Action Research Programme

Summary Report

June 1, 2018

"The research we do at the local level - collaboratively - is what makes formal, outside research work. Outside research cannot be installed like a car part - it has to be fitted, adjusted, and refined for the school contexts we work in."

Mike Schmoker

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Reference to Literature

A growing body of literature, both in the education and business worlds, (eg. Gardner, 2017; MontielOverall, 2006; Hattie, 2015; Lance, Rodney, and HamiltonPennell, 2000) state that when professionals with different areas of specialization collaborate, the final result is superior to the result of an individual effort. This is true in our school communities, when classroom teachers and non-enrolling literacy specialists, teacher librarians and learning resource teachers. collaborate, the result is increased skill acquisition among students (Hattie, 2015; Haycock, 2007; Lance et. al., 2000). Yet despite this research, classroom teachers and literacy specialists still face many barriers to impactful collaboration.

This research paper examines the conditions needed to support effective collaboration between teacher librarians, learning resource and classroom teachers to develop students' intermediate literacy skill acquisition.

Information Gathering

In addition to a literature review, information was gathered from independent schools in the Lower Mainland and Vancouver Island, most of whom have small class sizes and well resourced libraries and learning resource centers. These schools are in the process of implementing the new provincial curriculum which has a strong focus on literacy and collaboration.

Planning

This paper was based on a qualitative research project conducted during one full academic year. Using grounded theory, we started with a question, gathered data and coded it to find themes and ideas. Data was collected and analyzed from two separate online surveys sent to ISABC educators. Personal interviews were conducted on site at two ISABC schools and were guided by a series of questions. The problem at the core of this research was how schools can create the necessary conditions for impactful collaboration between classroom teachers and non-enrolling literacy specialists to support the development of student's intermediate literacy skills. As these educators share a mandate to promote literacy skill acquisition it would seem that collaborating to pool their expertise and resources would be beneficial; however, our research indicates that collaboration is not common practice. Surveys and interviews investigated the benefits and barriers to collaboration.

Evaluating

Survey results indicated robust support for the teaching of reading, writing and resource skills and of the idea of collaborating with teacher librarians and learning resource teachers to support student's literacy skills. Yet despite this strong support, most schools do not have school wide collaborative plans on how to teach and assess this skills. Survey respondents indicated several factors that act as barriers for collaboration, the most common being a perceived lack of time, though when ask to elaborate on what was meant by lack of time, respondents were able to identify more specific factors that act as barriers against collaboration. Interviews were conducted at two schools, who self identified as having

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collaborative instruction and planning around literacy skills, and common themes were identified in these interviews.

Conclusion

Developing strong literacy skills in our students is an important mandate of both the new British Columbia curriculum and ISABC schools. Librarians, learning resource, classroom teachers and school leaders all have a significant role to play in the development of these skills. Effective collaboration, which systematically teaches, evaluates, remediates, and reinforces literacy skills, between these three stakeholder groups is the ideal but not the reality in the majority of schools.

 To create an ideal environment of collaboration several steps are needed:
1. Teacher-librarians, learning resource and classroom teachers should evaluate their level of collaboration based on the "Collaboration in Action" charts (Table 2).
2. If the collaboration level is low, teacher and librarians and learning resource may wish to jump start collaboration in their areas of intersect.
3. Teacher-librarians, learning resource teachers and school leadership can then make plans on how to "level-up" their collaborative work.
4. School leadership needs to evaluate their "collabor-ability" (Sharatt and Planche, 2016) and their skill in promoting collaboration by providing the rationale for collaboration, creating time and structures to support, with well-articulated roles, and modeling the way.

Schools that prioritize, plan for and support the growth of these factors will be the fertile soil from which collaboration can bloom.
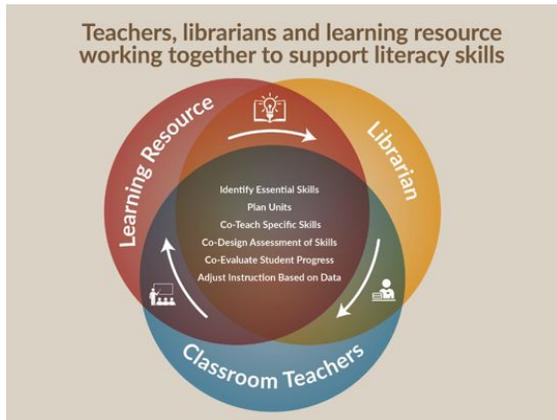
Fig 1. The Requirements for Collaboration   Fig. 2 Teachers, librarians and learning resources working together to support literacy skills

Reference to Literature

The subject of creativity has seen a resurgence in the literature associated with 21st century classrooms preparing students for the information economy workforce. (Aizikovitsh & Amit, 2009; Hathaway & Jaquith, 2014;

Howard-Jones, 2008; Huitt, 2007; McWilliam & Dawson, 2008; Robinson, 2015) There can be no current discussion on creativity in education without looking at the work of Sir Ken Robinson who popularized the notion of creativity in schools by delivering engaging and highly popular TED Talks (Robinson, 2006, 2020, 2013). His recent book Creative Schools (Robinson, 2015) is an argument against standardized testing and a celebration of the many instances of creativity that are springing from the grassroots, school by school, in education.

