Northwest Journal of Teacher Education

Journal of Educational Practices

Contents

Northwest Association of Teacher Educators

NWATE (Northwest Association of Teacher Education) represents a network of educators engaged in discussions and collaboration about teacher education in the Northwest region, with members in Alberta, Alaska, British Columbia, Idaho, Montana, Saskatchewan, Washington, and Oregon.

This association is an ideal opportunity to get involved with other educators concerned with similar issues in our field. This includes in-service and preservice teachers, field supervisors, teacher preparation educators, undergraduate and graduate education students.

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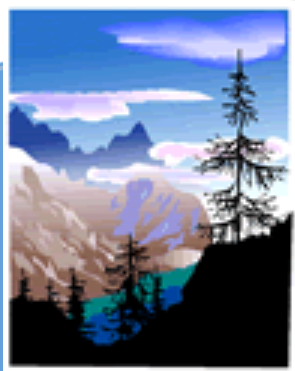
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Graduate Student, Western
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Northwest Journal of Teacher Education, formerly the Northwest Passage, is published twice a year in the spring and fall by the Northwest Association of Teachers Educators. The journal is published to stimulate lively discussions, contribute to timely educational practice and provide a forum for scholarly writing.

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Call for Manuscripts for the Northwest Journal of Teacher Education

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Submission Deadline: August 31, 2013

As you can see from the articles included in Volume Eleven #1, the editors of the Northwest Journal of Teacher Education believe teacher education is a broad, engaging area. We are pleased to accept papers on any topic in that broad area of teacher education. However, for this issue, we throw out a challenge: we are specifically interested in teacher education programs. In recent years, the range of models for teacher education has expanded to include a variety of alternative routes in addition to more traditional programs. For example, as a Visiting Professor at the University of Canterbury in New Zealand this year, Jim met programs for teacher education that were largely online. How an online format influences teacher education programs remains to be seen.

The variation in teacher education programs provides opportunities for teacher educators to compare and critique teacher education program models as we consider how to best prepare preservice and inservice teachers. What we know is that research comparing teacher education program models has not been particularly fruitful, and teacher education program choices remain largely philosophy informed by research. Boundaries between program models are blurred, and the influence of context seems to have been ignored.

If we are asking the wrong questions, what are the right questions? Instead of asking which program model is most successful, perhaps we should ask:

"What specific program features are important for educating the kinds of teachers we need? "What relationships exist between program features and teacher outcomes?"

"What programs features best prepare teachers for particular contexts?"

"How have changing conditions, policy shifts, labor markets, and institutional needs impacted teacher education program structures and practices?"

In our second journal edition of 2013, we wish to highlight the issue of Possibilities of Teacher Education Programs. We encourage NWATE members, and others, to weigh in on this topic – in whatever manner you wish.

GENERAL ARTICLE REQUIREMENTS

- Cover Page – The title should be in 14 point, bolded, italicized, in Times New Roman, and centered on the cover page with authors' name(s) and rank four spaces below the title in 12 point and centered. Include institutional affiliations and authors' e-mail addresses.

- Abstract Page – All manuscripts should include an abstract following the title page. Include the title of the article above the abstract. Limit the abstract to approximately 150 words or less, single-spaced.

Body of Manuscript:

- Use APA guidelines in preparing the manuscript. See http://www.apa.org/journals/faq.html for formatting information.

- The NJTE accepts manuscripts of varying lengths – if length adjustments are required, the editors will contact authors.

- Leave a single space before and after headings.

- Use 12 point font size.

- Use Times New Roman font.

- Use 1″ margins throughout the document.

- References and citations should also be prepared using APA guidelines. All table, appendices, footnotes, and bibliographic information will be placed at the end of the article in 12 point Times New Roman.

Please also add this line to your email: This manuscript represents original research and is not under consideration for publication in any other journal, conference proceedings, book, or encyclopedia.

Please submit all articles for submission consideration to nwate@shaw.ca

In this Edition of the Northwest Journal of Teacher Education

Jim Parsons, Editor
University of Alberta

Bonnie Stelmach, Editor
University of Saskatchewan

This is the first edition of the Northwest Journal of Teacher Education from new co-editors Bonnie Stelmach, from the University of Saskatchewan, and Jim Parsons, from the University of Alberta. We wish to thank Andrew Kitchenham, from the University of Northern British Columbia, for his stellar service as the previous editor. We also wish to thank Kurtis Hewson, from the University of Lethbridge, for his work in formatting this issue in his role of Director of Communications for NWATE.

This issue of the journal concentrates on presentations from our 2012 Annual Conference held in Edmonton, Alberta, Canada. At this conference, we created a broad definition of teacher education – one we believed helped push a creative, future agenda in our area. In this edition, you will find seven articles that span all areas of teacher education.

First, Kathleen Cowin, from Oregon State University – Cascades Campus, shares her research in an article "A Call to Action: What Student Teachers Can Teach Us." Her qualitative study focuses upon survey data, collected from student teachers in a graduate level university initial teacher program, to illuminate student teachers' experiences with cooperating teachers during student teaching internships. Her paper recommends using the comments and resulting themes for a cooperating teacher education and development program.

Second, in their article "Making the Grade: Examining Teacher Education," Kurtis Hewson and John Poulsen, from the University of Lethbridge, argue that the quality of a teacher's educational training program is of paramount importance and believe the elements of quality teacher education programs are not commonly agreed upon. Their paper examines a pre-service education model developed at their own university to help students assess both their strengths and areas they should work in the mirror of government standards. They offer a reflective tool that attempts to increase program coherence.

Third, Colin Saby's and Clive Hickson's, from the University of Alberta, article "Time for 'Positive' Transformation in Teacher Education" outlines some of the stresses of teaching to make a case that educational institutions should help create positive spaces that promote student and teacher wellbeing. They define and outline the goals and values of Positive Education and suggest how Positive Education can foster both wellbeing and academic achievement, help teachers rise to the challenges of their profession, and help students flourish and learn.

Fourth, in the article "Enhancing Understanding: Clarifying Teacher Mentor Roles in the Education of Pre-Service Teachers," Lorraine Beaudin, from the University of Lethbridge, shows the ongoing need for clearly communicating practicum roles and responsibilities among stakeholders to new Teacher Mentors and outlines how the University of Lethbridge's Faculty of Education's Educational Partners Orientation Program (EPOP) helps clarify what it means to mentor pre-service teachers in their internships.

Fifth, Mildred Masimira, a PhD student at the University of Alberta, writes about her experiences "Negotiating Liminal Spaces: Purposeful Pedagogy in Diverse Classrooms." Her paper explores her life as an African immigrant in North America where she inhabits and negotiates life as a person "in-between" worlds. Her discussion draws from personal experiences, postcolonial, and feminist theories to suggest how teacher education can create purposeful pedagogy that considers the changing demographic face of our classrooms.

Sixth, in "Building a Teacher Education 'To Do List,'" Jim Parsons, Larry Beauchamp, and Kelly Harding, from the University of Alberta, synthesize their own recent research in the area of in-service teacher professional learning to suggest possible improvements to pre-service teacher education programs. They generate a "To Do List" of six activities they believe would help pre-service education programs engage instructional activities and pedagogies that can become essential foundations to help build more powerful teachers and help teacher education programs educate teachers for effective careers.

Finally, in "Scientism, Philosophy and Brain-Based Learning," Greg Nixon uses brain-based learning as an example of the scientism he sees invading education departments and schools without critical dissent. In Greg's words, teacher educators are beginning to function within the unquestioned, "self-evident" paradigm of biological or computational reductionism (scientism). Scientism is a worldview or ontological construction whose truth value cannot be proven; therefore, Greg insists we should not blindly follow it without considering the ways in which human community is being constricted and how to interrogate the worldview within which we teachers and teacher educators work. For Greg, paradigm questioning is germane to curriculum theory and critical self-reflection lest we labor in the trenches, doing what is expected of us, without pausing to wonder why.

A Call to Action: What Student Teachers Can Teach Us

Kathleen M. Cowin
Assistant Professor
Teacher and Counselor Education
Oregon State University – Cascades Campus
Bend, Oregon
Kathleen.Cowin@osucascades.edu

Abstract

This qualitative study uses six years of survey data, collected from student teachers in a graduate level university initial teacher licensure program, to illuminate student teachers' experiences with their cooperating teachers during their student teaching internship. The data, comments made by student teachers about their experiences with their cooperating teachers, were used to answer this research question: What are student teachers telling us about their experiences with their cooperating teachers? Using the constant comparative method of qualitative analysis (Glaser & Strauss, 1967) the survey data consisting of answers to the open form question "My cooperating teacher could have been more helpful to me by . . ." was analyzed and coded revealing six themes. Examples of student teacher comments are included. The paper concludes with recommendations for using the comments and resulting themes for a cooperating teacher education and development program.

Introduction

The cooperating teacher is an integral part of the pre-service teacher preparation process. However, cooperating teachers often have not received formal preparation or education for serving in their multiple roles as mentors, coaches, and evaluators, beyond their own experience of being a student teacher or having hosted a student teacher previously. In this paper I will focus on the primary question: What are student teachers telling us about their experiences with their cooperating teachers? Through a review of the data routinely collected by our teacher education program, I will report what student teachers are saying about their experiences with their cooperating teachers to further our goal of better preparing cooperating teachers for their role, and to facilitate the development of the cooperating teacher-student teacher relationship.

Justification for the Study

Mentoring continues to be a part of early career induction for PK-12 educators. Much of the literature on mentoring in the PK-12 setting focuses on support and retention of early career educators (Darling-Hammond, 2001, 2003, 2005; Feiman-Nemser, 2003; Huling & Resta, 2001; Huling-Austin, 1990; Little, 1990; Moir, 2009; Moir & Gless, 2001; Odell & Ferraro, 1992, Odell & Huling, 2000; Strong, 2005). Wang, Odell, and Schwille (2008) reviewed the literature since 1997 on teacher induction effects and called for further study "to conceptualize the dispositions and skills that mentors need to influence beginning teachers' learning and teaching" (p. 146). Heeding this call, I focused my investigation on the role of the cooperating teacher who works with a pre-service (student) teacher in an initial licensure program.

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Contextualizing the Study

To contextualize the study, I will provide the following operational definitions and explanations of our university's teacher preparation program: A cooperating teacher is an inservice teacher who has completed at least two years of successful inservice teaching and is selected to work with a pre-service (student) teacher in a university based initial licensure preparation program. A student teacher is a teacher candidate for initial state teaching licensure who is in our university's 15 month Master of Arts in Teaching (MAT) degree and Licensure Program.

