simple style, and it seems that in this case, the style of blog writing suits them.

Evaluation of Impact of RICE Programme 2014

(by Mr Azahar B. Mohamed Noor, Assistant Head, Internationalisation, Humanities Department)

Abstract

This report seeks to answer two questions: (i) whether the RICE programme's objectives have been met, and (ii) how can the programme be improved for 2015.

Introduction

The inaugural Regional Immersion and Community Exploration (RICE) Programme was implemented on 10-13 March 2014 involving all Y2 classes visiting 4 destinations: Malacca-Seremban (5 classes), Pahang (2 classes), Penang (4 classes) and Sarawak (2 classes). The Programme serves as a signature Learning Journey (LJ) activity for the Year 2 cohort and aims to achieve the following student outcomes:

- Outcome 1 Global Mindset: An RGS student who is aware of, and takes an interest in the region.
- Outcome 2 Socio-cultural Intelligence: An RGS student who develops appreciation, respect and sensitivity to people of different cultures.
- Outcome 3 Citizenship: An RGS student who feels a sense of rootedness to Singapore and a sense of belonging to the nation.
- Outcome 4 Personal Development: An RGS student who develops an understanding of (one)self and reflects on her role in a learning community.

Literature Review

RGS recognizes the educational value of overseas trips. The experience of travelling to a foreign land and interacting with people from that country provides each student and teacher with the opportunity to experience the diversity of other cultures and communities. The experience of travelling together as a group will also provide opportunities for students and teachers to develop better rapport with one another, thereby building a stronger learning community.

The Experiential Learning Cycle (ELC) has been adapted in the design of the learning framework for the Programme. The ELC is a process of making meaning from direct experience, placing importance on field experience iand reflection as central to learning. This may involve getting students to interact actively with their environment and making meaning as well as connecting their experience to larger ideas and concepts.

Method

Both quantitative and qualitative feedback was collected for RICE 2014. Quantitative feedback was collected from students through a survey adapted and modified from MOE's Trips for Internationalisation Experience Survey (TIE), see Table 1. Qualitative feedback was obtained through online open-ended survey responses collected from the accompanying teachers, a focus group discussion with selected students and a post-mortem discussion with members of the organising team.

Results

Using a scale of 1 (strongly disagree) to 4 (strongly agree), Table 1 below shows strong positive responses in all the key result areas, with Sarawak recording significantly higher scores than the other three destinations.

Results Area	Average Scores	Malacca	Pahang	Penang	Sarawak
Global Mindset	3.48	3.44	3.41	3.45	3.76
Socio-Cultural Intelligence	3.57	3.55	3.52	3.56	3.74
Citizenship	3.34	3.30	3.43	3.26	3.50
Personal Growth	3.46	3.46	3.43	3.45	3.57
Teachers' Facilitation	3.50	3.45	3.50	3.45	3.70

Table 1: Results from Student Survey

Other Feedback from Students and Teachers

1. The RICE Programme has helped build positive relationships between students and with their teachers. Phrases like “bonding”, “mix with classmates that (they) normally do not mix with”, “shared experiences and memories” featured frequently in the dialogue.
2. Feedback on the professional development was less unanimous - while the more experienced staff felt that there could have been less briefings and handouts, staff who have less experience with overseas excursions found these sessions useful.
3. The destinations and activities planned had offered rich learning experiences, with the kampong visits highlighted as being most impactful. Students were generally most engaged in hands-on activities and during interactions with the local community. However, language barrier limits real interactions.
4. The scheduling was tight, leading to a general feeling of being “rushed” through the experiences. This contributed to a certain degree of fatigue. A few students shared that they felt there was “insufficient closure” to their RICE experience upon their return.
5. Most students took great ownership of their journals. A teacher commented that “the overarching question for each day was broad enough to offer a wide scope to play with and rich enough for (her) to chew on.” Students felt that the sections for recording stories and sensory experiences (sight, sound, etc) were more useful than the daily sections. Suggestions were made for the journal to be less bulky.

Considerations for 2015

The RICE Programme can be said to have fulfilled its objectives of building class bonding and stronger teacher-student relationship. It has, in some ways, also contributed to the attainment of the student outcomes of “Global Mindset”, “Socio-cultural Intelligence”, “Citizenship” and “Personal Development”.

Given the above, it is recommended that the RICE Programme continue to be a signature programme for the Year 2 cohort. Nonetheless, the data and feedback from RICE 2014 will be useful in the planning for 2015. Key considerations will go towards reducing the number of activities and visits in a day to allow for more rest time and for students to engage in personal reflection.

The use of overarching conceptual framework has certainly made learning more explicit and helped students to articulate their observations. The reflection sessions were also essential to learning where reflective conversations took place in a more personal and collaborative setting. For 2015, these sessions can be increased to three. To enhance the programme’s “Citizenship” component, the last reflection session should help students to draw the link between their RICE journey and their own experiences in Singapore. Facilitation questions will be prepared to make this “Citizenship” component more explicit.

Changes to the travel journal will be made for it to be less bulky, less structured and to provide more space for note-taking. Two post-trip CLE lessons will also be set aside to allow students to reflect on their RICE journey, share the key learning points, reflect on their achievements and provide a proper “closure” to the students’ RICE experience.

Cooperative Learning as an Effective Learning Tool across Multiple Disciplines

(by Ms Ong Shu Juin, Assistant Head, Philosophy, Language Department, Mrs Angela Teo and Mrs Mak Wai Ling, Physics and History Teachers, Science and Humanities Departments, respectively)

Abstract

Cooperative Learning involves students working together in small groups to accomplish share goals (Gillies, R., 2007). This study aims to find out how cooperative learning contributes to effective student learning for high ability teenaged females in terms of mastery of content knowledge and development of socio-affective skills in the context of Singapore. This study is carried out in History, Physics and Philosophy lessons with 3 classes of Year 1 students. The findings from this study will be useful to teachers who are interested to find out the benefits of cooperative learning.

Introduction

Cooperative learning focuses on how individuals learn within group settings whereas collaborative learning examines group learning or group cognition (Koschman 2002; Zhang et al, 2009; Hong, 2010). In the light of this understanding, cooperative learning can be viewed as the beginning of or a form of structured collaborative learning as group formation, interaction procedure and outcomes of activity are highly structured. Cooperative learning can be a good scaffold towards collaborative learning (Chai et al, 2011).

Studies have shown that cooperative learning enhances content mastery (Johnson & Johnson, 1989; Slavin, 1990; Kagan, 1992) and development of socio-affective skills (Sharan, 1980; Borich 2004; Johnson & Johnson 1991). However, there is little research done on the effects of cooperative learning on high-ability teenage girls. Hence, this project aims to find out how high-ability teenage girls benefit from cooperative learning.

Method

Two lessons for each subject were conducted in Term 4. Cooperative learning strategies were used in each lesson. After the lessons were conducted, self-evaluation and peer evaluation surveys were carried out for all the three classes for each subject. The survey results were analysed and were followed up with interviews (face-to-face and e-mail) with a few students to find out more about their responses in the surveys.

Results

A sample of the results of the Self-Evaluation Survey (133 respondents):

Survey Items	Always	Frequently	Total
3. I asked others for their ideas and information.	25	56	81
4. I asked for help when I needed it (e.g. seeking clarification from others)	38	45	83
5. I helped the other members of my group learn (e.g. explaining concept, paraphrasing to clarify).	17	59	76

A sample of the results of the Peer-Evaluation Survey (137 respondents):

Survey Items	Always	Frequently	Total
3. She asked others for their ideas and information.	21	50	71
4. She asked for help when she needed it (e.g. seeking clarification from others)	31	50	81
5. She helped the other members of her group learn (e.g. explaining concept, paraphrasing to clarify).	26	50	76

Discussion

On the whole, the self-evaluation and peer- evaluation survey results show that students acquired content knowledge through the cooperative tasks in all three subjects. They also developed socio-affective skills such as active listening, turn-taking and interacting with one another in a respectful manner.

