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5-31-2005

Whatever Happened to Lisa Simpson? An Exploration of Female Adolescent Development through Problem Based Learning

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Recommended Citation

Perrault, Amy, "Whatever Happened to Lisa Simpson? An Exploration of Female Adolescent Development through Problem Based Learning" (2005). *Critical and Creative Thinking Capstones Collection*. 237. https://scholarworks.umb.edu/cct_capstone/237

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Step 6: Analyze the Results

Regardless of the outcome of my initial investigation, I cannot simply take it at face value. As a practitioner of PBL I must continue to employ all the methods of good critical and creative thinking as I review my own work. I can begin by asking whether I have exhausted all of the resources at my disposal, whether I have dismissed any information unfairly, or on the contrary, accepted information without viewing it critically. Once I am satisfied that I have done my best to treat the results with a critical eye, I can begin to move forward and share them with my colleagues as I recommend solutions. Answers are a wonderful product, but in the PBL model, are in no way an *end* product at this stage.

At this stage of my exploration I am still in the midst of step 5, as much of the information I would like to acquire and the methods required to do so extend beyond my capabilities and time constraints for this project. In order to truly investigate the relevant issues in greater depth I will need a more hands-on approach. I can begin to move forward by examining the research that is emerging from public single gender schools and compare it to what exists at present, but much of the qualitative data that I am seeking in my KNF chart will involve developing relationships with others and encouraging stakeholders to join me in this process. Ideally my first step from here will be to conduct a pilot survey within my own single-gender school in hopes of establishing some basic information from which to expand my work. Qualitative data, something that I have identified as pertinent but lacking in the current literature, can help me to further identify layers of this problem and avenues that I can explore.

Using the data I hope to obtain from a small survey in my own school will allow me to engage my colleagues in the discussion around these issues and gauge their interest in helping me to proceed with my investigation. One key to successful problem solving in the PBL model

is bringing in stakeholders, those who are invested in the problem or target population; if I can build a core group of people to join me in the continuation of my work I can create a more complete PBL experience through interaction and feedback. This basic set of results, alongside contributions from others who will hopefully join me in my investigation, will be the stepping stone for the remainder of my project

Potential Solutions and Communicating the Results: Recommendations for the Future

Having taken the information from my analysis so far, the next steps would be to make recommendations for where this process should lead, and to communicate them to those who may be affected by its outcome. One of the most important facets of PBL, as outlined earlier in step 9, is the sharing of information. Though I may not have found a solution in the strictest sense of the word, the conclusions I reach at the end of my investigation may provide insight into the next step that should occur in my own analysis, and may guide someone else's research toward new insights. Regardless of whether it is my own work or another's that may be influenced, this generally occurs in steps 8 and 9 of the PBL process, and it involves using tools similar to those of the problem finding process in step 3. In addition a number of other tools like SCAMPER (see Eberle 1971) and How-How Diagrams (see Greenwald), help to expand upon any potential solutions or means of exploration.

Regardless of the ultimate outcome of my investigation, as a PBL practitioner one of my goals, indeed one of my obligations, is to communicate my results with those who share an interest in this messy problem. Sharing information is key to any successful PBL process because it *sustains* the greater process, creating new insights that others may take back to their own work to help them move beyond roadblocks or problems that they have experienced. My findings may provide the *A-HA!* moment for another colleague's work and she may someday do the same for me as she begins to explore new ideas or avenues of the same problem. This level of interconnectedness of PBL problems, while being one of the deepest challenges of the process, also may be one of its greatest assets, and can only be utilized through the communication of results. This is often accomplished through the publication of one's findings,

but engaging others to join in the process, as suggested in step 6, is another means of achieving the desired result.

I have made significant progress toward achieving my goal of successfully exploring the interaction between single gender schools and female adolescent development, but I am far from being finished. At this step of the process I would make the following plans and recommendations for my own future work and for anyone else interested in the process;

- To expand the PBL process to my own school (using a small qualitative survey, for instance) in an effort to begin more hands-on research to supplement the literature I have
- To contact others with an interest in this field, including teachers at other schools, and researchers in education and psychology, to get a feel for the current state of these issues
- To engage my colleagues in my work by sharing my results thus far and encouraging them to work with me on an exploration of our own population of students and how they relate to these issues
- Eventually, to engage my *students* in this process as a new group of stakeholders who have yet to be truly included in the exploration of these issues in hopes of gaining a new perspective into the problem

Though I have a long journey ahead of me I am encouraged by the progress I have made so far and I feel as though I have learned a great deal, not only about the problem I chose to explore, but about my own ability as a critical and creative thinker and how it impacts me in this process. I am looking forward to the next steps in the process and the insight they will bring.

