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# Exploring New Frontiers in Self and Peer Assessment

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# **EXPLORING NEW FRONTIERS IN SELF AND PEER ASSESSMENT**

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*Inspired by the goal to lead teacher learning and development in language and literacy in secondary humanities, educational leaders from three Alberta school jurisdictions are working together to create a network of research, improvement and innovation in writing instruction and assessment. Drawing from current leadership, literacy and instructional research, this paper presents a collaborative journey in developing innovative strategies in peer and self-assessment of writing. Clear instructional leadership goals saw the emergence of a technology application for peer and self-assessment that is developed locally in Alberta with and by teachers to meet the unique and changing needs of Alberta students.*

## **INTRODUCTION**

The benefits and power of feedback on improved student competencies and learning outcomes have been confirmed through a number of studies and meta-analyses (Kluger & DeNisi, 1996; Hattie, Biggs,

& Purdie, 1996; Hattie, 2009, 2011; Hattie & Timperley, 2007). Subsequent attention on a broadened conception of peer assessment as a viable means for providing feedback accompanied by self-assessment, is receiving renewed attention for its potential to improve student self-efficacy, learning, and achievement (Topping, 2009, Andrade & Valtcheva, 2009; Sendzuik, 2010; Panadero & Alonso-Tapia, 2013; Panadero, Romero & Strijbos, 2013). Though these evidence based studies attest to the value of peer and self-assessment, the practical logistics of finding and implementing efficient and effective classroom strategies continue to challenge educators and researchers alike. In addition, providing students with feedback does not ensure that action by the student will be taken since action presumes that students understand what they need to do.

Innovative learning and teaching practices present unique challenges of their own, notably the need for teacher professional learning and support in classrooms. Leadership practices play a key role in guiding teacher learning and development for high quality learning (Robinson, 2011). Teachers who see leaders as deeply involved in collaboratively analysing student learning needs and committed to developing teacher capacity in instructional strategies to meet those needs, are empowered to lead change in their own classrooms: “The most powerful way that school leaders can make a difference to the learning of their students is by promoting and participating in the learning and development of their teachers” (Robinson, 2011, p. 104). This paper describes how leadership practices led to increased teacher collaboration between subject discipline areas (social studies and English) and change in how writing was taught and assessed in senior high classrooms. This change in learning and teaching strategies led to the development of an innovative technological application (*PeerVision*®) that attempts to address some of the complexities as well as barriers to implementing peer and self-assessment strategies.

## **LEADERSHIP OF TEACHER LEARNING**

AISI Cycle 5 provided the opportunity for drawing together three school districts in the goal of improving high school writing instruction and assessment through interdisciplinary learning. The first step was to draw high school Social Studies and English Language Arts teachers together to look at shared goals, common elements of persuasive writing between discipline areas and consider how collaborative practices could enhance student understanding of learning outcomes and competencies. Teachers and department heads were consulted by district senior leaders and invited to information sessions. “Buy in” surveys were conducted to determine next steps. Based on positive feedback, a research oriented professional learning plan was developed with clear, straightforward goals and timelines.

Robinson’s student-centered leadership principles, five dimensions supported by three leadership capabilities (2011, p. 16), were the drivers for planning and action. Time was spent building relational trust prior to the development of instructional goals guided by dimension three - a coherent instructional program (pp. 84-101). Teachers were assisted to develop a common instructional framework representing coherence within and between grade levels in the two discipline areas, reinforcing the same ideas, using similar vocabulary, linking with previous learning and guided by common assessments. Two student learning goals were selected: to improve student critical thinking leading to increased competencies in persuasive writing; to improve student engagement through a more interdisciplinary approach in senior humanities (social studies and English). Instructional goals focused on teacher collaboration in creating a common instructional framework comprising curriculum, instructional strategies and assessments that are coordinated within and between grade levels. Funding was secured to support release time for teachers to attend professional learning sessions facilitated by an external researcher. District learning coaches, who also attended the sessions, functioned as a bridge between teacher learning and implementation of strategies in classrooms, working alongside teachers

with students. Feedback surveys were conducted after each learning session and teachers participated in the ongoing planning for professional learning.