From the results of the self-evaluation and peer-evaluation surveys, the number of students who indicated "Always" and "Frequently" for items 3, 4 and 5 of the self-evaluation and peer-evaluation surveys were lower than the other items. The respondents from the e-mail interview thought that the figures were relatively lower for questions 3 and 4 because many of their peers tended to work independently and so they tended to rely on themselves rather than their peers when they needed help or information.

For item 5, the respondents thought that their peers might be quite humble and did not want to give themselves too high rating for this item as it might seem as if they thought too highly of themselves. However, the respondents also said that it would seem as if they had low self-esteem if they gave their peers high ratings but gave themselves low ratings, so the ratings of their peers could not be much higher than their own.

Conclusion

The findings of this project suggest that cooperative learning strategies help high-ability teenage girls master content knowledge as well as develop socio-affective skills and dispositions.

Through the lessons, we also found that the use of ICT helps to enhance cooperative learning. For instance, the use of Google Drive and Documents allow students and the teacher to work together on a shared product, contributing their ideas and comments on their peers' work.

References

1 Chai, C., Lim, W., So, H., & Cheah, H. (2011). *Advancing Collaborative Learning with ICT: Conception, Cases and Design* (1st ed.). Singapore: Ministry of Education.

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Becoming Scientists Through Video Analysis

(by Mr Thio Cher Kuan, Subject Head, Physics, Science Department)

Synopsis

Students learn passively when lessons focus on solving physics problems in pen and paper practices and very often, the context or the problems is simplified and inauthentic. Thus many students do not see the relevance in completing these problems except to gain the sufficient knowledge and skills for assessment purpose.

A meaningful and engaging approach in getting the students become Scientists is through the use of the Tracker Video Modelling, a video analysis and modelling tool. In this approach, students are to

1. ask questions, observe, experiment and measure and
2. analyse, reason and predict recorded real-life videos.

Basically, teachers use videos to assist students in the acquisition of the skill of video analysis. Once the students have mastered the art of analysis, they can undertake their own video modelling and analysis, based on their personal interest and present their findings.

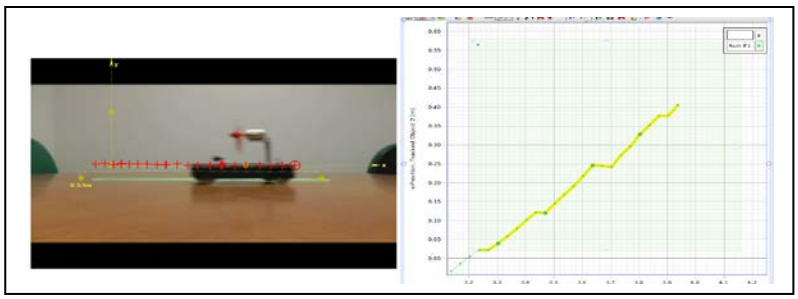
Instructional Design and Lesson Delivery

This instructional tool encourages students to be like Scientists as they investigate the topic, 'Motions'. Through these investigations, students can apply what they have learned in Kinematics and Dynamics theory lessons and draw meaningful conclusions about motions, as reflected in the video. In order for students to be able to do self-investigation and to become a self-directed learner, they need to be equipped with the following resources and skills:

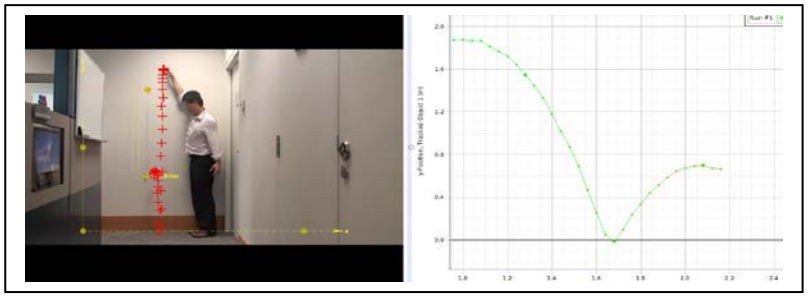
1. Equipment to take videos
   - Video taking equipment is readily available with the widespread use of smart handphones with video taking capabilities.
2. Setup of motion for investigation
   - Students need to be aware and trained in setting up the motions that they want to investigate (for example, having a reference length within the video).
3. Video Analysis software
   - A variety of video analysis software is readily available on the internet (video tracker http://www.cabrillo.edu/~dbrown/tracker/).
4. Training on using video analysis software
   - Students also need to be trained to be familiar with the use of video analysis software.
5. Kinematics and Dynamics theories

This instructional tool can be adapted to the desired level of inquiry. In 2013, the Tracker Video Modelling was used to help students draw the link between theoretical knowledge on Kinematics and the visual representation of kinematics graphs shown on the tracker. The simple videos analysis exercises have helped students in the following two ways:

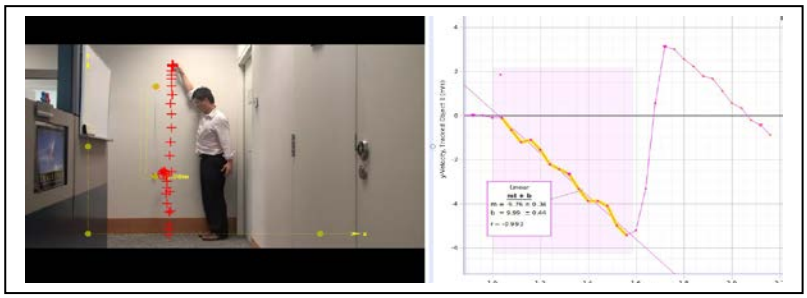
1. Familiarise themselves with the software
2. See how kinematics graph is obtained in real time.



Once, the students have understood the basic concepts, they are encouraged to move on to analyze more complex motions which they have come across in their pen and paper class exercises.



Students applied their knowledge of kinematics and determined the velocity and acceleration of the objects using the tools available in the video analysis software.



Reflections

Students could better understand the links between the various kinematics graphs and theories with the video analysis tools. They could also see the application of theories in real-life situations and obtain information and data about motions through their recorded videos. The key challenge faced is the time constraint; the teacher has to plan everything (e.g. video analysis tools training, teaching of kinematics theories) to fit into the specified time-based curriculum. However, if the video analysis tools can be used for more meaningful engagement of students in the various topics within the Physics curriculum, the time spent on training the students is justified.

Recommended Readings

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Using *Turnitin* As A Pedagogical Tool To Reduce Plagiarism and Provide Quality Feedback

(by Ms Jassie Teo, Senior Teacher, English Language, English Language Department)

Synopsis

Apart from the fundamental issue of academic dishonesty, plagiarism poses a vexing problem when grading an English Language (EL) assessment, where language use is a key component of the assessment criteria. Disregarding the plagiarised parts of a student's work often leaves insufficient evidence for the grader to evaluate the language ability of the student. Also, work with substantial amount of unattributed quotes and ideas makes it difficult to determine if the student has genuinely understood the purpose of the task. To tackle the issue of plagiarism in the Year 3 blog writing assessment, *Turnitin* was employed as a pedagogical tool, and it was found to be an effective one in reducing plagiarism in students' work.

Introduction

The Year 3 EL teachers embarked on a blog writing assessment task in 2012. In this task, students were expected to publish a blog article that presented the viewpoint held by a stakeholder related to an issue under discussion, and this required research work, which often involved surfing the Internet for relevant information to be used in their blog article. In the course of grading the assessment, 6 cases of plagiarism were reported, and the two common types of plagiarism found in the blog writing assessment were: (i) word-for-word copying from sources and (ii) unattributed quotes and ideas (missing in-text citations). When we interviewed these students to find out why they had plagiarised, their responses included:

- 'I didn't know that in-text citation is necessary.'
- 'That's what my friends and I have been doing for other subjects.'
- 'But I was only citing it as an example to support my point.'
- 'It's well written…it's exactly what I want to express.'
- 'I thought just having one or two sentences was fine.'
- 'I wanted to do well.'