Our university academic year is divided into four 12 week segments: fall, winter, spring and summer. Each candidate begins the early childhood and elementary MAT program taking introductory courses in teaching methods and strategies (pedagogy), human development, educational history and research during the first summer term. In fall and winter terms the candidate then takes additional methods courses in teaching specific curriculum areas such as mathematics, science, language arts and reading, and also completes two part-time student teaching internships in two different schools at two different grade levels. The spring term consists of one course focused on preparation of the teacher work sample, plus full-time student teaching in which the candidate returns to the classroom (same school and grade level) from fall term. In spring term, candidates work alongside their cooperating teachers the same hours and schedule, moving gradually to assuming the full responsibilities for the class for three full weeks during the term. The final summer term concludes with the completion of the candidate's Master's thesis and oral examination. The candidate then graduates from the program with a Master of Arts in Teaching degree and initial state teaching licensure in both early childhood and elementary education.

Review of the Literature

Killian & Wilkins (2009) describe three factors of highly effective cooperating teachers as "(a) being in the midrange in number of teaching years, (b) having supervised more than five earlier field experience students, and (c) having closely collaborated with the university supervisor" (p. 67). Glenn (2006) posited five actions that effective cooperating teachers model in a study of two pairs of cooperating teachers and their student teachers made from her vantage point as their university-based student teacher supervisor: collaborating rather than directing; relinquishing an appropriate level of control; allowing for personal relationships; sharing constructive feedback; and accepting differences (pp. 89-93).

Kitchel and Torres (2007) explored the many factors in matching student teachers with cooperating teachers - especially how the relationship between the student teacher and cooperating teacher was perceived to affect the student teaching experience. Their study of student teachers in an agricultural education program used data from the Mentoring Relationship Questionnaire and the Myers-Briggs Type Indicator (p. 15).

Rajuan, Beijaard and Verloop (2007) examined cooperating teacher expectations of student teachers in the early part of the development of their relationship. This study used five "categories of orientations" to discover cooperating teachers' underlying values and beliefs about teaching and teacher education. These five orientation categories used by Rajuan et al. (citing the work of Calderhead and Shorrock, 1997) were academic, practical, technical, personal, and critical (p. 225). Rajuan et al. reported that understanding the differences and similarities of both the orientations of cooperating teachers and their student teachers and how these differences and similarities can affect how the relationship develops can provide insights into how cooperating teachers mentor (p. 227). The close examination

of both similarities and differences also provided insights into both satisfactory and unsatisfactory self-reported experiences by cooperating teachers and student teachers. The study concluded that particular orientations, when aligned between cooperating teacher and student teacher, contribute to "satisfaction with the mentoring relationship" (Rajuan, et al., p. 238).

With these studies as a backdrop, I began to further consider the data we collect in our program from student teachers and cooperating teachers and how that data could inform our practice as teacher educators. Although I believe these studies each provide a manner in which to better understand the perspectives and orientations of the cooperating teacher, the study by Rajuan et al. (2007) pointed out to me that the student teacher's voice is often not heard or is minimized. From the routine data collected after each student teaching experience is completed, I set out to examine what student teachers in our teacher preparation program were saying about their experiences with their cooperating teachers. This data will be reported following an introduction to the theoretical underpinnings for the study.

Theoretical Underpinnings

In a review of six years of evaluative survey data collected about student teachers' experiences with their cooperating teachers in my university's teacher education program, I noted that student teachers provided frank and concise summative comments about their experiences with their cooperating teachers. I saw these comments as a way to give voice to the student teachers' experiences with their cooperating teachers. Researchers Wang, Odell and Schwille (2008) completed a literature review from 1997 focusing on induction practices of beginning teachers and called for additional teacher induction research related to

mentoring relationships (p. 148). Wang et al. citing Rolheiser and Hundey (1995) also noted connections between pre-service teacher experiences and beginning teacher induction stating, "the collaborative norms and dispositions that beginning teaches develop in their preservice teacher programs contribute to their learning to teach in the induction period" (p. 147). Wang et al. called for additional case studies "to further conceptualize the dispositions and skills that mentors need to influence beginning teachers' learning and teaching" (p. 146). The work of Rajuan et al. (2007) used focus groups to illicit data on the role of the cooperating teacher. Examining the methodology of Rajuan et al. and heeding the call of Wang et al. for additional case studies, I began to closely review the survey data our student teachers had provided about their cooperating teachers to more fully understand the student teachers' perspectives as to the dispositions and skills that their cooperating (mentor) teachers exhibited, or failed to exhibit, during the student teaching experience.

Methodology

Data Collection Schedule and Sample Instrument

Surveys completed by six cohorts of student teachers at the end of winter and spring terms, in academic years 2006-2007 through 2011-2012, were used as data for this paper. This survey was developed by the university's College of Education for use in licensure programs. It must be noted that the form's rating changed once during this six year period. Copies of the programmatic survey form used by student teachers to evaluate their cooperating teachers are included in Appendices A and B. Individual student teacher survey responses are not made available to cooperating teachers, and the student teachers are made aware of this when they complete the survey.

Data Presentation

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Although a comparison across the two forms of the survey is not possible due to the change in rating scales, it is important to note that there is no statistically significant information that the closed form data provided. In addition, because this data reflects the overall scores for cooperating teacher evaluations from only six cohorts of student teachers, there is not a large enough sample to perform a more in-depth statistical analysis.

As discussed in the earlier literature review (see Kitchel & Torres, 2007; Rajuan et al., 2007), when student teachers are satisfied with their relationships and experiences with their cooperating teachers, these student teachers tend to rate the student teaching experience, and their cooperating teachers, positively. In the case of our programmatic data, student teachers who were satisfied with their relationships and experiences with their cooperating teachers tended to rate the cooperating teacher with all the same high numerical rating scale level. For example, in Cohorts 1-3, which used a rating scale of 0-5, with five being the highest rating, most student teachers who were satisfied with their student teaching experience and their relationship with their cooperating teacher rated their cooperating teachers almost exclusively with either 4s or 5s. The same was true for Cohorts 4 - 6, except that the rating scale for Cohorts 4 -6 was based on a 0-3 rating, with 3 being the highest score.

The same was true for open form question number one: *My Cooperating Teacher was most helpful to me by . . .* as every student could find at least one positive thing to say about their cooperating teacher even in situations where a difficult relationship existed between the student teacher and the cooperating teacher. However, there was often a discrepancy between student teachers' responses to the closed form questions and open form question number two.

Now I will focus my analysis of the data on student teachers' responses to the second open form question: *My Cooperating Teacher could have been more helpful to me by . . . .*

To code the data from open form question two, I first typed in all the responses from the student teachers, keeping the responses recorded from members of each cohort in separate groupings. I recorded exactly what was written, not editing for conventions such as word choice, grammar, spelling or punctuation. (Only in the final presentation table of the data did I correct spelling.) I then reviewed these transcripts and began coding (Glaser & Strauss, 1967) using a hand-scored color coding system based on the use of words and phrases in each individual comment. I worked with one cohort's data at a time, then I combined these six coded sets of data into one set of data with emerging themes being listed.

To provide for inter-rater reliability, I gave the original transcripts of each of the six cohorts' comments and the one set of data listing emerging themes I had compiled to two colleagues who voluntarily reviewed the data separately. One volunteer inter-rater is a colleague who is currently teaching, and is a veteran teacher of 11 years who has served as a cooperating teacher for another institution. She currently serves as an "adjunct" teacher education methods instructor at my university. The other volunteer inter-rater is a colleague who recently graduated from a teacher preparation program (not my university's program) and has been a student teacher and substitute teacher and was formerly an attorney: for him, words matter. Both volunteer inter-raters have advanced degrees and are familiar with Glaser and Strauss' (1967) constant comparative method. Where any differences in our coding of the words or phrases existed these were noted in the final data record. There were only two student teacher comments that were coded differently by one of the additional colleagues who assisted in the coding. The student teacher comments listed in Appendix C are examples of the coded student teacher comments. Where comments were very similar

only one example was listed in Appendix C. Of the potential 223 comments, 143 were made, for a response rate of 64.1 per cent on open form question two.

Analysis of the Data

The comments in answer to survey question two, *My Cooperating Teacher could have been more helpful to me by . . .*, were coded, revealing six themes: (a) communication styles and skills, (b) cooperating teacher expectations, (c) being part of the school community, (d) curriculum, (e) time to meet together, and (f) teaching time. Four comments were listed that were not coded into any of these identified six themes. Examples of the student teacher comments about their cooperating teacher can be found in Appendix C.

A Deeper Look at the Six Themes

In this section, I will give examples of the comments written by student teachers about their experiences with their cooperating teachers and provide context for the student teachers' comments.

Communication styles and skills.

The theme that was addressed by the greatest variety of comments was communication styles and skills. I believe communication styles and skills may be the entry point into discussing and planning for inservice education about all the themes revealed in the student teachers' data, especially when you factor in the multiple roles that cooperating teachers must navigate. Many of the comments focused on student teachers wanting more critical feedback on their work. Some examples of this theme are:

"My Cooperating Teacher (CT) could have been more helpful to me by giving me more criticism of where I need to improve."

"Sometimes I felt that I was doing well but was unsure what was good about my work and what needed attention."

"My CT could have been more helpful to me by being more communicative about areas which are my weaknesses or potential problem areas."

Student teacher comments also indicated that student teachers felt that their cooperating teachers were unsure of how to give critical feedback or did not feel comfortable in giving negative feedback. Here are examples of student teacher comments:

"My CT could have been more helpful to me by being more communicative about areas which are my weaknesses or potential problem areas."

"I personally would like to have had more criticism. I do well when my errors have been pointed our clearly."

"She is a kind person that I think occasionally hesitated to suggest improvements."

The delicate balance of how to, how much and when to give critical feedback to a novice without causing them to feel defeated or give up was noted in the comments that student teachers made, highlighting how some cooperating teacher were not able to balance critical and positive feedback:

"There were possibly a few times she could have let me struggle a little more."

"My CT could have been more helpful to me by providing informal feedback on my teaching earlier in the term to help guide me toward improvement."

"There was a significant lack of encouragement and support throughout the term. She made me feel uncomfortable and nervous on a daily basis. Her mood was unpredictable but mostly negative."

Cooperating teacher expectations.

The theme of cooperating teacher expectations seems to be a straightforward request by student teachers for more clearly articulated expectations by their cooperating teachers. I was intrigued to find so many problems in this area were related to how the first meeting between cooperating teacher and student went. For example, what could seem like a small issue, using text messaging to leave a message for a cooperating teacher by a student teacher, became a problem that marred multiple student teacher-cooperating teacher relationships from the first days. Cooperating teachers told me that they did not carry a cell phone at school or look at it throughout the school day as most student teachers stated they did. Also some cooperating teachers did not have a cell phone with a texting option. After experiencing several of these problematic cooperating teacher-student teacher relationships, it became apparent that modes of communication would need to be a topic that student teachers must discuss with their cooperating teachers from the first day. Some examples of student teacher comments were:

"I could have used more guidance from the beginning."

"My CT could have been more helpful to me by being more consistent with expectations for her classroom."

"She had high expectations without providing a lot of guidance or directions."

"At first, we had some issues regarding timeliness of email and telephone communication, but this is much improved now."