Information Gathering

With rapid changes in technology in a world of increasingly complex problems and economies, being able to think creatively will be essential to our students as they graduate into the workforce. How can we best prepare students for this change? Many thinkers believe that creativity will be an essential skill for students moving forward.

Teachers at ISABC schools were asked: What is your definition of "creativity"? What is your rationale for teaching creativity? How do you foster creativity in your students?

Planning

The first set of data was collected through a questionnaire sent to every ISABC school administrator, with the request that they pass it along to pertinent teachers at their schools. The form went out to 25 schools and a total of 37 teacher responses, representing 17 schools, were received.

The second stream involved gathering data on this topic at the Learning and the Brain Conference on The Science of Innovation, which mostly focused on creativity. The notes gathered from this event were similarly coded and summarized.

Evaluating

Both sets of qualitative data were coded and then summarized to cover three main areas: definitions of "creativity"; rationale for teaching creativity; and how creativity can be fostered in the classroom. The third and final section was further summarized to create a collection of "Creativity Routines".

Conclusion

I have learned that there are many activities and routines that teachers can implement in the classroom to help foster creativity amongst their students. The most intriguing to me is using walking to boost divergent thinking.

To test this out in my own practice I plan to use a mix of techniques from above, starting with some version of formative divergence assessment for my students (the 30 Circle or 100 Paperclip exercise). With a loose baseline of data, I will then regularly use the Walking for Creativity technique when students are generating ideas for their art projects. I will end the year with a follow-up divergence assessment to see if there has been any change.

The Learner Centred Band Room: The Paradox and Consequent Challenges of Learner Centred Band Teaching

by Ian Farish

Why is it important to consider learner centred approaches in band teaching? The routine of band rehearsals in middle and high schools has looked the same way across North America for many, many years. Are students learning or are they simply going through the motions and following my directions? Philosophically, the tenets of learner-centred teaching offer the answer: students are unique in their interests and what motivates them, are able to communicate their needs, are able to teach themselves, and they can be trusted with opportunities to direct their own learning. However, although teachers agree with the goals of student centred learning, the need for an orderly rehearsal seems to limit the possibilities.

While students in a literature class can chat, write, and collaborate in small groups to engage socially as learners, this is more difficult for musicians in a single room. Unless students are playing together, a music room becomes very loud and chaotic if students are asked to do their musical work on their own or with a partner. In this study I was able to modify my teaching to allow for student choice, increased formative assessment, social learning and creative projects.

My action items included the following: the use of new technology in the classroom for formative assessments; making allowances for learning-chatter (pair sharing and questioning versus adherence to strict silence); allowing discretionary practice at various moments in rehearsals (versus unison or individual teaching while others wait); making space in the yearly calendar for student creative projects; scheduling creative periods akin to Google's "20% time".

These actions were found to augment the learning goals of my performance program, and resulted in increased motivation and enjoyment by students.

Reference to Literature

Creating reflective students requires intentional instruction but it also requires a transfer of autonomy and mastery of content from teacher to student. Therefore, students can become more intentional in their own learning by teaching someone else. "When someone is expecting to teach, they process the information they're learning differently. They tend to seek out key concepts more actively, look for relationships between ideas and mentally organize the material in a more effective way" (Kageyama, n.d.).

Information Gathering

Question: How do students learn better by teaching someone else?

Pairing the best pedagogical theories with the realities of a 2nd language classroom can be a challenge. There is no substitution for an immersion environment or even daily instruction. Therefore, this requires language teachers to be creative about how to layer the content and provide the repetition necessary for acquisition, without appearing redundant or boring in only a few blocks a week.

What better way to build mastery than to have to teach to someone else? What if your success was measured by the achievement of those you had taught?

Planning

In collaboration with the Grade 3 French teacher, we determined a two week schedule where Grade 7 would come visit Grade 3 to observe, take notes, plan and carry out an assessment activity.