The gravity of the academic offence notwithstanding, it seemed unfair to mete out the full disciplinary penalty to the 6 students since detection was solely dependent on the graders' ability to identify suspected cases of plagiarism, and there was no consistent way of determining evidence of plagiarism in a student's work. In fact, it is likely that the actual number of plagiarism cases was much higher than the 6 that were reported. In the end, the students were given a stern warning and counselled on why they should not have plagiarised. It was with this prior experience in mind that the Year 3 EL teachers resolvedly adopted *Turnitin* as a tool to tackle the issue of plagiarism when we conducted the same blog writing assessment in 2013.

Instructional Design and Lesson Delivery

The two key features of *Turnitin* that addressed our concerns are the ***OriginalityCheck*** and ***GradeMark***. The ***OriginalityCheck*** reports the extent of plagiarism – if any – found in the student's work and lists the online sources from which the plagiarised material is appropriated, while ***GradeMark*** allows graders to give comprehensive feedback on students' performance using the various tools available within this feature:

(i) ***Comments Text Boxes*** – Individualised comments can be colour-coded and inserted into the student's paper.

(ii) ***QuickMarks*** – Standard comments for common errors can be created and inserted into student's paper.

(iii) ***General Comments*** – A summary of the student's overall performance can be included using the General Comment tool.

(iv) ***Grading Rubrics*** – A rubric scorecard can be attached to indicate the student's score based on the assessment criteria.

To address the problem of unattributed quotes and ideas, students were taught the use of hyperlinks when making references to materials from other sources, and the proper use of quotation marks when citing text verbatim. Students were then instructed on the use of *Turnitin* for the purpose of submitting their work and viewing feedback for work submitted. In summary, students submitted their work twice on *Turnitin*:

1st Submission (FA): Students submitted their blog article draft at least 3 weeks before the final deadline.	▪ Both students and graders checked for plagiarism in the draft using ***Originality Check.*** ▪ Graders gave feedback using ***QuickMarks*** and / or ***Comments Text Boxes.***
2nd Submission (SA): Students uploaded their revised blog article by the stipulated deadline.	▪ Using ***Originality Check***, students did a final check for plagiarism. Resubmission was possible before the deadline (previous versions are overwritten). ▪ Graders provided feedback using the various tools, including a final score for the blog article via the ***Grading Rubrics*** tool.

The use of *Turnitin* for the submission of formative assessment (FA) heightened the students' awareness of plagiarism by presenting to them categorically the extent of plagiarism found in their work, and the buffer time between the FA submission and the summative assessment (SA) submission gave students time to make the necessary adjustments to avoid plagiarism.

Reflections

With the adoption of *Turnitin* in the second round of conducting the blog writing assessment, we were pleased that there were no cases of plagiarism reported in the final submission of the students' work. The following table sums up the advantages of using the tool, as well as some of the challenges faced when using it.

Advantages	Disadvantages
▪ **Ease of checking submissions** The *Submission Inbox* lists the students' name and their exact time of submission, allowing graders to check the submission status instantly.	▪ **Elaborate settings** The great number of options available in the settings can be confusing for first-time users.
▪ **Self-check for plagiarism** Students' access to the *Originality Report* encourages them to take personal responsibility for maintaining academic integrity.	▪ **Inability to detect plagiarism of ideas** The system is less sensitive in detecting cases where an idea appropriated from an external source has been extensively paraphrased.
▪ **Fairer system of detecting plagiarism** With the availability of an *Originality Report* for each submission, detection of plagiarism is applied to all, and is no longer grader-dependent.	▪ **Inability to assign weightings to criteria** Each criterion of the *Rubric Scorecard* is assigned equal weighting and the system does not extend the user flexibility to adjust the weightings to reflect the relative significance of the criteria.
▪ **Comprehensive feedback** Students receive discrete feedback via *Comments Text Boxes* and holistic feedback via *General Comments*; a customisable *Rubric Scorecard* is also available.	▪ **Rejection of submissions due to system overload** Most of the 'late submission' cases involved students who attempted to submit their papers just minutes before the deadline but were unsuccessful. The malfunction is likely to be caused by the huge volume of uploading that occurred close to the deadline, resulting in an overload in the system. Students should be advised to avoid submitting their papers at the last minute.
▪ **Time reduction in grading** The *GradeMark* feature allows for paperless submission and grading, while the *QuickMarks* templates remove the inconvenience of re-typing comments for common errors.	

Note : Interested readers may log on to *Cybersphere* (Courses: Year 3 English Language, Section 10) for examples of *Originality Reports* and how feedback can be given using *Turnitin* tools.

The Use Of *VoiceThread* As A Self And Peer Evaluation Platform To Improve Scenario Writing Skills

(by Ms Loy Hui Nin, Teacher, and Miss Tan Yen Chuan, Teacher-Specialist, Chinese Language, Mother Tongue Department)

Synopsis

Scenario writing is one of the genres of essay writing in "O" levels Higher Chinese. However, teachers usually observe that some students do encounter difficulties in giving a coherent and logical narrative in scenario writing.

To help students overcome this challenge, the teachers introduced the VoiceThread online platform to students so that students could give feedback, using their choice of feedback mode in VoiceThread (either by text typing, video recording or audio recording), at any time and location so long as there is internet connection. This provides students with a means for self-directed learning to increase their knowledge, skills and personal development (Gibbons, 2002). VoiceThread also encourages collaborative learning by providing a platform for students to interact with each other so that they gain deeper understanding of their learning (Chai & Tan, 2010).

Instructional Design and Lesson Delivery

VoiceThread is a web-based application that allows users to collaborate asynchronously and interact via posting and commenting on the platform in different ways (typing text, video, audio, and doodling) anytime, anywhere (Rodesiler, 2010). Hence, with the appropriate scaffolding, students analyze a text collaboratively, share new perspectives and challenge each other's thinking to develop deeper understanding of their learning process.

The students adopted a systematic approach in their evaluation and reflection: upload an essay - evaluate others' essays - monitor - plan – self-evaluate - re-write the essay based on feedback. This systematic approach highlights the importance of undivided attention devoted to the monitoring strategy.

During the re-writing stage, students could improve their essays by incorporating the constructive feedback they received from their peer evaluation as well as self-evaluation. This improved version essay is then submitted to the teacher for grading.

This intervention focused on student engagement in metacognition; students would reflect on the quality of their written essays, using the given feedback from both peer-evaluation and self-evaluation as well as the info-data from the recordings of comments and interactions in VideoThread.

This strategy was carried out with a Year 2 Higher Chinese class of 32 students, in a 1-to-1 ICT classroom setting. Students uploaded their essays to their VoiceThread accounts and invited their peers to evaluate their essays. The evaluations were to be done in class. However, if the students had insufficient time to complete the activities, they were allowed to complete them, out of class. The first draft of the first essay was used as the pre-test. All students were required to evaluate their peers' essays before self-evaluating their own essay. They then made the necessary amendments to improve their essays based on the feedback, and submitted the improved version of the essay to the teacher for grading. In total, each student wrote three graded essays before the post-test. In brief, the process is illustrated in the table below.

