

## **Collaboration on a Research Literacy Module for Project Work**

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### **Abstract**

Project Work (PW) is a Singapore Ministry of Education initiative introduced after the launch of “Thinking Schools. Learning Nation” in 1997. Consisting of four components: Knowledge application, communication, collaboration and independent learning, students work in groups to research a topic for a written report and oral presentation. Information /research literacy skills are an important component for successful completion of their research project. This article describes the collaboration between National Institute of Education (NIE) English Language and Literature (ELL) staff and teachers at a Singapore secondary school with the purpose of improving the information/ research literacy skills of teachers (who would then teach these skills to their students) for the delivery of PW. Through a series of discussions and online communication, the teachers decided to implement a module developed by ELL staff. Using the source evaluation checklist Currency, Relevance, Authority, Accuracy and Purpose (Blakeslee, 2004) the module was created using the online bulletin board platform Padlet. It was implemented in the July 2018 semester and ELL staff were invited to observe the classes where it was taught and provide feedback to the teachers. This collaboration with the goal of improving information/research literacy skills could serve as a model for other schools.

### **Keywords:**

*information literacy, source evaluation checklist, research skills, online learning*

### **Project Work and Information Literacy**

NIE reports including 3:3:3 Roadmap 2013-2017 (2013), TE21: A Teacher Education Model (2009) and TE21 Implementation Report (2012) stress educational research and strengthening the theory-practice link. Information literacies and knowledge management are stated as main aspects of development for 21<sup>st</sup> century teachers (p, 30-31, 2009). An MOE initiative; 21<sup>st</sup> Century Competencies 21CC (2010), emphasizes management and responsible use of information as important skills. The importance of preparing preservice teachers to be teacher-researchers has been recognized globally (Gray & Evans, 2002). Equally important is the ability to teach these skills to students (Mokhtar, et. al 2007, pp. 4-7; ACRL, 2011, pp.1-2; 9-10; Foo, et. al, 2014, pp.18-19).

Recently introduced NIE initiatives for further preparing teacher- researchers include Educational Research (ER) for student teachers in their third year and Academic Research (AE) for final year students. Eligible ER students are invited to join NTU's Undergraduate Research Experience on Campus (URECA) program. The English Language and Literature Academic Group offers courses which deal with academic writing/research skills; ALS10A Academic Discourse Writing (taken by all NIE BA(Ed) and BSc(Ed) students). AAE30A Research Methods is also a core course for degree students. ER students attend five two-hour lectures on research methodology and design and AE students take a course on research while working on their project. In addition, the NIE Library (LIBRIS) offers short workshops and instruction on aspects of research.

While these courses and requirements offer transferable skills for research tasks NIE students undertake- there is a need for more comprehensive information literacy instruction which would aid in professional development and prepare teachers to teach skills to their students. Locally, the lack of information literacy (IL) skills of Singapore students has been researched (Yng, 2011; Chang, et. al. 2012; Foo, et. al, 2014; Tan, 2017) and the need for information literacy instruction for Singapore teachers has been noted (Mokhtar & Majid, 2006; Mokhtar, et. al. 2007, Mokhtar, et. al., 2008; Majid, Chang & Foo, 2016; Tan, 2017).

Specifically, this need has been noted for Project Work teachers (SEAB, 2016); Bryer, 2006, Mokhtar & Majid, 2006; Tan & Theng, 2006; Mokhtar, et. al., 2008; Pillai, Ellis & Tan, 2009; Lin, T., et.al, 2015).

Project Work (SEAB, 2016) is described as a “learning experience which provides students with the opportunity to synthesize knowledge”. Recent definitions of information literacy describe competencies which include media literacy (Farmer, 2016) and include many of the same elements as PW (evaluation, organization and communication).

*Table 1: Project Work: Learning Outcomes*

| <b>Domains</b>               | <b>Learning Outcomes</b>  |
|------------------------------|---|
| <u>Knowledge Application</u> | Students will acquire the ability to make links across different areas of knowledge and to generate, develop and evaluate ideas and information so as to apply these skills to the project task |
| <u>Communication</u>         | Students will acquire the skills to communicate effectively and to present ideas clearly and coherently to specific audiences in both the written and oral forms                                |
| <u>Collaboration</u>         | Students will acquire collaborative skills through working in a team to achieve common goals  |
| <u>Independent Learning</u>  | Students will be able to learn on their own, reflect on their learning and take appropriate actions to improve it.  |

(SEAB, 2016)

*Table 2: Information and Media Competency*

|                                     |   |
|-------------------------------------|---|
| <u>Access and Retrieval</u>         | Recognizing the demand for, being able to search for, being able to access and retrieve information and media content         |
| <u>Understanding and Evaluation</u> | Understanding, assessment and evaluation of information and media (includes organization)                                     |
| <u>Creation and Utilization</u>     | Creation, utilization and monitoring of information and media content (includes participation in societal –public activities) |