During visit 1, the Grade 3 French teacher introduced a new story (The Three Bears) to her class while the Grade 7 students took notes. Then each Grade 7 was paired with a Grade 3 buddy to help with a guided activity, first working on pronunciation and listening comprehension and then finishing with writing short answers.

Between visit 1 and 2, the Grade 7 students returned and had two classes to debrief and plan an activity in small groups. The class brainstormed 4 different study strategies (jeopardy game, gesture review, listening & drawing …) with corresponding practice activities and created any necessary resources.

On visit 2, we set up 4 stations where all Grade 3 students got to try each activity and respond to a short survey about which one helped them learn best. Grade 7 students filled out a survey about the process and how they feel it helped them.

Evaluating

Surveys from both Grade 3s (on the most useful activity) and Grade 7 (activity analysis and post-teaching reflection) helped reinforce previous anecdotal evidence. The Grade 7 survey demonstrated increased confidence, skills and metacognitive awareness around mastery learning.

Conclusion

Sometimes students make the best teachers and they can explain concepts to each other in ways that the teacher cannot. One-on-one guided cross-aged tutoring is an effective way to provide opportunities for repetition, rehearsal and reflection to encourage students to more actively engage in their own learning by being accountable to someone else. This practice is easily adaptable to suit different subject areas and age groups, provided your schedule will allow for it.

Female High School Students Talk about Women Composers:
A Qualitative Study
by Anne Bonnycastle

Context

An examination of repertoire played by high school and youth orchestras over the last ten years reveals every piece to be male-composed. Studies show that reflects the overwhelming prevalence of male-composed music in the repertoires of professional orchestras. This study explored the thoughts, feelings and perceptions of female, high-school orchestra students' about gendered repertoire: specifically their reflections after having spent a term playing women-composed music in orchestra class.

Evaluating

Twenty-two female students participated in conversational interviews (individual and in small groups). Data was transcribed and coded. The following themes emerged:

· every participant revealed a male schema for composers (in response to the request to "describe the picture that comes to mind of the word *composer*", all participants described a male);

· participants attributed the dearth of female-composed music in their own repertoire sets (and in orchestral performance repertoire in general) to historic social conditions that existed in the past and that (they said) do not exist today;

· participants were surprised and/or shocked at the low numbers of contemporary female composers in existence today, and struggled to explain this phenomenon;

· participants revealed low self-efficacy for composition: they described themselves as "not creative enough" or "not talented enough" to compose music.

Conclusion

Discussion pointed out that these girls failed to make a connection between the male-dominated musical world in which they are situated and their own disinclination to pursue music composition. Education regarding canon creation was clearly needed in order for students to understand that the concept "great composers" was created by a biased, historically situated process.

Reference to Literature

In Experiential Education there is common belief that we are doing 'good work' in transforming the lives of the students in our care but, in reality, without assessing the learning, how do we know? David & Alice Kolb, Dan Garvey, James Toole, educators at schools from ISABC, ISEEN, GEBG, NExT, and the Institute for Experiential Learning in addition to theoretical articles on Assessment of Experiential Learning from Ryerson, McGill and Northeastern led to the foundation and underpinning for further exploration, questions, and evidence.

Information Gathering

How do you assess experiential learning?

o How do we identify Experiential Learning programs that offer the greatest chance of a transformational experience for our students?

o What measures do we have to assess the impact of our Experiential Learning programs on our students as well as the communities in which they operate?

o What measures do we look for to assess the transformation of our students? What attributes are we looking to develop?

Educators do not have tangible evidence that verifies our belief of transformational experiential learning and we have little structured knowledge about what aspects of the experiences offer the most significant, lasting learning.

Planning

The basis for the gathering of information came via the literature and online material. Supported by conversations with learned colleagues within the education world of Experiential Learning. Ultimately, this led to the formation of the attached survey which has three areas: demographic information, open ended/anecdotal, selection from a list of know descriptors. This survey was trialed within my own school for refinement before being sent to various groups listed above of teachers, leaders, and researchers in the field of Experiential Education and Learning. Participants primarily involved people who work at the high school and university level.

Evaluating

There are many facets, layers and complexity. Of the 47 responders 83% were Independent School Educators. With regard to Quantitative Highlights the top three 'Soft Skills' that were intentionally delivered were Collaboration, Resilience, and Positive Attitude. Whereas the top three 'Intangible Skills' were Communication Skills, Leadership, and Teamwork. Regarding Qualitative Highlights: Curricular Goals, Real World Experience, and Character Development lead the list. Impact/Meaningful Relationships and Interest of Students were the highest motivations for selecting an impactful experience. Journals, interviews, and student engagement formed the essential measures of success and almost two thirds indicated both both interpersonal and intrapersonal skill development.