Lesson	Activities	Remarks
Pre-lesson Activity	➢ ***Essay 1 (1st draft)*** ✓ Students were required to complete their first scenario essay at home by typing into a MS Word document before coming to class	➢ Pre-test ➢ Graded
Lesson 1 (50 min)	➢ Teacher-directed learning on scenario essay writing ➢ Lesson scaffolding on how to use rubrics and feedback templates when conducting evaluations	
Lesson 2 (50 min)	➢ Lesson on the use of VoiceThread for giving comments and feedback via different media forms ➢ Submission by uploading of students' first essay using their VoiceThread account, followed by a sharing with their peers	
Lesson 3 (50 min)	➢ ***1st Evaluation Activity – Evaluation of Essay 1 (1st draft)*** ✓ Peer evaluation and self-evaluation of essays ✓ Evaluations of work using the given rubrics and feedback templates	
-	➢ Completion of peer and self-evaluations, by students, after class	
Lesson 4 (50 min)	➢ ***1st in-class Essay-writing Session – Essay 1 (2nd draft)*** ✓ Edition of students' essays, using MS word, based on the given feedback ✓ Submission of the improved version for grading	➢ Graded
Lesson 5 (50 min)	➢ Return of students' essay 1 (2nd draft), together with teachers' feedback ➢ ***Essay 2 (1st draft)*** ✓ Completion of 2nd essay at home → upload to VT → invite peers to the essay	➢ Ungraded
Lesson 6 (50 min)	➢ ***2nd Evaluation Activity – Evaluation of Essay 2 (1st draft)*** ✓ Evaluation of essay 2 in class ✓ Completion of the evaluation outside of class, given the time constraint	
Lesson 7 (50 min)	➢ ***2nd in-class essay-writing session – Essay 2 (2nd draft)*** ✓ Edition of students' 2nd essay in class, using MS word, based on the feedback ✓ Submission of edited and improved version, Essay 1 (2nd draft), for grading.	➢ Graded
Lesson 8 (50 min)	➢ Return of students' essay 2 (2nd draft), together with teachers' feedback	
-	➢ Summative Assessment	➢ Post-test ➢ Graded

Reflections

The findings indicated that self-evaluation and peer-evaluation enhanced one's written work.. Although peer feedback could not be expected to be as accurate as feedback given by an expert, it was reasonable to use peer feedback for learning. When nurturing students to be independent learners, the role of the teacher as a facilitator should not be undermined. The teacher should provide proper guidance to students on writing good essays and giving quality feedback, especially in the area of evaluation, both self and peer.

It was also noted that the degree of improvement in performance would depend on the students' language competency and info-communication technology (ICT) skills. Technical problems might arise from the Chinese inputs for VoiceThread. Lastly, a lot of time had to be invested in overcoming technical issues and teaching students how to use VoiceThread before we could reap the fruits of our endeavour.

Unanimously, the teachers also concurred that with sufficient practice, the quality of peer feedback would be enhanced and students would begin to trust and value their peers' feedback.

Recommended Readings

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Explore The Famous Sayings In Higher Chinese Teaching
名句名言在高级华文教学中的探索

(by Ms Mu Jun, Teacher, Chinese Language, Mother Tongue Department)

Synopsis

Famous sayings are the essence of human experiences, and also the accumulation and precipitation of culture, history, wisdom and ideological cohesion. They cover a wide range of life lessons and the beautifully-crafted language adds much charm to them. When it comes to the teaching of Higher Chinese in secondary school, it becomes especially important to impart to students how to best understand and use these sayings. The teaching method influences the role of famous Chinese sayings in cultural understanding and appreciation. This approach seeks to teach students ways of analysing famous sayings and how to infuse them into their daily lives. By doing this, it strengthens teaching effectiveness and enhances learning experiences. The text contains numerous examples of famous sayings which students can make use of in their assignments and examinations.

名句名言是人类生活经验的淬炼和总结，是文化历史精华的积累和沉淀，是思想智慧的结晶和，它们涉猎广泛，积极向上，语言优美，具有无穷的魅力。在新加坡教导学生学习高级华文时，可起到一言九鼎、举一反三、事倍功半的作用。本论文旨在通过分析教师教导学生名句名言的缘起，选择方式，如何分类，以及采取何种方法，使名句名言渗透到正常的高级华文教学中去，春风化雨、润物无声地提高教学功能，加强教学效果。文中含有丰富的名句名言举例，学生如何使用在学习中的案例也俯拾皆是，不胜枚举。

Instructional Design and Delivery

缘起：由于历史的原因，华文中富含哲理的名言名句非常丰富多彩，这些名句语言凝练，语义饱满，一字千金，含有丰富的文化成分。学习这些句子，不但感受历史文化，也会作为学生学习模仿的对象，提高审美能力，锤炼语言能力。新加坡学生课业紧张，没有机会接触和积累“名言名句”的机会，所以，希望学生通过阅读来积累，有点不现实。

由教师提前发现、挑选好“名言名句”，然后教给学生，无疑是一个较为方便快捷、删繁就简的渠道。如此，就能在最快时间稍稍改善学生在高级华文学习方面表达能力欠缺、语言贫乏的通病。还有一点就是考试的需要。会考试卷一中的作文，试卷二中的理解问答，都需要考生能够用精炼的语言来写作，以及回答问题。

来源：一、网络的发达，让“名言名句”举手之劳般轻易获取：当今的网络能在弹指之间获取我们所需要的名言警句。网络上有很多热心人士为我们整理和收集了许多“名言名句”。但是要精选，因为这些句子有些经不起推敲。但如果经过仔细认真的挑选，最终能成为学生的知识财富。

二、书本的购买：多年来，笔者有意无意选购了一些“名人名言”的书籍。如：1《读者文摘丛书人生格言》、《古诗文背诵》等等。我经常翻阅，从中发现和选取一些适合新加坡本地中学生的

“名言警句”，在必要的时候教给学生，也增加自己讲课说话的水准和魅力。作为教师，也耳濡目染，享受其中，在教会给学生的过程中自己也会受益匪浅。

三、杂志《格言》《意林》《家庭》《青年文摘彩版》《演讲与口才》：这些优秀的中文杂志有个共性，就是都看在很多时新的好句子，笔者手头这些杂志有些是订阅，比如《家庭》杂志，笔者发现其每页下放，都会刊登“名言名句”，所以，专门订阅了它，并且从中自习挑选。类似的杂志还有《意林》《少年文摘》《演讲与口才》《美文少年版》等等。除此之外，笔者还经常到社区图书馆，翻阅一些中文杂志，勤奋地抄写下来。这些句子收集起来，然后经过挑选，都可以作为高级华文学生学习“名言名句”的原始素材。稍加留意，就会发现类似的材料散落各处，只要老师处处留心，滴水成河，粒米成箩，何愁没有享用不尽的“金山银山”。

四、古典文学，尤其是古诗词：许多古文名句概括了人们立身行事的准则，成为经过岁月打磨、通身散发诱人光芒的警示格言，如：“学而不思则罔，思而不学则殆孔子”，“先天下之忧而忧，后天下之乐而乐——范仲淹”，“勿以善小而不为,勿以恶小而为之——
刘备”……这些古诗文中的名句或者传授给我们治学勤思的治学之道；或者教会我们要胸怀天下的宽阔胸襟，亦或者留给我们作人处事的行为准则，阅之读之体悟之，无不获益匪浅，受益无穷。本地的高级华文课本中，目前已经见不到这些古诗文的踪影，学生大多没有其他途径学会这些古诗文名句，所以，开辟一点宝贵课堂时间把这些古诗文抄录讲解给学生，让他们通过这些古代文化的珍贵遗产，掌握其“精华”所在，这是一个较恰当的做法。

当然，除了古诗文中的名句，我也会找一些短小精悍含义凝练的五言绝句如：陶渊明《杂诗十二首》其一，李白《静夜思》，杜甫《春夜喜雨》，孟郊《游子吟》，李绅《悯农》等当然，这类适合中学高级华文学生学习的还有许多，但相比于“名言名句”来说，这类作品要尽量少。