Also, personal values around what "on time" meant became an expectations problem. One student teacher was told that for her cooperating teacher "being on time" meant arriving one hour before school began so that the cooperating teacher could prepare

for the day and still have time to talk with the student teacher before the students arrived or morning faculty meetings were held. Another student teacher was told by the school office manager to come one half hour before the students arrived and was then met by an angry cooperating teacher who said she had no time to talk with her that day. Problems around understanding basic work expectations of the cooperating teacher were easily solved by giving a list of topics for both student teacher and cooperating teacher to discuss at their first meeting. This theme of cooperating teacher expectations is also related to themes of time to meet together, being part of a community and communication styles and skills.

Being part of the school community.

Being part of the school community may seem to be an obviously vital part of the process of a cooperating teacher inviting a student teacher to work in one's classroom and school. However, as discussed by Clarke and Jarvis-Selinger (2005), cooperating teachers may not perceive the tenuousness in how student teachers approach joining a new school (p.67). The student teacher joins a school not only as a new member but as a student member – not yet one of the fully participating members. Some student teachers have doubts about their abilities, and without day-to-day knowledge of the workings of the school, have to learn much in an on-the-job manner. The cooperating teacher, however, typically is already fully a part of the community. Depending on the personal relational styles of both the cooperating teacher and the student teacher there can easily be misunderstandings of expectations in how to be a part of the classroom and school community. It seems that many missteps could be avoided by bringing this topic to the forefront in early conversations during cooperating teacher inservice and education and through structured discussions between cooperating teachers and student teachers. It also

seems that this theme could be addressed through an exploration of communication styles and skills. Some student teacher comments related to this theme were:

"My CT could have been more helpful to me by helping me feel more a part of the team. I still feel like an outsider and that I was on my own to work my way in."

"My CT could have been more helpful to me by helping me feel more comfortable at this school."

"My CT could have been more helpful to me by including/informing me of the PLC, staff and other important meetings that could create learning opportunities."

"Sharing a few more policies of the school and some class responsibilities."

Student teachers commented that it was the little things, like offering a place to put one's coat and bag or showing the student teacher where the restroom and staff room were located on the first day, which made the student teacher feel welcome as a "real" teacher, not a visitor. Again, it would be simple to put together a list of community building action items for student teachers to talk with their cooperating teacher about with the intention of building a strong mentoring relationship between the cooperating teacher and student teacher from their first meetings together.

Curriculum and teaching time.

Curriculum and teaching time were themes that seemed inter-related. Often if the student teacher was unsure of how to use a curriculum material or felt that the subject content was new or difficult for them (for example, some student teachers have told me that they did not feel they were "good" at math as a student themselves, so they were afraid that they would not be able to teach math) they would not initiate taking on teaching the subject

unless told to do so by their cooperating teacher. Some examples of student teacher comments were:

"My CT could have been more helpful to me by giving me more guidance in the material and strategies to present the curriculum."

"My CT could have been more helpful to me by connecting the learning activities to district curriculum more specifically."

There were also comments related to specific areas related to curriculum such as how to meet the needs of diverse learners. Some student teacher comments were:

"My CT could have been more helpful to me by discussing the specific needs of the diverse learners in the class."

"Verbalizing more about how she makes and implements accommodations and extensions in the classroom."

It was also noted that some cooperating teachers feared releasing their early childhood or elementary aged students to lessons taught by a student teacher. For example, one cooperating teacher told me she felt pressure for her early childhood and elementary aged students to perform well on an upcoming state standardized test and was fearful that the student teacher's pacing with the lessons would fall short and the needed curriculum would not be completely covered before the upcoming test. Given such concerns, scheduling a student teacher in a classroom slated for high-stakes state standardized testing might not be the best approach. This area could be a point of discussion with the school district leaders who select grade levels for student teacher participation. Some examples of student teacher comments related to the theme teaching time were:

"Allowing me a bit more time to teach. After my work sample concluded, I had to continually ask for opportunities to teach."

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"My CT could have been more helpful to me by allowing me to assume responsibility of the class more often – to act as a teacher."

Time to meet together.

The theme of time to meet together was often mentioned but is an area where little can be done based on the time available in a school day to meet and confer between cooperating teachers and student teachers. I believe it is important to consider the issue of time and it may be best addressed as it relates to the theme of communication styles and skills. Some student teacher comments were:

"Setting time aside to discuss lessons. She is so busy, and has so many duties. I felt a little bit like I was part of her multi-tasking instead of getting one-on-one quality time."

"My CT could have been more helpful to me by providing more debriefing time that was routine/uninterrupted."

Implications

I believe the six themes that surfaced in this study, based on student teachers' comments, could provide the goals for design of an education program for future cooperating teachers. These themes are particularly important when addressing how to assist cooperating teachers' growth in not only expertise but in balancing their multiple roles as mentors, coaches, and evaluators of pre-service student teachers. Our work as teacher educators needs to be informed by data from both the cooperating teachers and student teachers. We need to closely examine the data we collect and look to future data that may be needed.

Future Research

Continued research into the role of the cooperating teacher is needed on many fronts, such as: communication styles and skills, perspectives on teaching and learning, relationship formation, expectations of student teachers and cooperating teachers, and balancing multiple and often conflicting roles as coach, mentor and evaluator. For my part, this research is a call to action for change in my university's teacher preparation program:

- Analyze the data that is collected already and thoughtfully consider what else needs to be collected

- Redesign of the program forms to capture the data that is needed

- Assure that data that is requested is complete and accurate

- Use a data collection approach to discover more about who the cooperating teachers are beyond demographic data (possibly through the use of interviews, focus groups, more detailed surveys, a variety of instruments such as the Mentoring Relationship Questionnaire, Teaching Perspectives Inventory, or other instruments)

- Review, discuss and analyze the collected survey data with the cooperating teachers and student teachers through preparation of discussion topics materials

- Develop a model for discourse that brings cooperating teachers, student teachers and university teacher educators together as collaborators to learn what student teachers and cooperating teachers are saying about the student teaching internship experience

- A widened dissemination of the survey data to include cooperating teachers, student teachers and teacher education faculty and an invitation to school district leaders to be a part of a collaborative dialog about current teacher education literature and what the survey data reveals about cooperating teacher selection, preparation and education

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- A celebration of what is working and creation of a plan for change as needed for improvement

The possibility of changes to selection, preparation and education processes of cooperating teachers could provide additional opportunities for collaboration between school districts and university teacher education programs. Based on the themes that surfaced from an analysis and discussion of the data from this study of one university's teacher preparation program, and a review of current cooperating teacher literature, an approach in the development which focuses on development programs for cooperating teachers may be a starting point. Research based on data we routinely collect can be thoughtfully analyzed and could contribute to the success of cooperating teachers, student teachers, future teachers, the school districts they serve, and teacher educators as they lead teacher preparation programs.

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Appendix A
College of Education Evaluation of the Cooperating Teacher Form

Example Rating Scale used for Cohorts 1, 2 and 3
DIRECTIONS: *Please rate your Cooperating Teacher on the scale of 5-1 or NA by circling the appropriate number or letters NA.*
5   = Always (or whenever appropriate) 4   = Usually 3   = Sometimes 2   = Seldom 1   = Never NA = Not Applicable

My Cooperating Teacher:

5 4 3 2 1 NA   1. Discussed purposes and objectives of lessons.

5 4 3 2 1 NA   2. Required and discussed written lesson plans.

5 4 3 2 1 NA   3. Provided time for cooperative planning.

5 4 3 2 1 NA   4. Observed my teaching and provided helpful feedback on my lesson in a timely manner.

5 4 3 2 1 NA   5. Provided time for follow-up conferences.

5 4 3 2 1 NA   6. Helped identify problems and plan several possible alternative solutions.

5 4 3 2 1 NA   7. Helped me plan a variety of teaching techniques.

5 4 3 2 1 NA   8. Allowed me to make independent decisions in my teaching.

5 4 3 2 1 NA   9. Kept me informed of my strengths and weaknesses throughout the term.

5 4 3 2 1 NA   10. Encouraged openness so that I could question procedures, which I did not understand.

5 4 3 2 1 NA   11. Made me feel comfortable in discussing any problems in connection with my internship.

5 4 3 2 1 NA   12. Helped me locate and obtain teaching resources and materials.

5 4 3 2 1 NA   13. Related my internship experience to conditions I would probably meet in my career.

5 4 3 2 1 NA   14. Made me feel an integrated member of the school community.

5 4 3 2 1   NA   15. Treated me as a colleague.

5 4 3 2 1   NA   16. Acquainted me with routine teaching details (i.e., progress reports, fire drills, safety procedures, etc).

5 4 3 2 1   NA   17. Discussed the general scope and sequence of the curriculum I was to teach.

5 4 3 2 1   NA   18. Allowed and encouraged me to use a variety of the curriculum I was to teach.

5 4 3 2 1   NA   19. Allowed me sufficient opportunity for complete responsibility and Management of the class.

DIRECTIONS: Please respond to the following:

My Cooperating Teacher was most helpful to me by . . .

My Cooperating Teacher could have been more helpful to me by . . .

Additional comments attached?   Yes   No

List any additional teachers (& the grade they teach) at your placement site that you would recommend as Cooperating Teachers:

Kathleen M. Cowin

Appendix B
College of Education Evaluation of the Cooperating Teacher Form

Example Rating Scale used for Cohorts 4, 5 and 6
DIRECTIONS: *Please rate your Cooperating Teacher on the scale 3-0 by circling the appropriate number.*
3 = Exemplary 2 = Proficient 1 = Partially evident or needs work 0 = Lacking

<u>My Cooperating Teacher:</u>

0 1 2 3   1. Discussed purposes and objectives of lessons.

0 1 2 3   2. Required and discussed written lesson plans.

0 1 2 3   3. Provided time for cooperative planning.

0 1 2 3   4. Observed my teaching and provided helpful feedback on my lessons in a timely manner.

0 1 2 3   5. Provided time for follow-up conferences.

0 1 2 3   6. Helped identify problems and plan several possible alternative solutions.

0 1 2 3   7. Helped me plan a variety of teaching techniques.

0 1 2 3   8. Allowed me to make independent decisions in my teaching.

0 1 2 3   9. Kept me informed of my strengths and weaknesses throughout the term.

0 1 2 3   10. Encouraged openness so that I could question procedures which I did not understand.

0 1 2 3   11. Made me feel comfortable in discussing any problems in connection with my internship.

0 1 2 3   12. Helped me locate and obtain teaching resources and materials.

0 1 2 3   13. Related my internship experience to conditions I would probably meet in my career.

0 1 2 3   14. Made me feel an integrated member of the school community.

0 1 2 3   15. Treated me as a colleague.

0 1 2 3   16. Acquainted me with routine teaching details (i.e., progress reports, fire drills,

safety procedures, etc).

0 1 2 3   17. Discussed the general scope and sequence of the curriculum I was to teach.

0 1 2 3   18. Allowed and encouraged me to use a variety of the curriculum I was to teach.

0 1 2 3   19. Allowed me sufficient opportunity for complete responsibility and management
                       of the class.