Conclusion

Summarizing the evidence gathered from the survey, specifically the top comments from various sections, the following would be intentionally included in the ideal experiential learning lesson:

- development of the top three soft skills: Collaboration, Resilience, Positive Attitude

- development of the top three intangible skills: Communication, Leadership, Teamwork

- an activity designed on predetermined Curricular Goals based in the Real World which developed Character while at the same time generated Meaningful Engagement and was Accessible to all

Then assess what you intended to teach, established a baseline through a pre-experience assessment, gather anecdotal evidence, allow time for processing, and witness the students applying the new skills in the future.

At the end of the survey the respondents were offered the opportunity to continue this discussion or not be involved further at this time - 70% of the participants indicated that they would welcome further discussion.

Reference to Literature

There is an abundance of research in the area of teaching high potential/high ability learners, and the information ranges from a focus on the challenges and reasons behind the lack of effective gifted programming, to successful and developed gifted programming in our schools today. The varying literature and research in this area provided much of the foundation of understanding that went into the development of this particular case study. Please refer to the full paper for details.

Information Gathering

The purpose of this case study was to gather information, research, and evidence on the topic of enrichment for high potential/high ability learners to determine how our school can best most forward with a strategy for addressing the needs of these students. In our investigation into how best to serve our high-potential learners, we asked a number of questions including: How do we meet needs of high potential learners in our classrooms? What is best practice? What would work within the financial, demographic, staffing etc. realities of our school?

Planning

As an International Baccalaureate (IB) school, Brockton is committed to teaching to diversity. As such, we want the enriched opportunities available to our high potential/high ability learners to be accessible to all students. In the past, Brockton used a pull-out model of enriched and gifted education. While this model was effective at challenging and engaging our most able learners, we questioned whether this approach was in line with the IB's philosophy of inclusive education and our school's commitment to teaching to diversity.

We began this project with a survey to our junior school staff which included the question: "To what extent do you plan for enriched opportunities in your curriculum design?". 75% of the staff who responded to the survey indicated that they sometimes (with planning) or sometimes (haphazardly) provided enriched opportunities in the classroom. Moreover, 87.5% of staff who responded to the survey indicated that " ...there is a need for gifted/enriched learning at Brockton School". The action research team worked with the teachers in Grades 1, 3, 6 and 7 to develop enrichment "toolkits" which seek to challenge our students' creative and critical-thinking skills. These toolkits consist of critical and creative thinking activities presented by Amy Burvall and Dan Ryder in "Intention: Critical Creativity in the Classroom" (2017). These activities are carefully linked to teachers' IB Units of Inquiry (UOI), but are not subject specific; they can be used in a variety of contexts.

Evaluating

The findings of our research and surveys were clear indications that providing meaningful challenge for our high potential/high ability students was an area for development within the school.

Conclusion

Any program we design must be adaptable and able to suit the needs of our student body as it changes month-to-month and year-to-year. As such, we are moving forward with a plan to support teachers as they extend their pre-existing Units of Inquiry and individual lessons by encouraging students to dig deeper into Primary Year Program (PYP) and Middle Years Program (MYP) curricula through the lenses of critical and creative thinking.

Reference to Literature

Mathematics education has always been concerned with helping students see how math is applicable to the world around us and some math educators are now becoming interested in using math as a tool to explore global issues (Alsina, 2002). There are several benefits to this approach, including helping students to develop quantitative literacy (Alsina, 2002), increasing student motivation (Turner & Strawhun, 2007), and helping students view mathematics as a useful tool that can be used to help them prove points and make sense of the world around us (Gutstein, 2006).

Most students solve math problems without considering their knowledge of the situation at hand and do not give realistic responses (Verschaffel et al. , 2000; Cooper & Harries, 2002). This behaviour is due to sociomathematical norms that students have developed throughout their schooling and the use of authentic problems can help to break these norms (Verschaffel et al. , 2000). Authentic problems are those that are based on a realistic scenario, involve real data, and are genuinely worthy of solving (Palm, 2008; Turner & Strawhun, 2007; Verschaffel et al. , 2000). When choosing a problem, teachers should look for topics that are familiar and relevant to students' lives (Verschaffel et al. , 2000).

Information Gathering

Our research question is: What would happen if students learned math through the theme of global water issues? We also included four sub-goals to define categories for our research: Teaching math through the theme of global water issues will:

● foster positive attitudes toward mathematics
● foster positive beliefs about mathematics
● allow students to consider real-world factors when problem solving
● allow students to learn about water-related issues

By teaching math and water issues together, we hoped to strengthen our students' abilities to perceive math as a useful tool for solving real problems, as well as see how the different math concepts were all interrelated.