五随手做笔记：多年来，我保留着一个习惯，身边随时带着一个笔记本，在看到好句子的时候，我会留心把它们抄写下来。虽说现在已经到了资讯迅猛发展、扑天盖地的时代，但是，我这个朴素的习惯让我收集了许许多多的“名言名句”，每个星期，我都会准备至少5句“名言名句”，准备在星期一的课堂上讲给学生听。这样做的缺点是，没有章法，看到什么好句子就写下来，往往5句话之间没有任何关系，不利于学生分类整理，但有个更大的好处就是常记常新，永远在吸收新鲜的血液，呼吸新鲜的空气。

六在别人的优秀篇章里寻找收集：
平日阅读的报刊篇章里，这一类的句子也会掩藏在字里行间，只要稍稍留意，就会搜罗天下智慧。这需要老师一双聪灵勤奋的慧眼。

选择标准：

一主题正面积极向上立意高；二适合中学高年级学生即刚刚进入青葱的青春期学生阅读；
三语言优美，读来朗朗上口，写下来整齐美观，看着可人，读着顺口，句式排列优美，多种修辞手法穿

插使用。

避免：一主题灰色，看破红尘的；二语言过于艰涩；三恋爱指南等有关爱情的，居家过日子地，夫妻相处之道，婆媳过招，妯娌连襟唇枪舌剑等等之类，也应该避免推荐给中学高级华文源流的学生。道理不必赘述。

教学方法：

一学生准备一本笔记本，作为"名人名言"的记录：每年开学伊始，老师要求学生准备一个小型笔记本，老师要求学生把笔记本包装得小巧可爱。老师每年需要寻找两次合适的机会，把学生们的笔记本收集起来，统一检查一遍，看看其中有无错别字，错的标点，改正过来。以免以讹传讹。

二老师印制各种印刷资料：如《谚语》（包括从一画到十六画以上的500多条民间口口相传的谚语）《熟语一八五条》《谚语160条》等等。印发给学生。

三鼓励学生大胆使用：我总是不厌其烦地鼓励学生在每次做练习，写作文时，把自己的笔记本摊开来放在手边，写作的过程中大胆使用，一篇作文可以使用1到3句。不要认为这种强迫使用会显得生硬不自然，只要慢慢练习，逐渐地，学生从开始地"硬硬"使用，到后来的主动自然，进而到达水乳交融、贴切地把"名言名句"和自己要表达地意旨融汇在一起。

Reflections

学生学习成果：一演讲词非常漂亮，美不胜收；二作文风格别具；
三试卷二理解问答句子有分量，突出观点，给人深刻印象；四剪报作业也异军突起。五小练笔也会使用如：'只有在那崎岖的小路上不畏艰险奋勇攀登的人，才有希望到达光辉的顶点'，如果不摔跤，怎么能学会骑马脚踏车呢？"等句子，让故事顿然生辉。

Recommended Readings

此文荣获教育部第四校群"2013年教案设计及教学心得大赛教学论文组 二等奖"。

Language Teaching Through Drama Techniques

(by Mr Kumbalingam Uthaman, Teacher, Tamil Language, Mother Tongue Department)

Synopsis

"*Children's theatrical creativity or dramatization efforts are very close to their literary creative activity.*"
(*LevSemenovivh Vygotsky, Imagination and Creativity in Childhood*.)

The place where the teacher daily faces the challenge of meeting student needs is the classroom. A range of learner attributes characterizes the diversity of today's classroom. Effective classroom instruction goes beyond strong content knowledge, excellent classroom management skills and a solid foundation in pedagogical approaches. It requires a teacher who can provide age-appropriate, culturally relevant, learning-style appropriate, cognitively challenging, linguistically comprehensible input for each student in an environment that respects a range of learning abilities. In other words, the teacher must be able to provide meaningful learning opportunities for every student, taking into consideration their varied learning styles. One such meaningful learning opportunity is the use of ***Drama***.

D *- Deepen pupils' understanding on content*
R *- Rapport building with pupils*
A *- Active participation*
M *- Multiple intelligences being developed*
A *- Attainment level being increase*

The teaching of Mother Tongue as a second language inevitably involves a balance between receptive and productive skills. Towards this end, drama is an effective teaching tool to achieve this balance. Drama is a motivational tool as it is fun and entertaining; it engages and energises students in their learning as language becomes the means of emotional expression. Drama also develops creative and critical thinking skills and promotes collaborative learning.

Instructional Design and Delivery

When students watch a drama, they are able to broaden their knowledge and deepen their understandings. When students act out the drama, they are able to expand their recall, comprehension, and application skills. However, these activities only develop students' lower level thinking skills. As teachers, it is our responsibility to nurture and develop our students to their potential. To develop both the higher order thinking and the lower level thinking (as seen in the above Bloom's Taxonomy), the following drama techniques have been adopted:

Thinking Skills: New Bloom's Taxonomy	
Creating	Synthesizing, Designing, Constructing
Evaluating	Checking, Critiquing, Judging
Analyzing	Distinguishing, Selecting, Focusing, Organizing
Applying	Carrying out, Using, Implementing
Understanding	Explaining, Summarizing, Illustrating
Recalling	Remembering, Identifying, Recognizing

- **Board Meeting**
- **Conscience Alley**
- **Head or Tail**
- **Hot Seat**
- **The Moot Court**

Board Meeting
It involves the discussion of a current issue in the country or the world. After reading a newspaper article, students will take up roles involved in the situation and have a board meeting. The title of the article I chose is

'Counselling for more Youths instead of Court's Punishment'. The students assumed roles such as the lawyer, delinquent, the parents of the delinquent, Police officer, Social Activist etc.

Conscience Alley

Students analyze and take a stand. Two groups with opposing stands will form two lines facing each other. A student with a dilemma walks between these lines as each student in the line alternatively voices out their point of view. When the student reaches the end of the alley, she makes a stand based on the viewpoints that she has heard.

Head or Tail

A short film is shown to the pupils. The film is stopped at a significant point. The students will then have to think and continue the story from that point. They will then act out their version of the ending. Likewise, the last segment of the film can be shown and students can be given the task to create the front part of the film.

Hot Seat

After reading a story-based text, one student assumes the role of the writer or a character from the text. The other students, from the point of a view of a reader, will then think critically and raise thought-provoking questions.

Moot Court

The teacher will start the ball rolling by introducing the case to the class. Students will then be given different roles such as Lawyer, Judge, Accused, Reporter, Witness, Sketch Artists and Court Assistant, based on their interests or strengths. Through this activity, students review the background information and the facts, determine the main issue(s), frame their arguments and come to their own judgment with substantiated reasoning. (See photograph)

The planned activities are closely aligned to MOE's 21st Century Competencies. The four key competencies are :

- **Creativity and Innovation**
- **Critical thinking and problem solving**
- **Constructive communication**
- **Teamwork**

> *"Drama, more than any other form of creation, is closely and directly linked to play, which is the root of all creativity in children. Thus, drama is the most syncretic mode of creation, that is, it contains elements of the most diverse forms of creativity."*
> *– Lev Semenovivh Vygotsky*

Reflections

When drama techniques are applied to teaching, differentiated Instruction is easily infused into the lesson. As a result, all students are able to actively participate in the lesson, gaining the opportunity to analyze and assess the subject at hand. Platforms are also provided for students to create and present their own work. Through these activities, students expand their multiple intelligences, such as verbal and linguistic, logical and mathematical, and bodily and kinesthetic intelligence, interpersonal intelligence. In addition, students' higher order thinking skills, including the 21st century skills, are strengthened. When the creativity within students is brought out through teaching, the learning experience gained is not only educational, but also enjoyable.