## **STUDENT SELF AND PEER-ASSESSMENT**

While feedback is clearly the most effective formative assessment strategy (Hattie, 2009), its conceptual construct is not straightforward. Hattie and Timperley (2007) provide a deeper explanation than can be covered in this paper but in summary, feedback provides information to students about their performance and can be understood as teachers and students asking and answering three feedback questions (Hattie & Timperley, 2007): Where am I going? How am I going? Where to next? When feedback is utilized by the learner to restructure knowledge, whether it be domain based or metacognitive (Winne & Butler, 1994 in Hattie, 2009) then it is best understood as intertwined with instruction: “the process itself takes on the forms of new instruction, rather than informing the student solely about correctness” (Kulhavy, 1977, p. 212). Feedback does not have to come from the teacher alone – and this is particularly important when considering the realities of timeliness and large class sizes. Feedback from peer review has multiple benefits; not only are students receiving information regarding performance that generates change, there is learning for the student and teacher inherent in the process itself (Topping, 2009). However, the success of the strategy relies on students developing their own personal competence in complex appraisal as well as possessing fundamental conceptual knowledge: “what is required is not peer assessment as routine activity or busyness but purposeful peer assessment that is designed with a clear pedagogical intent, namely to provide students with practical experience and a body of conceptual knowledge” (Sadler, 2010, p. 541). *PeerVision*® is a technology solution that assists with developing student competence in self and peer assessment while at the same time providing support with the domain specific conceptual knowledge base needed for the appraisal process.

## **THE INNOVATION**

Clear instructional leadership goals set the stage for the creation of a technology application developed locally in Alberta with and by teachers to meet the unique and changing needs of Alberta students. *PeerVision*® arose from a non-digital strategy for peer and self-assessment that transformed the writing rubric, an instrument used primarily for summative assessment, into a formative assessment tool. The Annotated Instructional Rubric© (AIR) is a construct that ‘operationalizes’ the category descriptors within the rubric, providing students with the language for appraisal as well as specific directions for re-envisioning and re-working prose. The development of AIR was found to be a powerful tool for student engagement in peer and self-assessment of writing, providing students with ready access to the language for learning in order to provide effective feedback. Results from student surveys and reflections revealed that students felt empowered to analyze their own and peer writing, to take ownership for their work and developed awareness of self as writer thereby regulating and personalizing their own learning (de Leeuw, 2011).

Reinventing this strategy as a web based application further enhanced the application of the non-digital strategy. Figure 1 below provides a visual representation of the process. Students are able to engage asynchronously, anytime from anywhere; the application is housed on local or school servers and provides a safe and secure environment for anonymous peer review of written assignments – student information is protected; student self-assessments are visible to the teacher but not to the peer reviewer; the application has built in scaffolding for assisting students with the language for appraisal while also providing flexibility for creating student generated reflective comments; there is flexibility in the number and order of peer reviews as well as multiple opportunities for re-envisioning written work; students receive anonymous feedback from peers as well as feedback and/or summative assessments from their teacher; there is teacher capacity to create peer review groups (not visible to students) within a class.

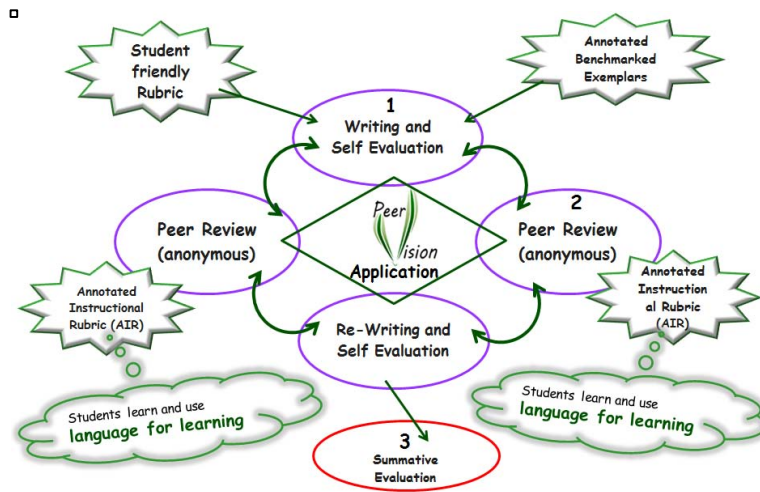


Figure 1: Visual Representation of *PeerVision*® Strategy

## CONCLUSION

Next steps involve gathering more feedback from students and teachers as to the effectiveness of *PeerVision*® in improving student engagement, motivation and achievement. Qualitative and quantitative perception data will be analysed as well as standardized assessments. Future goals for *PeerVision*® are to broaden its application to a wider range of learning tasks and age groups and to utilize learning analytics to assist students and teachers with developing targeted learning and teaching goals. Learning analytics is an emergent field of research that aspires to use data analysis to inform decisions empowering students with the capacity to create personalized learning goals and plans in critical thinking and writing. An interface for teachers to create their own annotated instructional rubrics is underway.

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