(UNESCO, 2014, p. 11. in Farmer, 2016)

## **Collaboration**

The collaboration described in this article between NIE ELL staff and PW teachers at a Singapore Secondary School (referred to as Vanda in this article) began in 2016 when the author took a four-month Staff Development Leave (SDL) from her position as a senior lecturer at NIE. The purpose of the SDL was to learn more about information literacy in teacher-training programs and four weeks (October 18 - November 20) were spent visiting universities in Australia with the aim of learning how their pre-service teachers were prepared to teach IL in the schools. In addition to learning about the Australian education context, one of my aims was to explore how IL could be better implemented in the Singapore schools. I wanted to know what challenges teachers faced in terms of preparing students for collaborative research projects; what strategies teachers used/challenges they faced in teaching independent research skills to students and how NIE could do more to prepare teachers in these areas.

Based on previous experience with the school (in 2014 I had been invited as a judge for an ICT teacher competition) I wrote to the principal of Vanda in February 2016 with my proposal and had a meeting at the school in September 2016 once my SDL had begun. The principal noted that an area teachers had previously discussed was the lack of IL skills in the teaching of PW and that they felt that they needed more background to teach it effectively. Another meeting was set up between the Project Work coordinators, myself and ELL colleague Dr. Anitha Devi Pillai in November 2016. Both Dr. Pillai and I have taught PW

and academic discourse skills. In addition, our doctoral research was in the areas of academic writing and information literacy respectively. The department was in the midst of revising their PW curriculum and they felt it would be an effective time to introduce a new unit on information literacy with the assistance of ELL staff. They felt that collaboration between ELL and Vanda should be in the form of teacher training before they started teaching the students. The decision was made to refer to the new module as Research Literacy (RL).

Initially, the new module was scheduled to start in May 2017, but due to external factors (the school was in a holding facility until it could be moved to new premises) and other delays it was finally decided to begin in July, 2018. Following subsequent meetings with school administrators, the Vanda PW team decided to teach PW as an intensive one-week Post-Examination program and that Research Literacy would be integrated into that one week as three one-hour lessons with the following specific learning outcomes:

- Learning about various types of sources
- Using search engines
- Evaluating search results
- Sieving for needed information
- Issues in copyright and plagiarism
- Making proper references and citations
- Representing information in appropriate genre/form

The ELL team met with the PW coordinators in early March 2018 and discussed specifically what would be useful for the RL modules. A subsequent meeting with Ms Mae Lim (manager of Learning Services at NIE LIBRIS) about frameworks for the teaching of source evaluation resulted in the adaptation of Currency, Relevance, Authority, Accuracy and Purpose for the RL module. This framework was chosen because of ease of use and ample online resources. Using Padlet (an online bulletin board) for the development meant that it would be easy to update and to demonstrate to the entire team of teachers. One Padlet was made which could be adapted as a lesson plan with students and another was made which was intended as a Teacher Resource page. Teachers could then choose and adapt what would be most useful for them and appropriate for the students.

ELL staff were invited to Vanda later in March and demonstrated the module to the PW coordinators who then subsequently showed it to the staff who would eventually teach the course. We were then invited back to answer questions from the team of teachers in April. Based on the meeting and our suggestions, lesson plans were developed by the teachers which were sent to us for comment. The teachers had taken our materials and developed three sets of lesson plans and resources. Each lesson was an hour long and the target students were from Secondary 1 Express, Normal Academic and Normal Technical and would be taught by two teachers. Lessons one and two used the Currency, Relevance, Authority, Accuracy and Purpose framework; Lesson one stressed finding information on the Internet and distinguishing between primary and secondary sources and Lesson two focused on using Google. The third lesson dealt with copyright, plagiarism and referencing. We returned with our comments later in the month and met the team of 14 teachers to give our feedback.

Implementation of the lessons began in August 2018: (Lesson 1 – Aug. 20- 23) and continued into September (Lesson 2 – Sept. 10-14); (Lesson 3 – Sept. 17- 21). Dr. Pillai and I observed six during lessons during this time (two each week) and as of October 18, 2018 are still

writing up observations which will be shared with the Vanda staff. We then plan to meet with all the stakeholders (PW coordinators, teachers and other administrators) to evaluate the use of the module and to make needed changes for the next time it will be taught.

### **Significance**

Many of today's students can use technology, but not necessarily for academic purposes (Farmer, 2016). As students are expected to do increasingly more complex research assignments, information literacy instruction is important (Ellis, 2009).

The need for information literacy instruction in Singapore has been highlighted earlier in this article and recently in the local news Loh, C.E. and Foo, S. (2018) "Fake news: Combating the larger challenge of information illiteracy."

### **Conclusion**

This collaborative effort between ELL and Vanda Secondary School staff is one example of how information/research literacy skills can be implemented into the Project Work curriculum. Schools wanting to increase information/research literacy for PW could consider the development of their own module based on this experience.

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