Planning

We first taught this unit to three classes of grade six students during the third term of 2016-17; however, we did not conduct our action research until teaching the unit to this year's grade six students during the second term. Data was collected using pre and post surveys, discussion groups, anecdotal records, and from samples of student work. The comparison of the pre and post surveys enabled us to look for general trends in responses. Two rounds of discussion groups gave us interesting insight into students' perspectives towards our unit and the anecdotal data helped us keep

track of student commentary and behaviour during class activities. Finally, the samples of student work act as a record of how our students communicated their reasoning and logic while engaged in problem solving tasks.

Evaluating

Our findings suggest that our math and water unit caused some students to have a negative shift in their attitude towards math; we suspect this was due to the fact that the water topic was not relevant to their lives. In terms of helping students see how math can be used as a tool for understanding the world around us, our results were inconclusive. When given pencil and paper type activities, our students did not increase their ability to think realistically about problems; however, when problems were posed orally or discussed as a class, students were able to consider many real world factors. Furthermore, students showed a tremendous growth in their ability to state assumptions needed to solve problems. Lastly, along with learning math, students greatly increased their knowledge of water-related issues.

Conclusion

We found that this style of teaching was more meaningful and we grew to be even more passionate about our lessons. We also enjoyed the challenge of creating authentic tasks based on a non-mathematical theme and would like to use this teaching approach in the future, perhaps for even longer than one term. Since we found that our students did not relate well to the water theme, we are considering switching our topic to something that would be more familiar and motivating for our grade six students.

My action research project focuses on my personal journey as an educator, to enhance my pedagogical approaches that will equip students with skills needed for a future that is constantly changing.

My image of the child: All children are capable, curious learners that want to learn and grow. They need active learning and love novel ideas.

My guiding research question: How can I create a learning environment that promotes student empowerment of our youngest learners?

With this in mind, I explored the meaning of self-efficacy (belief in one's capabilities to organize and execute the courses of actions required to produce given attainments), empowerment (giving kids skills to pursue their passions, interest and future) (Innovator's Mindset), and group Dialogue (to strive to encourage children to talk among themselves and not being the hub of every conversation).

I started by listening to the children and stopped 'teaching'. I just listened to and documented their conversations, and tried to extend their ideas and thinking by asking questions. After playing with various ways of listening to children, documenting, and extending their ideas I then began to document the process of the learning. I realized that the most successful documentation was when I documented the ideas during our whole class conversations. The challenge was looking over their theories and ideas so that I could decide where we should go next.

In early March, a team of teachers from our school visited the Opal School (age 3-Grade 5) in Portland to explore how they invite, sustain and expand playful Inquiry. The importance of questions was evident immediately. Opal school teachers posed powerful, open-ended, and thought provoking questions that invited inquiry and wonder. This reinforced what I had discovered in my own documentation - that questions are important in driving inquiry. I wondered, how could I develop rich questions like those that were used at Opal school? I knew I needed the help of my 'team' to continue along this pathway.

Challenges:

- developing invitations based on the children's responses to activities and interests, instead of my expectations

- the need for more time to meet and share with colleagues to review ongoing documentation to get fresh perspectives

- figuring out how to use student interests that go outside of the 'theme'

- going slowly enough to 'hear' and interpret their theories and not worry so much about what we 'must teach'

- listening and not answering the questions for them or making judgements

- developing students' listening skills so they can be patient, wait their turn and have conversations without me

Successes:

- documenting the process of the theme and making it visible

- sharing the documentation with the parents

- understanding the importance of questions being open-ended and provocative

- realizing the importance of repeating a question throughout the unit so children can revisit and build on their thinking

- recording conversations of individuals at class discussion time

- revisiting my documentation to explore what the children were telling me

- understanding that loose parts require the 'right' question and materials

- using the question what's your intention? and then allowing the students to state their intention to choose their activity

This is only a beginning… I have so much more to learn and practice. My colleagues and I need to help each other interpret the documentation through conversations about each others' students. Sharing our ideas and documentation will enable us to look at the learning through different lenses, help us to become unstuck, and to know where to go next.

The results of this research impacts me as a whole teacher. I believe that the theories and ideas in my research are relevant for any teacher at any grade. We all need to focus on what is relevant for our students in a changing world. I believe that: teachers are researchers and designers of education and we need to listen to our students because they are the experts of their own learning.

Many thanks, to the Action Research Coordinators, Amrit Cojocaru and Noralea Pilgrim who have given so much of their time and wisdom over the past year. Your efforts are deeply appreciated.

Common Goals Uncommon Outcomes

ISABC

INDEPENDENT SCHOOLS

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