DIRECTIONS: Please respond to the following:

My Cooperating Teacher was most helpful to me by . . .

My Cooperating Teacher could have been more helpful to me by . . .

Additional comments attached?   Yes   No

**List any additional teachers (& the grade they teach) at your placement site that you
would recommend as Cooperating Teacher**

Appendix C
Examples of Student Teacher Survey Comments about their Cooperating Teachers

Please note: Where the student teacher comments are bolded this comment was coded into two different themes.

Themes	Subthemes	Examples of Student Teacher Survey Comments Open form question number two: *"My Cooperating Teacher (CT) could have been more helpful to me by . . ."*
Communication Styles and Skills	Ability to give feedback	"My CT could have been more helpful to me by giving me more criticism of where I needed to improve." "She is a kind person that I think occasionally hesitated to suggest improvements." "Sometimes I felt that I was doing well but was unsure what was good about my work and what needed attention." "More feedback on formal and informal observations." "My CT could have been more helpful to me by communicating more about how I was doing." "explaining what she was doing and why in terms of instructional methods." "My CT could have been more helpful to me by providing <u>more</u> feedback about the ways I could improve my teaching." "suggestions for improving specific strategies." "My CT could have been more helpful to me by giving me more guidance at the beginning of my teaching experience." "My CT could have been more helpful to me by being a little more approachable." "communicating more of her ideas, etc., to me." "more open communication." "providing more specific feedback." "helping me think through lesson ideas and providing consistent and detailed feedback about my lessons and teaching." "Volunteering more feedback about my practice. I sometimes felt that she had something to say or advice to give about a choice I made but she wouldn't comment unless I asked."

		"My CT could have been more helpful to me by providing me with more critical feedback."
		"My CT could have been more helpful to me by being more communicative about areas which are my weaknesses or potential problem areas."
		"I personally would like to have had more criticism. I do well when my errors have been pointed out clearly."
		"My CT could have been more helpful to me by being more communicative with me on my weaknesses *or what she wanted from me*."
	Giving a balance of negative and positive feedback	"There were possibly a few times she could have let me struggle a little more."
		"talking about my strengths and weaknesses (specific strategies) more often."
		"giving me more positive feedback."
		"Rare to receive any positive feedback."
		"help me identify strengths."
		"My CT could have been more helpful to me by not being so discouraging."
		"by giving me some positive feedback. Not just what I was doing wrong or ineffectively."
		"giving some positive feedback."
		"There was a significant lack of encouragement and support throughout the term. She made me feel uncomfortable and nervous on a daily basis. Her mood was unpredictable but mostly negative."
	Timely feedback	"My CT could have been more helpful to me by providing informal feedback on my teaching earlier in the term to help guide me toward improvement."
		"My Ct could have been more helpful to me by allowing me more daily feedback."
		"More informal feedback on a daily/weekly basis."
		"timely feedback."
	General communication skills	**"At first, we had some issues regarding timeliness of email and telephone communication, but this is much improved now."**
Cooperating Teacher Expectations	Clarifying Cooperating Teacher	"My CT could have been more helpful to me by being more *consistent with expectations for her classroom*."
		"To make this fit with the CT the student teacher has to

	expectations	be highly organized."
		"My CT could have been more helpful to me by being more communicative with me on my weaknesses *or what she wanted from me*."
		"It was hard to get to know her *expectations* and teaching style."
		"She has high *expectations* without providing a lot of guidance or directions."
		"My CT could have been more helpful to me by taking on the role of a mentor instead of the role of a boss."
		"My CT could have been more helpful to me by letting me *go* so I could be more creative in developing my own lesson plans."
		"I would have liked to have been informed that I was lacking earlier rather than via email a few days prior to the scheduled Three Way Evaluation meeting."
		"I feel her expectations for a student teacher were unrealistic and impractical making the term extremely challenging."
		"I could have used more guidance from the beginning."
		"At first, we had some issues regarding timeliness of email and telephone communication, but this is much improved now."
Being Part of the School Community	Feel a part of the class and school community	"Acknowledging me in the beginning."
		"My CT could have been more helpful to me by establishing my role as a *teache*r in the class."
		"integrating me into the classroom/school."
		"My CT could have been more helpful to me by encouraging relationships with other staff."
		"My CT could have been more helpful to me by making me feel more a part of the team. I still feel like an outsider and that I was on my own to work my way in."
		"making me feel like a member of the school community."
		"sharing a few more policies of the school and some class responsibilities."
	Invitation to meetings and other school	"My CT could have been more helpful to me by helping me feel more comfortable at this school. Inviting me to IEP meetings."

	events	"including/informing me of the PLC, staff and other important meetings that could create learning opportunities."
		"I was not invited to attend any parent teacher meetings. They were all kept private. If another student teacher is placed with this CT they need to be highly motivated."
	Part of the curriculum planning process	"My CT could have been more helpful to me by inviting me into her lesson planning process."
		"My CT could have been more helpful to me by incorporating me into her planning."
		"I wish we had planned more together. He is very spontaneous and I am more of a planner."
Curriculum	Planning for instruction	"My CT could have been more helpful to me by giving me more guidance in the material and strategies to present the curriculum."
		"identifying resources for lesson ideas."
		"My CT could have been more helpful to me by requiring lesson plans."
		"My CT could have been more helpful to me by requiring to look over my lesson plans."
		"discussing lessons in more detail."
	Diverse learners and accommodations	"My CT could have been more helpful to me by discussing the specific needs of the diverse learners in the class."
		"verbalizing more about how she makes and implements accommodations and extensions in the classroom."
	District based curriculum	"My CT could have been more helpful to me by connecting learning activities to district curriculum more specifically."
	Lesson objectives	"My CT could have been more helpful to me by in some cases diving a little deeper into her objectives for each assignment given to the students."
		"My CT could have provided me with lesson ideas and objective ideas."
		"My CT could have been more helpful to me by discussing purposes and objectives."
	Work samples	"Specific objectives I could have focused on in my work sample."
		"providing more guided instruction on my work sample

		planning."
		"Being more specific on what needed to be covered for my work sample. Changes happened often and a change in curriculum came in the middle of the work sample."
Teaching Time	Amount of time the student teacher was allowed to teach	"My CT could have been more helpful to me by allowing me to teach more whole group activities."
		"I wish she would have given me more opportunities to teach maybe math or writing."
		"My CT could have been more helpful to me by allowing me to feel free to bring my own style into teaching for the three weeks I taught all day. "
		"making me teach more."
		"My CT is a very efficient, productive, type 'A' personality teacher. She allowed and wanted me to teach as much as possible but she had a hard time 100% letting go when I was teaching a lesson."
		"Allowing me a bit more time to teach. After my work sample concluded, I had to continually ask for opportunities to teach. For much of the term I felt as though my value was really as an Educational Assistant. I displayed lots of student work and filed lots of papers."
		"allowing me to teach other than the work sample and formal observations."
		"allowing me to teach during my thee weeks of full-time student teaching without hovering all the time."
		"My CT could have been more helpful to me by allowing me to assume responsibility of the class more often – *to act as a teacher*."
Time to Meet Together	Time to talk and discuss together	"Setting time aside to discuss lessons. She is so busy, and has so many duties. I felt a little bit like I was part of her multi-tasking instead of getting one-on-one quality time."
		"Honoring and valuing time to meet."
		"Planning how we would score and evaluate students. This was something that we would always run out of time for."
	Time for collaboration	My CT could have been more helpful to me by saving more time for collaboration."
	Time for joint planning of	My CT could have been more helpful to me by helping to plan more time for working together to plan curriculum."

	general curriculum	"Allowing more time to discuss teaching strategies and curriculum."
	Time to discuss informal and formal observations of teaching	"My CT could have been more helpful to me by providing more feedback on formal and informal teaching observations." "We had very little time to meet for debriefing." "My CT could have been more helpful to me by providing more debriefing time that was routine/uninterrupted."
	Time to plan the Work Sample	"My CT could have been more helpful to me by providing more time for discussion of the work sample unit overall."
Other Items	Organizational skills	"My CT could have been more helpful to me by being more organized – I struggle with organization as well, so we both had papers everywhere." "Being a bit more organized (classroom space, time usage)." "She has everything so well laid out and planned ahead it was hard at times to see her routine."
	Presence	"My CT could have been more helpful to me by being a full-time teacher and being present on Mondays and Fridays."

Making the Grade: Examining Teacher Education

Kurtis Hewson
Faculty of Education
University of Lethbridge
hewskp@uleth.ca

John Poulsen
Faculty of Education
University of Lethbridge
John.poulsen@uleth.ca

Abstract

High quality teachers make a difference. Marzano notes, "the single most influential component of an effective school is the individual teachers within that school" (2007, p. 1). There are a multitude of considerations that impact the effectiveness of an individual teacher, but arguably the quality of a teacher's educational training program is of paramount importance. The initial theory and practical training that pre-service teachers receive not only prepare educators to enter the classroom but can have a profound impact on their later growth and development as a professional.

However, despite the impact that pre-service teacher training may have on developing effective teachers, what constitutes a quality teacher education program is not commonly agreed upon. As Linda Darling-Hammond (2000) comments, "Education schools have been variously criticized as ineffective in preparing teachers for their work, unresponsive to new demands, remote from practice, and barriers to the recruitment of bright college students into teaching" (p. 166). Educational programs can be considered fragmented, with various aspects of the content, pedagogical coursework and field experienced viewed as disconnected, with a divide existing between university and school based training (Darling-Hammond, 2000). The research objectives of this paper are to examine: (1) the pre-service education model developed at one Alberta, Canada university, an undergraduate program that strives to achieve program coherence between the teaching skills required by provincial legislation, course content and field experiences; (2) the government standards for beginning teachers, (3) student personal responses of their sense of readiness compared to the government standards (comparing the education program to government requirements), and (4) potential use of a reflective tool shared in further forging program coherence. The results show a clear-headed view of the students' own "sense of preparedness." They can distinctly see where they have strengths and where they have areas that they intend to work on.

Introduction

It is no secret that quality teachers matter. It has been noted, "the single most influential component of an effective school is the individual teachers within that school" (Marzano, 2007, p. 1). Although there are a multitude of considerations that impact the effectiveness of an individual teacher, one factor that must examined is the quality of a teacher's educational training program. The initial theory and practical training that pre-service teachers receive not only prepare educators to enter the classroom but can have a profound impact on their later growth and development as a professional. In short, not only do teachers matter but the pre-service education they engage in matters as well. However, despite the impact that pre-service teacher training has on developing effective teachers, what constitutes a quality teacher education program is not commonly agreed upon. As Linda Darling-Hammond (2000) comments, "Education schools have been variously criticized as ineffective in preparing teachers for their work, unresponsive to new demands, remote from practice, and barriers to the recruitment of bright college students into teaching" (p. 166). Often educational programs are considered fragmented, with various aspects of the content, pedagogical coursework and field experience viewed as disconnected, with a divide existing between university and school based training (Darling-Hammond, 2000). This paper will examine the pre-service education model developed at one Alberta, Canada university, an undergraduate program that strives to achieve program coherence between the teaching skills required by provincial legislation, course content and field experiences. By focusing upon conceptual coherence in the teacher education program, this model aims to provide pre-service teachers with the education fundamental for not only success in beginning teaching experiences within the province and abroad, but instill a pedagogical foundation congruent with continued growth and professional learning.