Evaluation and Self-Assessment: What Have I Learned?

What sets problem-based learning and other creative problem solving methods apart from traditional forms of research is their focus on evaluation. Throughout the process, practitioners evaluate what they are doing and revise their process in light of what they have learned. As new information arises, ideas are revisited and changes are made to focus areas and/or directions for further exploration. At no point does the process become stagnant because practitioners do not continue to move ahead without looking at where they just were. Progress for its own sake is irrelevant; sometimes the wheels of the machine grind to a halt because the direction of the analysis is wrong, and it is time to go back to the drawing board. Rather than seeing this as a setback, PBL practitioners view this adjustment as a key tool in their exploration. Richard Harris even suggests that, at no point would a creative problem solver take on the mindset “that ‘if it ain’t broke, don’t fix it’ . . . [because] ‘there is no such thing as an insignificant improvement’” and anything that enhances the process should be welcomed and explored (2).

In my own analysis of female adolescent development, I have employed the PBL model of creative problem solving to help uncover new ideas and directions for further study. Though I have not *solved* the problem, in the strictest sense of the word, my investigation has provided me with a number of positive outcomes—a new understanding and appreciation for creative problem solving in general, and PBL specifically; a new perspective on female adolescent development, a better understanding of the role of single gender schools, and a series of new questions that I may want to explore in the future. My own understanding of critical and creative thinking has been enhanced because I have experienced it firsthand through this process, and I have a strong desire to engage my colleagues in further exploration of the same issues. It is this last outcome that will drive my future endeavors.

I believe that I have only begun to explore this issue in all its complexity, but I am excited by what I have found so far. I have learned a great deal about my own abilities as a PBL practitioner, about the needs of my students, and about myself as a critical and creative thinker. I know that I have a significant amount of work ahead of me but I have established a strong foundation for the rest of my exploration.

CONCLUSION

In closing, it appears from my investigation so far that the challenges facing female adolescents today have a significant impact on their growth and development, and that the role of their schools can potentially be an asset for dealing with this critical time in their lives. At the same time one can argue that unless students begin to understand the issues themselves, no amount of research, problem-solving, or policymaking can adequately address these issues. Knowing that problem-based learning is most successful in a group setting where participants are stakeholders in the problem they are exploring, one of the next steps in my process may be to expand this analysis to *include* female adolescents and the people who have daily interaction with them, like parents and teachers. Taking much of the information I have gleaned from this basic example of how to progress through the problem-based learning model, I can continue to explore it in much more depth with those whom it directly affects—most importantly students, but also parents, teachers, and school administrators. Inviting stakeholders who have a vested interest in the outcome of the analysis to actively participate in helping to address the problems that young women face today may provide new perspectives that I had yet to uncover as an individual problem solver and that will help bring new ideas to light. It may also be the means of finding a new direction that leads to the answers that I have searched for throughout this process. My goal, then, is to continue the process with the knowledge I have gained and a new appreciation for the role that adolescent girls and their families may play in unraveling this mystery. My own school can serve as a testing ground for my preliminary findings and from there, anything is possible.

Given the findings I have made and the frame of reference that I have in my own school, I would begin the next phase of my work by doing two things: inviting my colleagues to share in my findings and provide feedback to me, and conducting a small survey of my own students. Each of these, as I mentioned previously, has its own benefits for the process. Many individuals who choose to work in single gender environments, in my experience, choose to do so because they believe in what the environment has to offer. That intangible belief in what each of us does is a powerful factor that may shed new light on the issues embedded in this problem. By gathering a cohort of interested stakeholders, I can then initiate steps to begin my own qualitative research knowing that others are eager to find answers to these questions and help our students become happy, well-adjusted young women. The one aspect of the PBL process that I missed as an individual researcher was that constant feedback from others and the fresh perspectives that multiple practitioners would bring to the table. While it does not discount the work that I have done, being an individual completing a process that is ideally suited for a team may have limited my findings. By including my colleagues, and hopefully my students and their parents at a later date, I can take part in a more thorough PBL process.

Finally, this project is a culmination of three years' of master's course work and more than five years of my life's work with adolescent girls in the Boston area. It has given me new hope for how we as a school community can meet their needs, and how we can help them take ownership of the process by including them in it. I hope that the completion of this project and the dissemination of my findings to my colleagues and students will energize them to join with me to continue my work. The future looks bright, and Lisa Simpson would be proud!

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