Recommended Readings

1. LevSemenovivh Vygotsky, *Imagination and Creativity in Childhood, Journal of Russian and East European Psychology,* vol. 42, no. 1, January–February 2004, pp. 7–97, Sharpe, Inc.
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3. http://dramasource.com

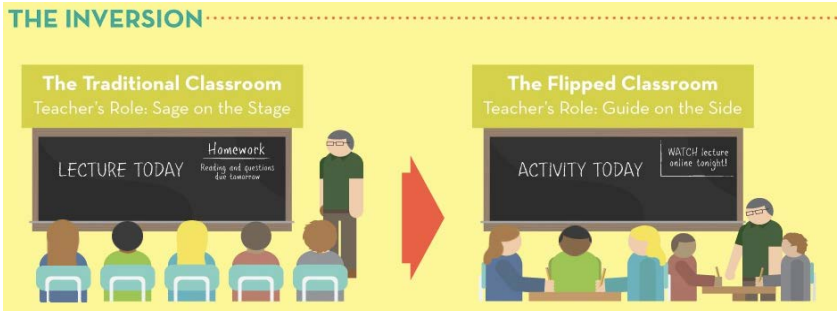
Flipping The classroom – What Does This Mean?

(by Mr Thomas Lee, Senior Teacher, Social Studies and Regional Studies, Humanities Department)

Synopsis

The **flip classroom** has been touted as an on-line learning tool; it encourages a shift away from the didactic, teacher-centric educational approach that has proverbially dominated classroom for time immemorial. Essentially, it explores the best ways for students to learn with online tools vs. the best ways for them to learn face-to-face. Simply put, it means having a portion of the learning done through activities at home, while students and teachers return to class after that to work on the answers. This is premised on learner needs being central e.g. pace/ability of the learner; type of learning styles; and the need to differentiate the class to preserve engagement. In planning for a flip activity/portion of the curriculum, it will cater to the ability of the students by providing i. control over the learning material, ii. variety of resources for learning, iii. engagement in the form of wanting to continue to learn, be it in the classroom or beyond (a means of achieving Self-Directed Learning). The following is an example of what Social Studies teachers in RGS do with regards to the flip concept. Beyond this, the teachers have designed the curriculum along **David Klob's Experiential Learning Theory**, with the **flip** being just one of the instructional tools in the bag.

The flip, as mentioned in the preceding paragraph, typically involves what is illustrated below:



Source : http://www.knewton.com/flipped-classroom

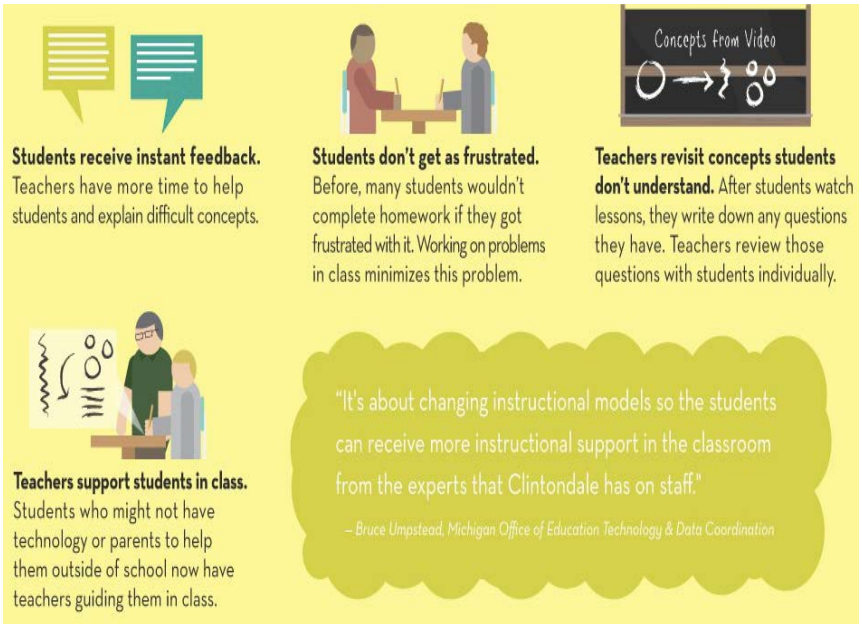
A fair bit of activities seems to be centered on having students watch videos of lectures at home and eventually working on the answers to more searching questions in the classroom. In short, the traditional homework becomes a classroom activity where students can call upon the help of both the teacher and his/her peer. This makes learning more meaningful and collaborative in that both students and teachers get real time feedback on the extent of the learning (or gaps) and learn to work with others in processes that help make them more socially adept in settings to make meaning of a given situation.

In RGS Social Studies, we did not start with recording our "lectures", but relied on the wealth of videos that are already out there on YouTube for instance. One example would be the exploration of the concept and policy of multiculturalism where societies/governments need to grapple with the myriad of cultural differences that would impact on any given group's means to better jobs, access to material wealth and political participation. The focus of the lesson was on uncovering how affirmative action could be required as well as detrimental. We used a YouTube video on the issue to tease out the positives and negatives. Students were then required to log down their responses in a Google document. You can access this video at *http://www.youtube.com/watch?v=PiSpkDWaYfI*.

The flip in the classroom was a quick grouping of all the responses of the students off Google document into broad areas e.g. the positives and negatives of affirmative action, questions students had while they watched the clip, further comments and even resources students found that were relevant to the topic. This document is shared for everyone online and is live for updating as the course ensued.

Of note is that the video we used was not just used for one lesson. Indeed, it was the basis for further investigation and discussions in class and helped to bring student involvement and self-directedness as they discovered innate human issues that appealed to them. Some even went as far as to read more on other affirmative action programmes in the USA, for example.

On a final note, we started with a video, but subsequent flips were not based on videos alone, but resources such as readings, discussion forums et cetera that were either found or created as part of the course. This made the lessons truly engaging and dynamic both for the learner, educator and parents (whom were involved in discussions/questions students had after the lessons). In short a quick show of the benefits is illustrated below:



Source : http://www.knewton.com/flipped-classroom

Reflections

The described process did not take a leap of effort to do, but it did take a fair bit or re-orienteering on the part of students and teachers and it literally flipped the lessons on its head. In the course of our experimentation, we started with lengthy videos and eventually readings and realized that that was counter-productive as students might be over-saddled with the "new homework". Hence we came up with FLIP-B2IT to help manage the load, and since then we have not looked back.

Recommended Readings

1. What is a Flip Classroom? *http://tinyurl.com/92xfjue*
2 Flipped Classroom. *http://www.knewton.com/flipped-classroom/*
3. Flipped Classrooms. *http://net.educause.edu/ir/library/pdf/eli7081.pdf*
4. Flipped Learning Network. *http://flippedclassroom.org*
5. Kolb… Learning Styles. *http://www.simplypsychology.org/learning-kolb.html*

Learn To Play and Play To Learn : A Game-based Experience In The Learning Of History

(by Tan Kok Wah, Teacher, History, Humanities Department)

Synopsis

"*Play is a very serious matter…*
It is an expression of our creativity,
And creativity is at the very root of our ability to learn, to cope,
And to become whatever we may be."
(Rogers & Sharapan, 1994)

"How could board games be used to support historical inquiry (HI)? In this historical Investigation, students were tasked to inquire into an authentic historical issue and to demonstrate their learning by forming a response to the HI question as well as producing an end-product, a board game. The lesson was designed to provide further opportunities for students to apply and deepen their learning from the Year 2 History syllabus, Unit 2: Rise of Political Consciousness: Japanese Occupation, 1942-1945. The HI task requires students to apply their understanding of the unit-specific historical concept of *'Change and Continuity'* by identifying and explaining aspects of change and continuity from the people's perspective of Singapore before and after the Japanese Occupation.

Instructional Design and Lesson Delivery

Game-based Learning

Gaming is an effective educational tool that enhances learning. Generally, people learn for three major reasons: motivation, content mastery (including higher order thinking) and social skills.

Board Games

Board games are important visual tools that provide visual simulation to help students process information. It also helps students develop a swift ability to think on their toes. Well-crafted board games create an engaging and appealing atmosphere in a safe environment that would bring out the playful yet competitive spirit in students. They also help to reinforce content knowledge acquisition and skills application.