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Program Coherence

Coherence in the foundational framework of any teacher education program is critical. Graham (2006) suggests that traditionally, "Teacher education programs have been described as fragmented, lacking coherence and consistency and as not providing powerful learning to pre-service teachers" (p. 1128). Feiman-Nemser (2001) further contends that, "The lack of articulation and the fragmented nature of most conventional pre-service programs underscore the need for conceptual coherence" (p. 1023). At the University of Lethbridge, an institution located in the Canadian province of Alberta, program coherence is fundamental, as the program design focuses upon three essential elements that are interconnected throughout the five-year undergraduate program.
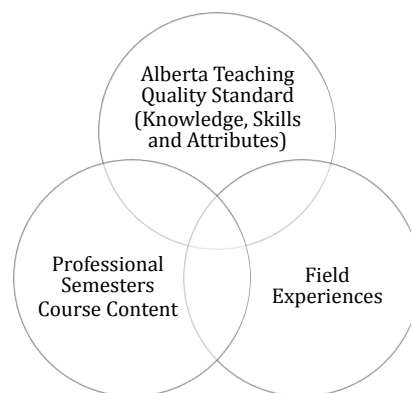
Although overcoming fragmentation in a teacher-training program can be difficult (Giannakaki, Hobson & Malderez, 2011), the University of Lethbridge model aligns these elements in the design and delivery of the Bachelor of Education degree, forging explicit links between the three, particularly within the Professional Semesters, where course content and field experiences connect theory and practice. Considering that typically, "the weak relationship between courses and field experiences is further evidence of the overall lack of coherence" (Feiman-Nemser, 2001, p. 1020), thoughtful consideration to all three

elements of the program model ensure cohesiveness and overall program coherence for its students.

Teacher Quality Standard

The Teaching Quality Standard is a ministerial order number 016/97 that was approved on May 14, 1997. This made law the Teaching Quality Standard in Alberta, Canada. It clarified and defined what quality teaching meant, as well as requiring all teachers to meet this new standard.

The Teaching Quality Standard has three sections, with the first section stating, "Quality teaching occurs when the teacher's ongoing analysis of the context, and the teacher's decisions about which pedagogical knowledge and abilities to apply result in optimum learning by students." This first point also requires teachers to, "meet the Teaching Quality Standard throughout their careers." The second and third sections outline in some detail what quality teaching looks like. The second section focuses on Interim Certification and the third section deals with Permanent Certification.

Interim Certification is intended for teachers who have just graduated university. After graduating from a recognized teacher preparation program, these beginning teachers must complete two full school years of teaching in Alberta before they can be eligible to apply for Permanent Certification. In applying for Permanent Certification, the teacher maintains that, besides teaching for two years, they have met the Teaching Quality Standard.

There are differences between the requirements for Interim Teaching Certifications and Permanent Certification. Permanent Certification requires points a to k (11) whereas Interim Certification requires points a to q (17). These points are referred to as KSAs, an acronym for "Descriptors of Knowledge, Skills and Attributes Related to Certification." Interim Certification explains its 17 points using 688 words whereas Permanent Certification uses 1526 words to illuminate its 11 points. Permanent Certification has greater specificity as well as assuming that Interim Certification has been met. The Act requires that, "Teachers who hold a Permanent Professional Certificate must demonstrate, in their practice, professional repertoires that are expanded beyond the Interim KSAs." The Interim Descriptors of Knowledge, Skills and Attributes Related to Certification (KSAs) are found in the list below:

Alberta Teacher Quality Standard Interim KSA's (adapted)

1. Teachers make reasoned decisions about teaching and learning based on their ongoing analysis of contextual variables.

2. Teachers understand the legislated, moral and ethical framework within which they work.

3. Teachers use the programs of study to inform and direct planning instruction and assessment.

4. Teachers demonstrate knowledge of the content they teach.

5. Teachers identify and respond to learner differences.

6. Teachers plan for instruction, translating curriculum and outcomes into meaningful learning activities.

7. Teachers create and maintain environments that are conducive to student learning and understand student needs for physical, social, cultural and

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psychological security.

8. Teachers establish relationships with students that respect human dignity.

9. Teachers use a broad range of instructional strategies.

10. Teachers apply a variety of technologies to meet students' learning needs.

11. Teachers gather and use information about students' learning needs and progress and assess the range of learning objectives.

12. Teachers engage parents, purposefully and meaningfully, in all aspects of teaching and learning.

13. Teachers identify and use relevant learning resources.

14. Teachers contribute, independently and collegially, to the quality of their school.

15. Teachers engage in assessing the quality of their teaching.

16. Teachers are able to communicate a personal vision of their own teaching.

17. Teachers achieve the Teaching Quality Standard.

The final KSA (number seventeen) serves as a validation that beginning teachers have achieved the standard with is law for Alberta educators. These Interim KSAs become the foundation upon which the teacher education program is built and serve as the measure for pre-service teachers making the transition from student to educator.

Professional Semester Course Content

On-campus learning is an important component of any teacher education program. As Linda Darling-Hammond (2000) attests, "Teachers who have greater knowledge of teaching and learning are more highly rated and are more effective with students, especially

at tasks requiring higher order thinking and problem solving" (p. 167). The theoretical foundation of this knowledge is predominantly developed at the University of Lethbridge in the professional semester's on-campus courses.

The University of Lethbridge houses a Teacher Education Program that is touted as being one of the best in Alberta. Anecdotal evidence of this come from hiring agencies that regularly suggest they often will short-list U of L students above graduates from other teacher preparation programs. The heart of the U of L program is held in its three professional semesters. Roughly described, the first professional semester (PSI) examines teaching lessons. In this semester, the focus is primarily placed on preparing, teaching, and assessment connected to individual lessons.

The second professional semester (PSII) is focused on teaching units of study. Students in this semester are required to create, deliver and assess student learning in a series of classes connected by theme or concept. The third professional semester (PSIII) requires that students focus on even longer-term teaching, assuming the role of an intern teacher in schools for the entire semester. In this third semester students perform much like a half time teacher.

Practicum

The final pillar of the Teacher Education program at the University of Lethbridge is the practicum experience for students. It is no surprise that the practicum experience is a highly valued and rich learning opportunity for students. As Munby, Russell and Martin (2001) share, the, "… overwhelming evidence of a decade of research on teacher knowledge

is that knowledge of teaching is acquired and developed by the personal experience of teaching" (p. 897). Smith and Lev-Ari (2005) also report, "… high agreement among educational theorists that the practical part is a strong and valued component in the education of teachers" (p. 292) and that the, "… view that comes out strong and loud is that the practical aspects of the preparation for teaching are more highly valued than other elements of the programme" (p. 299). Graham (2006) lends further support to this assertion, claiming that the student teaching experience "is eagerly and anxiously anticipated by pre-service teachers, and remembered as a significant milestone by in-service teachers" (p. 1118). However, it is critically important that the practicum is carefully planned and tightly aligned with the other components of the teacher education program (Darling-Hammond, 2000), as quite often field experiences can be fragmented (Graham, 2006).

One of the defining features of the practicum that contributes to the program coherence at the University of Lethbridge is the involvement of the faculty instructors in field experiences. Zeichner (2006) suggests that strong support from permanent faculty and the institutional budget devoted to practicum success for students is important. Course instructors supervise their students in the field, helping to bridge the gap that can exist between practical teaching experiences in the practicum with educational theory learned on-campus. The quality of the one-to-one discussion of experienced teaching events is a critical factor that helps beginning teachers make practical use of theory (Ingvarson, Beavis & Kleinhenz, 2007). In addition to teaching faculty participating in the practicum component of the program, professionals from the field, in the form of secondments, master teachers and sessional instructors, comprise a portion of the teaching staff and like tenured faculty, supervise students out in classrooms. As Feiman-Nemser (2001) asserts, "When the people

responsible for field experiences do not work closely with the people who teach academic and professional courses, there is no productive joining of forces around a common agenda and no sharing of expertise" (p. 1020). This professional partnership ensures a strong connection between the field and the on-campus learning, forging a strong connection between theory and practice.

"The practicum does not only serve as a bridge between theory and practice in the learning of teaching, but it is the context in which student teachers develop a personal teaching competence" (Smith & Lev-Ari, 2005, p. 291). With this in mind, the assessment of student teachers in the field is tightly aligned with the Interim KSAs described in the Alberta Teacher Quality Standard. Smith (2010) reminds us,

> It is therefore suggested that it is necessary to create a common basis for assessment to avoid that it is done intuitively by those who carry the assessment responsibilities. The quality of assessment needs to be strengthened, so assessment fulfills the formative as well as the summative function in the best possible way. (p. 41)

The Interim KSAs form the foundation for the formative and summative practicum feedback that student teachers receive in the field and are standardized for all supervisors and teacher mentors.

Method

A class of students (N=10) were asked to complete a reflection in which they examined their sense of teaching readiness compared to the Provincially Mandated Knowledge Skills and Attributes (KSAs). The reflection was completed on the last day of their penultimate practicum. That is, as part of the processing of their learning that took place at the end of their second last practicum, (just before their last

practicum) the students were asked to examine the KSAs with reference to their own sense of readiness.

Specifically, the students were asked to indicate with a zero, one or two how well they felt they had met specific KSAs, where zero=not at all, one=minimal or in progress, and two=attained or achieved. On the back of the page students were asked for general comments and then to address the implications of the KSAs regarding their final practicum, PSIII. Essentially, the students were asked to engage in the process of metacognition with particular attention to the KSAs. It was expected that this question would be part of the process of goal setting for their final practicum. The students knew about the KSAs and were familiar with them, as the KSAs had formed the foundation for their formative and summative assessment during their first two practicum experiences. The purpose of the reflection was primarily to envision a self-diagnostic tool for students to determine areas of focus for PSIII based on the KSAs as well as reflecting upon the KSA frame that will be the criteria once employed in the field.

The assignment also gave valuable information regarding the program, as it pointed to how the students were making purposeful connections to the KSAs. This kind of instrument could be used to further to help define the program and strategic planning in relation to the KSAs.

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Results

The students overwhelmingly responded with a sense of readiness. All students indicated that they felt they had met the majority of the KSAs. The mean of their personal responses to the 16 listed KSAs ranged from 1.67 to 1.93 (of a maximum of 2) indicating that the students felt that overall they felt they had achieved the majority of the KSAs. All students indicated that there were areas in which they felt they had not achieved the KSAs, in that they were in progress with achieving some specific KSAs. They indicated these areas as potential focus for their goals for their final practicum.

The raw scores connected with the specific KSAs ranged from 1.3 to 2. A score of 2 indicated that students felt that they all had achieved this KSA. The score of 1.3 suggests that the students felt that they had not achieved that KSA yet. Four KSAs were rated as 2 out of 2 by the students. That is, all the students felt they had achieved the following: KSA 2 – understanding the legislated, moral and ethical framework within which they work; KSA 7 - creating and maintaining environments that are conducive to student learning; KSA 9 – using a broad range of instructional strategies; and KSA 16 - communicating a personal vision of their own teaching. One student indicated that this did not suggest that they were master teachers, rather that they felt confident that they had achieved the level necessary for interim certification. Another student wrote, "I learned so much!"

There were specific KSAs that received lower scores potentially indicating a weakness or lack in the program with regard to those specific items. The lowest rated

KSA (1.3) was #12 – engaging parents, purposefully and meaningfully, in all aspects of teaching and learning. One student indicated that in their opinion they had not addressed this KSA yet. Five of the ten students mentioned KSA #12 with regard to goal setting. A common thread was the opportunity of connecting with the parents in order to increase learning, "… to interact with and contact parents; need to realize and take advantage of their impact in students' learning."

Some students wrote positively about this KSA, indicating that the structure of the program provided them the opportunity in the form of one more practicum to become more involved with parents. Students indicated that achieving this KSA was important to them, "I need to learn more about relationships with parents and involvement." The skew of this statement, is interesting as it suggests a very mature taking of responsibility for his/her own learning. The statement was not, "I need to be taught" rather it was a statement about their own journey and continuing growth. The second lowest rated KSAs (1.4/2) were 10 and 14. KSA #10 (applying a variety of technologies) was commented on by five students. Students were cognizant of the importance of technology as a learning tool, "I would like to work on technology and using it in my class."

KSA #14 (contributing independently and collegially to the quality of their school) was commented on by six of the ten students specifically as an area of potential growth. One student indicated that this was going to be the focus of focus for their final practicum, "I felt like I started this [KSA 14] but didn't have enough time to make sincere steps and changes. Hopefully PS3 will give me the opportunity

to work on this goal. I am excited to spend several months in a new school."
Another student voiced similar determination, "I plan on reaching out more to the school community."

KSA 3, 4, 5, 6, and 13 all received an aggregate ranking of 1.8. These KSAs deal with using the programs of study, demonstrating content knowledge, responding to learner differences, planning, and using learning resources. Students felt that this was ongoing and though they felt that they could teach and were successful this was an area that some felt they could and should improve.

Discussion

This sampling indicates that KSAs 10 (technology), 12 (engaging parents), and 14 (contributing to school climate) possibly deserve greater attention in the PSII program or that there is a need to strategically plan for these to be addressed in other areas of the program. Comments from the students suggest that they acknowledge time limitations within their program thus far and that they expect to cover those three KSAs in their final practicum.

This reflection was completed on a small number of students as part of an investigation into the perceived efficacy of their own teaching and effectiveness of the program. It appears that the targeted students understand on a deep level how the program relates to the provincially mandated requirements for interim certifications. Moreover they seem to understand how their personal growth was assisted by the program structure. The process of completing the reflection could have been an aid

in the clarification of where they are in their development. The tool could prove to be beneficial for students intrinsically as they self-reflect on the provincial KSAs and gain a greater working understanding of the Knowledge, Skills and Attributes expected by Alberta Education.

Utilizing this reflective tool (or another of similar design) could prove to be beneficial to the University of Lethbridge program in several ways. First, it would provide another level of intentional coherence between the provincial KSAs, the course delivery and the practicum experience for students. It would provide a reflective connection between the three elements for the students and ensure an even stronger, practical understanding of the Knowledge, Skills and Attributes that will forge the foundation of their evaluation in provincial schools when they embark on their teaching career. Secondly, it could provide strategic planning data for the faculty in determining how and where in the program individual KSAs are strategically addressed and how effectively they are being addressed from the perspective of the students. Finally, the tool could be used reflectively by students to establish professional goals for future practicums and specific KSAs still needing to be addressed in their own education and growth in becoming an interim teacher.

Conclusion

Zeichner (2006) states that, "We need to continue moving teacher education away from the traditional sink-or-swim model of field experience and toward a model like the professional development school of partner school where university faculty and staff provide instruction about teaching that is situated in relation to specific teaching contexts and where

expertise of P-12 teachers informs this instruction and the general planning and evaluation in the teacher education program as a whole" (p. 334). The University of Lethbridge program seems to have taken Zeichner's statement to heart and constructed a program that provides development to students in a sequential and purposeful manner. Part of the success of the program could be attributed to the close attention to the provincially mandated requirements, and the connection between the on-campus classes. It could be argued that of greater significance may be the continued and required reflection by the students on their own development with an eye to the provincial required KSAs.

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The Time for "Positive" Transformation in Teacher Education

Colin Saby
First Author
University of Alberta
csaby@ualberta.ca

Dr. Clive Hickson
Second Author
University of Alberta
clive.hickson@ualberta.ca

Abstract

Prevalence rates of serious mental health issues for students at all levels of education are currently unprecedented. Teaching has been frequently identified as one of the most stressful professions. Educational institutions need to be transformed into positive spaces that promote overall wellbeing for students and teachers. This transformation requires a clear, purposeful, and imaginative new vision –Positive Education. Positive Education provides curriculum and instruction that fosters both the skills of wellbeing and academic achievement. Positive Education puts teachers in a better position to rise to the challenges of the profession, which in turn helps students flourish and learn. Teacher education programs are a critical place to further develop and implement the vision of Positive Education. Thus, the article makes the case for *Positive Teacher Education*.

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Introduction

Imagine a curriculum that cultivates feelings of gratitude, optimism, interest, serenity, and joy. Imagine a classroom where students experience sustained periods of positive engagement and flow. Imagine a student who positively identifies with her school community and enjoys a strong sense of belonging because she has a number of healthy relationships with her teachers and peers. Imagine a school that develops true mastery and a sense of accomplishment amongst each student. Imagine an education that supports students to discover and commit to a greater purpose in life.

For a school to offer an experience as fulfilling as the one imagined above, the education system must deeply value student wellbeing. Recently, we have been imagining the type of education above and believe that schools can meaningfully contribute to the emotional, social, and physical wellbeing of students without sacrificing academic performance. We feel students deserve the opportunity to flourish in a variety of ways while learning at school. Schools primarily focus on students' academic performance; however, creating educational spaces that also nurture students' emotional, social, and physical wellbeing may be more important than ever. The prevalence rates of serious mental health issues for students at all levels of education – elementary, secondary, post-secondary – in North America are unprecedented (Canadian Paediatric Society, 2009; University of Alberta, 2011; Waddell, Offord, Shepard, Hua, & McEwan, 2002). Consequently, we argue that schools must be transformed into positive spaces that promote student wellbeing.

Students, however, are only one part of the equation. We believe teachers also deserve the opportunity to flourish. Teaching has been frequently identified as one of the

most stressful professions (Griffith et al., 1999; Kyriacou, 2001; McCormick, 1997).

Preservice teachers are also vulnerable to stress – as post-secondary students in general and

during their student teaching assignments (Capel, 1997; Chambers & Roper, 2000;

Mapfumo, Chitsiko, & Chireshe, 2012; Mundia, 2010; University of Alberta, 2011).

Beginning teachers who leave the field early in their career have been described as "a matter

of economic, social, and educational concern in many countries" (Long, McKenzie-

Robblee, Schaefer, Steeves, Wnuk, Pinnegar, & Clandinin, 2012, p. 7). Thus, we feel

institutions of education – both public schools and teacher education programs – must be

transformed into positive spaces that promote overall wellbeing for both teachers and

students.

Positive Education

Transforming public schools and teacher education programs into places that

promote wellbeing requires a clear, purposeful, and imaginative new vision. Seligman,

Ernst, Gillham, Reivich & Linkins (2009) have articulated such a vision and called it

"Positive Education." Within Positive Education, schools "teach both the skills of

wellbeing and the skills of achievement" (Seligman et al., 2009, p. 293). The label *positive* is

borrowed from the rapidly developing field of positive psychology and applied to the school

context. "Positive psychology is the study of the conditions and processes that contribute to

the flourishing or optimal functioning of people, groups, and institutions" (Gable & Haidt,

2005, p. 104). Accordingly, Positive Education may best be described as curriculum and

instruction based on the findings, principles, and applications of positive psychology, which

are specifically designed to contribute to student flourishing. However, we believe that

students and teachers, and in particular preservice teachers, should have opportunities to

enhance their own flourishing through a Positive Education approach.

Flourishing consists of five different elements: positive emotions, engagement, relationships, accomplishment, and meaning (Seligman, 2011). *Positive emotions* (commonly referred to as happiness) denote the extent to which a person experiences emotions such as joy, pleasure, glee, contentment, happiness, or love. *Engagement* indicates experiencing a state of "intense concentration and absorption in an activity" (Shernoff & Csikszentmihalyi, 2009, p. 132). *Relationships* refer to people who have multiple positive, healthy, trusting, and caring relationships that add to the richness of life. *Accomplishment* refers to a person who experiences a sense of mastery, success, or achievement in a variety of endeavors. Finally, *Meaning* signifies a sense that one serves a greater purpose in life than simply self. In sum, a student or teacher who enjoys more positive emotions, high levels of engagement, many positive relationships, a sense of accomplishment, and greater meaning in life will experience a high level of wellbeing. (Given this definition, we use *wellbeing* and *flourishing* interchangeably throughout the paper.)

The new vision for Positive Education is closely aligned to the rising call – by an increasing number of regional, national, and international organizations – for greater attention and action toward student wellbeing. However, this call is not currently being championed in teacher education. We feel now is the right time to share the vision of Positive Education both to educators and to teacher education programs. If schools are to successfully foster student wellbeing, education systems will have to transform to foster the overall wellbeing of both preservice and practicing teachers. Positive Education has the potential to help teachers to attend to their own wellbeing, take care of themselves, and

teach effectively so they can in turn attend to their students' emotional, social, and physical wellbeing. Positive Education puts teachers in a better position to rise to the challenges of the profession, which in turn helps students flourish and learn.

This paper takes a closer look at some threats to wellbeing being encountered by children and youth, university students, preservice, and practicing teachers. Subsequently, we outline aspects of Positive Education curricula and instruction and further expand on the potential of this approach. We intend to make a case for transforming teacher education into a process that focuses on both student and teacher wellbeing. Students and teachers have much to gain when schools respond to elements of wellbeing.

Challenges to Wellbeing: The Need for Positive Education

Fostering an understanding of the current milieu (Schwab, 1973) is an important place to begin a discussion about transforming education. Schwab (1973) argues any effort to change education that does not seriously consider "the milieus in which the child's learning will take place" (p. 503) will "inevitably fall short" (p. 506). Therefore, we aim to follow Schwab's advice and consider the milieu that many children and youth in Canada, post-secondary students, preservice teachers, and practicing teachers find themselves in.