Historical Investigation(HI)

HI is a platform for students to investigate different aspects of Singapore's history. In doing HI, students will get the opportunity to collectively explore a range of sources, such as artefacts, written, pictorial as well as oral sources, beyond what they are exposed to in the classroom. HI serves as a means for students to 'do' history by carrying out research, and applying their historical knowledge and skills to form their own responses to an authentic historical issue.

Stages of the Historical Inquiry - 6 stages process:

1. Understand the HI question
2. Gather and select sources
3. Examine selected sources
4. Construct individual responses to the HI question
5. Consolidate individual responses
6. Present group's conclusions

Lesson Development

Inquiry Question: Did the Japanese Occupation bring changes to the lives of the local people?
Student will discuss on any two of the following aspects of life:

a. school
b. pastimes
c. economic situation
d. health
e. sense of security
f. community ties

Students will design and produce a board game that will feature two major aspects of life of the local people. In the process, students will….

1. research, select, contextualize and interpret evidence from various sources on the local people's lives before and after the Japanese Occupation,
2. record and organize information, derived from a range of sources and
3. synthesize information from the sources to formulate responses to the historical question.

Students are actively and productively engaged in the learning process – researching..organising and synthesizing information.

Reflections

One key challenge is the lack of a competitive element in the board game design. Students enjoyed learning through the board game but felt that it was not exciting as it lacked the competitive element. The 'motivating' force in a board game, for example, Monopoly, to accumulate wealth or assets is missing. In addition, in a game-based learning environment where students are decision-makers and teachers are game masters, the teachers might feel uncomfortable and have the urge to teach, by stepping in to conclude or explain things to the students instead providing guidance. In this aspect, I feel that game-based learning is not just about the games themselves, but also very much about the classroom culture.

Teach For Understanding : Teaching To Learning Styles Through 4MAT Model

(by Mrs Lucille Yap-Chua Puay Lan, Lead Specialist, PeRL)

Synopsis

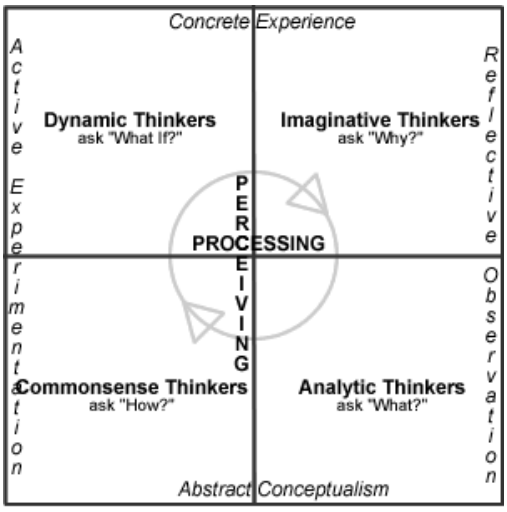
A concept-based curriculum that focuses on '*Teaching for Understanding*' calls for differentiated instruction as well as pedagogical strategies that allow students to develop *integrated thinking* (Erickson, 2002, p 106). **Bernice McCarthy's 4MAT Model** provides a conceptual framework for differentiation in curriculum and instruction that focuses on (i) Concepts, (ii) Essential Questions, (iii) Content Knowledge & Standards and (iv) Learner Outcomes. It is 8-step learning process wheel that develops and integrates all four basic learning styles with right or left brain processing skills to bring about whole brain learning. It also assesses learner growth through the course of the lesson.

The 4MAT Model is grounded on the principles of effective learning; intrinsic motivation, meaningful engagement, practice and application of learning, derived from numerous renowned theories on human psychology, learning and brain science.

Description of Model

In a diverse classroom, the 4MAT Model provides a clear and sequential learning path that supports all learning styles (see Figure 1). The knowledge of learning styles, defined as "a relatively consistent pattern of perception, interaction with and response to stimuli in a particular learning environment"' (Pithers & Mason 1992, p.61), enables the classroom teacher to gain some insights into students' preferred way of learning, which in turn can inform a better choice of learning activities. In a nutshell, the knowledge of learning styles allows the teachers to create *maximum engagement* with the learners.

Figure 1 : Learning Styles



Source : http://flexways.flexiblelearning.net.au

According to McCarthy, an individual **learning experience** is influenced by the twin elements of **perceive** and **process**. How a learner perceives the information, from thinking (conceptualization) to feeling (experience) and how the information is processed, from doing (action or experimental) to watching (reflection or observation) greatly impact the learning process.

In the Model, there are **four types of learners**:

i. Type 1, **imaginative learner** who wants to know **WHY**,
ii. Type 2, **analytical learner** who wants to know **WHAT**,
iii. Type 3,**common-sense learner** who wants to know **HOW**,
iv. Type 4, **dynamic learner** who wants to find out **WHAT IF**.

In order to meet the learning needs of these four types of learners, the classroom teachers must plan learning activities (Figure 2) that foster knowledge acquisition and skills development through discussion, teaching, coaching and self-discovery for Type 1, Type 2, Type 3, and Type 4, respectively (see Figure 3).

Figure 2 : Learning Activities for the 4 Learning Styles

Do Something Personal
 	
With new knowledge
 	
- Draw eg cartoons
- Skits
- Write story/poem
- Journal
- Think of how to
- Use in real life
	Activating Knowledge
	
	To get other interested
	
	- Imagery
	- 'Hook' Questions
	- Show Picture
	  - Demonstrations
	  - Mind maps
	  - Make a logo

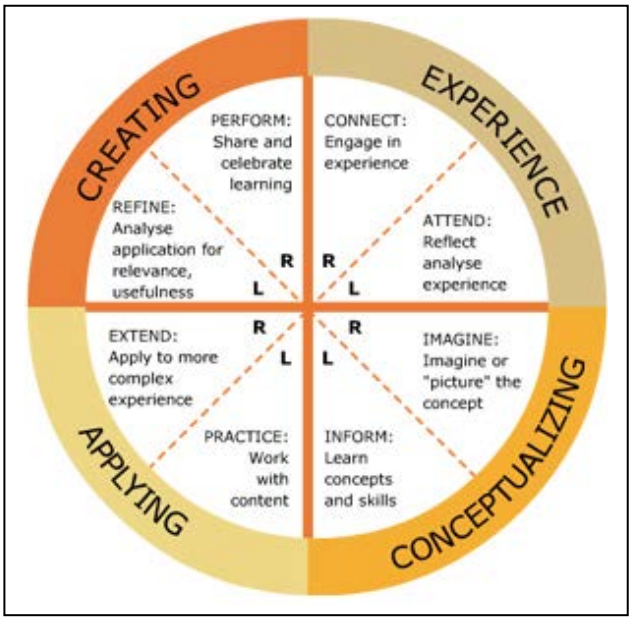
Using Knowledge **Learn by practice** - Hands-on - Worksheets - Puzzles - Fact games - Read given materials - Test theories - Drill	**Gaining Knowledge** **Teaching factual Information** - Lecture - Charts/graphs - Pictures - Timelines - Examples - Readings

Source : http://gteam.wikispaces.com/file/view/4Mat_table.jpg

Figure 3 : Skills of the 4 Learning Types

TYPE FOUR 'IF?' - Modifying - Intuiting - Adapting - Acting - Collaborating - Innovating - Creating	**TYPE ONE 'WHY?'** - Brainstorming - Listening - Speaking - Interacting - Knowing oneself - Understanding and - Appreciating others
TYPE THREE 'HOW?' - Experimenting - Manipulating Materials and Ideas - Following Directions - Building on Givens - Making Things Work - Testing Reality - Trying and failing - Applying	**TYPE TWO 'WHAT?'** - Observing - Analyzing - Classifying - Drawing Conclusions - Theorizing - Seeing Patterns &Connections - Conceptualizing the Sense of the Whole

Figure 4 : The 4MAT Model : A Cycle of Learning



Source : http://www.sumarianetworks.com/public/page/displaypage/id/43

Apart from learning styles, the 4MAT Model also takes into consideration right and left processing skills. This whole brain approach enhances higher thinking and learning as it provides a greater range and depth of understanding and encourages creative expression and problem solving.