Mental Health Issues Amongst Children and Youth in Canada

Unfortunately, many children and youth today face significant challenges that adversely affect their ability to learn and flourish at school. For example, serious mental health issues, such as depression and anxiety, affect over 1.1 million children and youth in Canada (Waddell, Offord, Shepard, Hua, & McEwan, 2002) and the number of students

affected by such issues is predicted to increase by 50% by the year 2020 (Canadian Paediatric Society, 2009). Not surprisingly, students with poor mental health are more vulnerable to a number of negative educational outcomes, including lack of motivation, discipline issues, and lower grades (Masten & Roisman, 2005). Nearly 70% of all mental health issues begin during childhood and adolescence and over 75% of individuals in need of treatment fail to receive any type of services (Mental Health Commission of Canada, 2009).

We are self-conscious about providing such a negative portrayal of childhood and adolescence because, as Aoki (2004) instructs us, this type of "generalized knowing is likely disembodied knowing that disavows the living presence of people" (p. 161). However, by providing an empirical account of the number of struggling students who are struggling, our intent is to move the discussion beyond the general notion that childhood and adolescence is a difficult time that all young people must unavoidably experience, to a clear picture of the serious wellbeing issues at hand. Alarming numbers of Canadian students experience anxiety and depression and relatively few get the support they need. However, in a recent Senate Committee report, the school system in Canada was identified as an ideal site for mental health promotion (Canada, 2006). Several scholars – in addition to those advocating for Positive Education – have argued that schools have tremendous capacity to integrate teaching practices that address social and emotional wellbeing (Adelman & Taylor, 2010; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

Student Wellbeing in Post-Secondary

Lee (2013) notes that the academic, financial, social, and time management issues faced by post-secondary students are often associated with declines in their physical and psychological health and suggests that it is time for post-secondary institutions to promote health opportunities on their campuses. Such thinking, coupled with several institutionally-based student health reports, has resulted in much discussion of wellbeing on campuses across Canada. Several colleges and universities are taking steps to address wellbeing; here we share brief examples of recent developments in two Canadian universities.

Considering student health and wellbeing at Queen's University. Recently, a number of tragic student deaths at Queen's University in Ontario, Canada prompted the institution to conduct a comprehensive investigation on student health and wellbeing. The Queen's University Student Mental Health and Wellness Report (2012) outlines the various types of support young people may require as they transition to university life. The Report argues that a university must be both a proactive and a responsive community that attends to and promotes the health and wellbeing of every student. The Report also puts forward a vision that encourages the development and implementation of initiatives that educate students about emotional, social, and physical wellbeing issues that may affect them and their peers. Thus, Queen's University is taking steps to provide students with the knowledge and skills to help themselves and support one another. The Report further identifies that, for students to meet the goal of an academically successful and fulfilling experience, "a safe, supportive, inclusive and engaging community" is a necessity (Queen's University, 2012, p. 6). For example, when planning program curricula, the report suggests that students be provided opportunities to cultivate wellbeing.

Considering health and wellbeing amongst education students. In much the same vein, the University of Alberta recently acknowledged the importance of identifying and addressing student health and wellbeing issues (University of Alberta, 2011). In particular, students in the Faculty of Education reported encountering a number of challenges to their wellbeing. For example, 44% of students in the Faculty of Education reported problems with sleeping, 89% felt overwhelmed, and 50% reporting that academic-related issues have been traumatic or very difficult to handle within one year of the survey. Sadly, the report identifies the 2003 University of Alberta Senate Task Force on Wellness which "recommended the development of an integrated, campus-wide wellness vision with measurable goals along with initiatives to reach those goals" (University of Alberta, 2003, p. 29). However, the Report concluded that in 2011, eight years after the Task Force, "such a vision has yet to be established for our campus" (University of Alberta, 2011, p. 29).

Preservice Teachers and Stress

Despite regional, national, and international calls for comprehensive health and wellbeing promotion in both public school and post–secondary settings – few are echoing this call in teacher education programs (Black-Branch & Lamont, 1998; O'Brien, 2012). This lack of transfer is a concern because several researchers have noted that the teaching profession is subject to high levels of stress (Griffith et al., 1999; Kyriacou, 2001; McCormick, 1997). Similarly, preservice teaching experiences – such as student teaching assignments – can expose preservice teachers to situations as stressful as those experienced by practicing teachers.

In our experience as teacher educators we have found many preservice teachers experience a high level of stress during their student teaching practicum. However, this phenomenon is not restricted to our own teacher education program, as student teaching practica have been being associated with moderate to high levels of anxiety and stress in many different parts of the world (Capel, 1997; Chambers et al., 2000; Mapfumo et al., 2012; Mundia, 2010). Feeling stressed and overburdened are themes preservice teachers identify as reasons for withdrawing from their teacher education programs (Chambers et al., 2000).

Although the causes of teachers' stress have been extensively examined, few investigations have been conducted with preservice teachers (Mapfumo et al., 2012; Mundia, 2010). As noted, post-secondary students face numerous challenges to their wellbeing by virtue of adjusting to life at university; these adjustments might be contributing factors to elevated stress levels for preservice teachers. On the other hand, Murray-Harvey, Slee, Lawson, Sillins, Banfield & Russell (2000), speculate that the small amount of research in this area might be due to the assumption that a high level of stress is a *normal* part of being a teacher and is accepted as a natural part of the transition from preservice to qualified teacher. Wilhelm, Dewhurst-Savellis & Parker (2000) suggest that preservice teachers might be especially vulnerable to stress because they are entering into a profession and being placed with mentors who might also be highly stressed. Accordingly, the issue of stress in the teaching profession needs to be addressed during a teacher's preservice years to help retain those who are leaving the profession early. Finally, we strongly agree with Chaplain's (2008) assertion that high levels of stress and anxiety experienced by preservice teachers suggest that we should be concerned about their overall wellbeing and their ability to successfully handle future classroom tasks.

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Practicing Teachers and Stress

When comparing the psychological health amongst 26 different professions Johnson, Cooper, Cartwright, Donald, Taylor, & Millet (2005), found teaching to be one of the top six most stressful occupations. In one study, more than 30% of teachers reported feeling 'very' or 'extremely' stressed due to heavy workloads (Chan & Hui, 1995). Attrition rates for teachers due to overburden and stress has reached alarming proportions in some parts of the world (Chaplain, 2008; Kyriacou & Kunc, 2007; Long et al., 2012).

Although teachers undoubtedly make positive contributions to student wellbeing, given the high prevalence of teacher stress, are teachers being supported to appropriately respond to the increasing number of students who face serious challenges to their wellbeing? For example, two main sources of teacher stress identified in the literature are teaching students who lack motivation and maintaining student discipline (Kyriacou, 2001). Considering that a lack of motivation and discipline problems are common amongst students with mental health issues (Masten et al., 2005), the issues of stress and wellbeing for both students and teachers must receive thoughtful attention and systemic action.

Montgomery & Rupp (2005) suggest that teachers' experience of negative emotions and a perceived lack of support both play important roles in teacher stress and burnout. In contrast, frequently experiencing positive emotions has been shown to reliably and significantly contribute to higher levels of mental and physical health, more fulfilling relationships, and better job performance (Lyubomirksy, King, & Deiner, 2005). Thus, cultivating positive emotions, a core feature of a Positive Education curriculum, can make an important contribution to this issue.

The Case for Positive Education

Clearly many children and youth, university students, preservice teachers, and practicing teachers are facing significant threats to their wellbeing. Positive psychology has the potential to address these issues, so we will briefly consider benefits linked to greater positivity. With an impressive amount of data, Lyubomirsky et al. (2005) demonstrated that happier people are more successful and productive. For example, Lyubomirsky et al. (2005), assert that "happy individuals are more likely than their less happy peers to have fulfilling marriages and relationships, high incomes, superior work performance, community involvement, robust health, and a long life" (p. 846). In relation to learning, Isen (1999) found positivity strongly linked to flexible, inclusive, and efficient thinking. For example, even mild positive moods can facilitate creative thinking, problem-solving, and improved memory recall (Isen, 1999). These findings suggest that Positive Education can meaningfully contribute both to student flourishing *and* academic performance, or similarly, to teacher flourishing and teaching performance.

Fredrickson (1998, 2001) offers a compelling theoretical frame for benefits of positivity – *the broaden-and-build theory*. This theory posits that experiencing positive emotions produces positive functioning which, over time, helps build psychological resources (Fredrickson, 1998, 2001). In contrast to negative emotions such as fear and anger, which tend to narrow thinking and behavioural options (i.e., fight or flight), Fredrickson argues that positive emotions broaden people's attention, thinking, and ability to take action. Emotions such as joy, contentment, and gratitude can prompt people to engage in a wider array of approach behaviours such as play, exploration, and generosity (Fredrickson, 1998, 2001). People who employ such approach behaviours are believed to

build skills, knowledge, and psychological resources that create significant adaptive advantages in a variety of domains over time (Lyubomirksy et al., 2005). Applying a positive psychology approach within schools can provide opportunities for students and teachers to feel better and function at higher levels.

Positive Education Programming and Curricula

Several "off-the shelf" positive psychology programs and manuals have been developed for elementary and secondary schools (Hooper, 2012; MacConville & Rae, 2012; Seligman et al. 2009). The Penn Resiliency Program (PRP) has been particularly effective at impacting serious mental health issues (Seligman et al., 2009). The PRP involves training teachers, counselors and other school-related professionals to teach and foster wellbeing skills to school-aged children and youth. The curriculum and instruction involves identifying and building on personal strengths and cultivating a sense of gratitude through regular writing activities, among others.

A meta-analysis of more than fifteen PRP studies revealed significant benefits to student wellbeing, including the prevention and reduction of depression and anxiety (Brunwasser & Gillham, 2008). Seligman et al. (2005) report: "The positive psychology programme increased students' reports of enjoyment and engagement in school. According to teacher reports, the positive psychology programme improved strengths related to learning and engagement in school (e.g., curiosity, love of learning, creativity)" (p. 301). Moreover, PRP has been shown to be effective amongst adolescents with diverse ethnic backgrounds in a variety of community contexts – urban, suburban and rural (Seligman et al., 2009). Based on surveys of the efficacy of Positive Education practices, Seligman et al.

(2009) conclude: "In summary, the existing research indicates that PRP produces positive and reliable improvements in students' wellbeing" (p. 300).

The PRP demonstrates that the essential knowledge and skills of wellbeing can be developed amongst teachers and effectively applied in classrooms to improve student wellbeing. The program has received extensive evaluation and one key finding has emerged: teachers must receive excellent training in positive psychology if the program is to be effective (Seligman et al., 2009). This finding points to an opportunity for teacher education programs. If we are to create curricula, classrooms, and schools that foster students and teacher flourishing, preservicing teaching is a critical place to begin.

Positive Teacher Education: A New Starting Point

Positive Education offers a way forward for teacher education at a time when students and teachers need a structured approach to managing threats to their wellbeing. Action is required given the health and wellbeing issues that public school students, university students, preservice teachers, and teachers are facing. The vision for Positive Education is to teach the skills of emotional, social and physical wellbeing so students and teachers can experience more positive emotions, high levels of engagement, positive relationships, a sense of accomplishment, and greater meaning in life (Seligman, 2011).