In brief, the 4MAT Model combines the elements of and the theories of : Perceive, Process, Learning Styles and Brain hemispheres and entails the use of right- and left-brain strategies within four distinct phases of the learning cycle : experiencing, conceptualizing, applying and creating (see Figure 4).

Instructional Design and Lesson Delivery

The 4MAT Model was employed in a Year 4 Geography lesson on "Poverty Reduction" under the unit, Development. Within this two-hour lesson block, different instructional approaches and learning experiences were planned, step-by-step, for the academically diverse students in the classroom, as summarized in Figure 5.

Figure 5 : A 4-Step Lesson Plan on "Poverty Reduction" using the 4MAT Model

<table>
<tr>
<td>STEP IV : EXCEL in UNDERSTANDING THROUGH APPLICATION by DYNAMIC LEARNER

Assessment - Performance Task – How can the living conditions of the one-roomers in Singapore be improved?

RM - Do it and apply to more complex experience (Integrate)
LM - Analyse application for relevance (Refine)

IF ? (Adaptations)

If you were the voice of the poor, what assistance would you like the government to provide to help you break the cycle of poverty?</td>
<td>STEP I : EXCITE THE IMAGINATIVE LEARNER

To motivate students to learn, a meaningful and engaging activity, using a HOOK, is planned to get the students excited.

Hook - Video-viewing (Poverty-stricken children)

RM - Create an experience (Connect)
LM - Analyse and reflect about the experience (Examine)

WHY ? (Motivate and Meaning-making)

"Imagine you were one of the children featured in the video. How would you feel?"</td>
</tr>
<tr>
<td>STEP III : EXPAND EXISTING KNOWLEDGE and UNDERSTANDINGS by COMMON-SENSE LEARNER

Strategy - Poverty Game , AYITI : The Cost of Life (Problem-solving)
Context: The Guinard family of five is struggling to get by in rural Haiti.
Task: Students will to decide on a given strategy - Happiness, Money, Health or Education – to assist the Guinard family of five overcome the challenges resulting from poverty, severe weather, and even potential violence so that they may have a chance at a better life.

RM - Practice and add something of oneself (Extend)
LM - Practice defined "givens" (by)

HOW ? (Usefulness and Skill Development)

♠ If given the choice, do poor people want to remain poor? Why?
♠ What can be done to reduce poverty?
♠ Is education is best measure to break the poverty cycle?</td>
<td>STEP II : EXAMINE FACTUAL INFORMATION by ANALYTICAL LEARNER

Strategy - Co-operative Learning
A set of fact sheets on the value of education, health, clean water supply and sanitation etc. will be given to the students

RM - Integrate reflective analysis into concepts (image)
LM - Develop concepts or skills (Define)

WHAT ? (Reflection and Concept Development)

♠ What do you understand by the term, 'poverty'?
♠ Where are the poor?
♠ What cause poverty?
♠ What impact does widespread poverty have on the people and the country?</td>
</tr>
</table>

Note : **RM** : Right Brain Learner and **LM** : Left Brain Learner

Reflections

The 4MAT tool is an easy-to-use but powerful instructional tool that caters to differentiation: all types of learners' styles are met. It promoted deep learning for students through meaningful learning activities that facilitate meaning-making and conceptual understanding. It also strengthened collaborative work through the use of a common meta-language.

Recommended Readings

1. B. McCarthy and D McCarthy (2005). Teaching Around the 4MAT® Cycle: Designing Instruction for Diverse Learners with Diverse Learning Styles
2. Game url: http://www.gamesforchange.org/play/ayiti-the-cost-of-life/

Interested in finding out your curriculum and pedagogy orientation?
Read on

THE CURRICULUM-PEGAGOGY GRID

If the curriculum and pedagogy continua form the axes of a grid, a diagram can be created and used to consider the dominant qualities of any classroom. Classrooms will fit into one (or more) of four types (perhaps depending on day of the week or time of year or whether or not they are being observed). In addition it is important to note that many teachers change their orientations from when they first began in the profession.

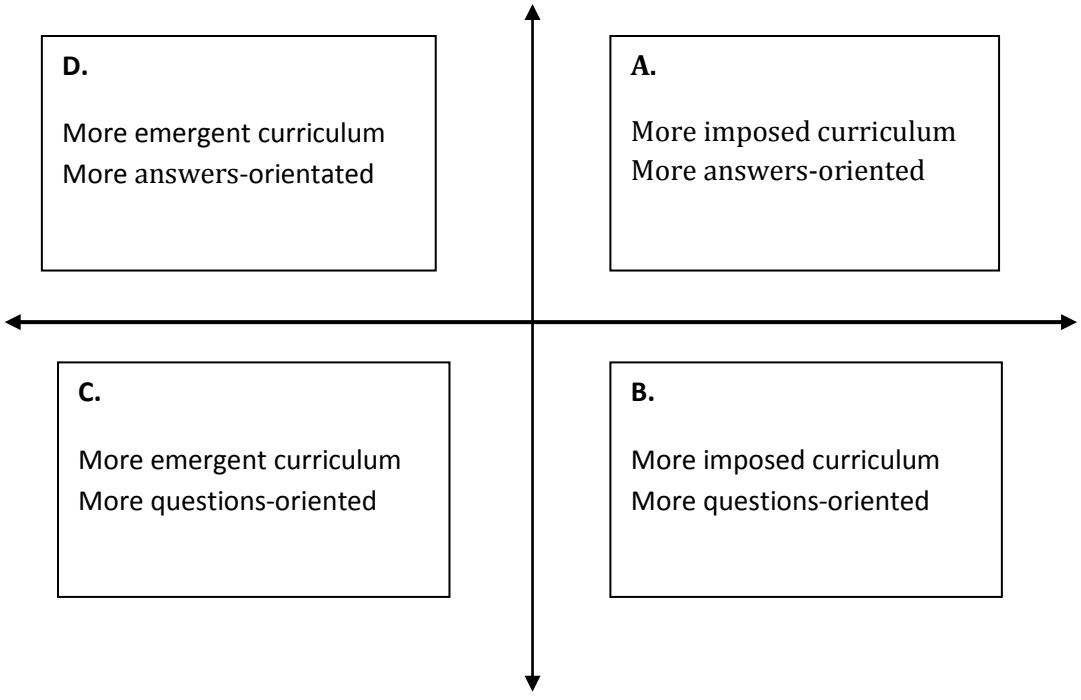
In A classrooms, teachers will be seen working from textbooks and lecturing pupils who will tend to work alone. In extreme examples everyone works to passing a test.

In B classrooms, teachers will be seen focusing mostly on other people's educational agenda but pupils will be learning in open-ended ways e.g. in discussion groups

In C classrooms pupils questions come to the fore and they are able to explore those e.g. in open-ended enquiry

In D classrooms pupils questions are used but only to cover a predetermined content.

Teachers can use the grid to self-assess and decide whether they want to change their dominant curriculum and pedagogy orientations.



(http://www.mantleoftheexpert.com/studying/articles/BE%20LA%20-%20Curriculum%20and%20Pedagogy%20in%20the%20Classroom.pdf)

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- The RGS teachers for their contributions

"Schools of the future will need both teachers and researchers, and people who combine both roles, as happens at Raffles Girls' School."

Sir Michael Barber

Oceans of Innovation: The Atlantic, the Pacific
Global Leadership and the Future of Education, 2012

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