A key issue appears to be that most preservice teachers or practicing teachers are currently not well prepared to imagine this type of education, let alone effectively provide it. The significant stressors teachers experience in their work lives likely serve as barriers to nurturing student flourishing, so providing preservice teachers skills to cultivate their own

wellbeing appears to be a key starting point. Few teachers have experienced training regarding the skills of wellbeing as a part of their preservice teacher training or professional development. Thus, the major goal for *Positive Teacher Education* is to provide curriculum and instruction regarding the skills of wellbeing.

Conclusion

The poor wellbeing experienced by so many students and teachers provides a clear imperative to act and a wonderful opportunity to take advantage of the growing body of knowledge that can help us all flourish. Positive Teacher Education has the potential to increase preservice teachers' ability to handle the day-to-day stressors of teaching and life so they can in turn enhance their students' capacities to handle stress. We believe Positive Education should be incorporated into teacher education programs curricula across North America. Ideally, Positive Education could be simultaneously and systematically incorporated amongst provincial school curricula, classroom instruction, and teacher education programs. However, perhaps a more strategic goal for the time being is the transformation of existing teacher education programs into *Positive Teacher Education* programs.

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Dr. Lorraine Beaudin

Enhancing Understanding: Clarifying Teacher Mentor Roles in the Education of Pre-Service Teachers

Lorraine C. Beaudin, PhD
Assistant Dean, Field Experiences
Faculty of Education
University of Lethbridge
beaulc@uleth.ca

Abstract

As more teacher preparation programs emerge in Alberta and as a significant numbers of teachers retire, there is an ongoing need for clearly communicating practicum roles and responsibilities among stakeholders, especially to new Teacher Mentors. This paper outlines the implementation of the University of Lethbridge, Faculty of Education's Educational Partners Orientation Program (EPOP) and briefly outlines the importance of clarifying what it means to mentor pre-service teachers in their internships.

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Introduction

Throughout the literature, mentor is defined in a variety of ways. Smith (2007) proposed that mentoring is a type of learning, where the mentee is supported but also challenged by the mentor in order to progress as a professional. Many definitions suggest a hierarchical relationship, the mentor holding more experience and knowledge that is to be passed to the mentee (Aladejana, Aladejana, & Ehindero, 2006; Fowler, & O'Gorman, 2005). Schwille (2008) suggests that being a mentor should be considered professional practice in itself for teachers, requiring a unique skill set that has been developed over time. Yet another definition of mentoring describes it as a combination of a relationship and a process (Kwan & Lopez-Real, 2005).

Within our Teacher Preparation program, we found a need to clarify the role of both the Teacher Mentor and the Intern Teacher within our last professional semester (PS III). This paper outlines the implementation of the University of Lethbridge, Faculty of Education's Educational Partners Orientation Program (EPOP) and how the EPOP workshops played a significant role in enhancing understanding of what it means to mentor in our PS III internship.

The Structure of our Teacher Education Program

The Faculty of Education program at the University of Lethbridge is comprised of four practicums. Prior to being admitted into the Faculty, students must complete Education 2500 or equivalent, which includes a 13-week on-campus course and a 60-hour practicum. Education 2500 is an opportunity for students and the Faculty to see if students are suited to the teaching profession. Upon successful completion of ED2500 and admission

into the Faculty, students complete three practicums. Professional Semester One (PS I) includes on-campus courses ending in a five-week practicum. Professional Semester Two (PS II) includes on-campus courses culminating in a six-week practicum. Finally, Professional Semester Three (PS III) is a 13-week internship wherein the Intern Teacher teaches half of the Teacher Mentor's teaching load. During the PS III internship, the Teacher Mentor uses the half-time *release* from teaching duties to mentor the Intern Teacher and work on a professional development project. Table 1.1 outlines the responsibilities and expectations of the three practica in more detail.

The Role of Mentor Teachers in Professional Semester Three (PS III)

For the Faculty of Education at the University of Lethbridge, Teacher Mentors are practicing teachers who are willing to take a Professional Semester Three (PS III) Intern Teacher. Teachers willing to mentor Intern Teachers need to be aware that the role of a Teacher Associate in one of our Faculty's first two professional semesters differs from acting as a Teacher Mentor in PS III. In all practica, teachers are expected to model teaching and general classroom management as well as explain the thoughts and beliefs behind their actions. Mentoring relationships in PS III, however, should shift towards a considerably more equal relationship, one in which the Intern Teacher should contribute actively (Walkington, 2005). This unique distinction separates the PS III Internship and the first two practica in our program.

Defining mentorship is a first step in helping Teacher Mentors understand their role in pre-service teacher education. After defining mentorship, exploring the benefits to both

Table 1. 1

Expectations and Responsibilities by Practica

Ed. 3500 (PS I)	Ed. 3600 (PS II)	Ed. 457X (PS III)
Description		
• General teaching skills	• Subject major teaching	• Introduction to first year teaching
Intern/Student Teacher Teaching Responsibilities		
• 5 week practicum	• 6 week practicum	• Approximately ½ time teaching assignment
• 1/3 time assisting	• 2/3 time teaching	• Engage in all professional school activities including district and site-based professional development days, Teachers' Conventions, etc.
• 1/3 time teaching	• 1/3 time assisting	
• 1/3 time observing/planning	• If appropriate, progress to 3-5 days of full time teaching	
• Written lesson plans for all lessons taught	• Written lesson and unit plans, including assessment and evaluation components	• All levels of planning
• May teach from plans prepared with/by Teacher Associate	• Plan, conduct, and research evaluation of pupil work	• Unit and long-range plans prepared in advance of internship
• Plans for informal evaluation		• Individual Professional Growth Plan (aligned with school goals)
		• Professional Development Project (aligned with goals and Individual Professional Growth Plan IPGP)
Teacher Mentor/Associate Expectations		
• Observation of most lessons taught	• Observation of most lessons taught	• Interact as knowledgeable, supportive, experienced colleague and coach
• On-going assessment and coaching	• On-going assessment and coaching	• Actively monitors Intern based on classroom observations
• Regular supervision and written feedback of at least one lesson daily	• Regular supervision and written feedback of at least one lesson daily	• Completes the Teacher Mentor section of the Descriptive Final Report
• Final evaluation with University Consultant	• Final evaluation with University Consultant	

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http://www.uleth.ca/education/sites/education/files/PS%20II%20Handbook%20WEB%20Aug%202012.pdf

parties is an important activity in setting the stage for the mentorship relationship. Simpson, Hastings, & Hill (2007) found that teachers begin to learn again themselves as they reflect on their own practices. Teachers have also reported that they learn through mentor training programs and acquire new, fresh perspectives including new styles and strategies for teaching from their mentees (Kwan et al., 2005; Simpson et al., 2007). Finally, mentors report that they experience a sense of pride and accomplishment when they witness their mentees' success (Hagger, & McIntyre, 2006 as cited in Hobson, Ashby, Malderez, & Tomlinson, 2009).

The benefits identified by teacher mentors and mentees make it clear that mentorship is beneficial for both individuals in the alliance. Hosting an Intern Teacher can contribute to the overall teaching quality of both Mentor Teacher and Intern Teacher. It is important that in-service teachers understand the key role they play in delivering a solid teacher preparation program and that this mentorship role is a significant contribution teachers can make to the development of a strong teaching profession. As our Faculty continues to work with teachers in the field, it is critical that in-service teachers be encouraged to develop a sense of pride in watching their mentees succeed. However, it is very clear that successful mentorship depends on clarity of participant roles and responsibilities and that not all in-service teachers have developed a variety of strategies for assisting beginning interns. Helping teachers build mentorship skills is an important aspect of any teacher preparation program that relies on teacher mentors being involved in their practica.

Enhancing Understanding: Clarifying Teacher Mentor Roles in the Education of Pre-Service Teachers

Context

In Fall 2011, more than forty percent of the teachers taking a student teacher from our program (PS I, PS II or PS III) were doing so for the first time. At the same time, several new teacher preparation programs were emerging in Alberta and a significant number of Alberta teachers were planning to retire in the near future. The combination of these realities created an increased need for communicating our practicum roles and responsibilities among stakeholders, especially to new Teacher Mentors. Responding to this need, the Faculty established an Educational Partners Orientation Program (EPOP). The Faculty had a strong commitment to this program and allocated monies for all aspects of EPOP, including travel and teacher substitute costs. Beginning in Fall 2011, EPOP workshops were integrated into all the professional semesters, typically as half-day sessions. The goals of the workshops were: 1) to clarify roles and responsibilities; 2) to help teachers understand what it means to supervise and/or mentor; and 3) to continue to build relationships between the Faculty of Education at the University of Lethbridge and in-service teachers.

Specifically the 3-hour EPOP workshops for Teacher Associates and Teacher Mentors were designed to be engaging with activities and opportunities for active participation. The workshops evolved, as they were delivered. In the Fall 2011, we completed five workshops for PS I, and two large workshops for PS III. Initially intended for teachers only, it became clear immediately that these workshops would also benefit Student Teachers and Intern Teachers. As well, it was clear from the feedback that even teachers who had taken many students in the past needed clarification regarding expectations in the various practica and were leaving the workshops with a renewed

understanding of our program and of the expectations of Intern Teachers and University Consultants.

In the first year, slightly more than half of all teachers involved in the various practica attended the workshops. We felt this number was extremely successful for a first year. As the workshops continued, we realized a strong need existed to clarify distinctions between being a Teacher Associate in PS I or PS II and being a Teacher Mentor in PS III.

Feedback

At all EPOP workshops delivered in the first year, participants were asked to respond to five basic statements relating to the workshop — 4 Likert and one open-ended item. The intent of the workshop evaluation was simply to help presenters gather information from participants to ensure that the workshop goals were met. As well, it was important that the workshop was delivered in an interactive format that would encourage all participants to attend. In other words, we appreciate that teachers are busy and we wanted the workshop to be one teachers felt was important, useful, and engaging.

After the initial workshop, through informal verbal comments, we realized that including Intern Teachers at future workshops was both important and useful to the entire process of clarifying expectations. We added the following statement to the workshop evaluation form for all workshops going forward: *Including the Intern Teacher in the workshop was beneficial*. All Teacher Mentors responded positively to this statement (94% Strongly Agreed and 6% Agreed). This response demonstrates that teachers appreciate the complexity of teacher education and that sharing expectations with their Student Teacher or

Intern Teacher is a valuable activity. As one Teacher Mentor stated, *This workshop has definitely set both of us (as teacher mentor and intern teacher), up for success.* It was clear from many other comments that teachers enjoyed hearing a common message with all stakeholders present.

After the first workshop, we also added the statement to all PS III EPOP sessions: *This workshop helped me to recognize the difference between being a mentor and a supervisor*. The purpose of this question was to see if teachers were clearly seeing the change in the role of a Mentor Teacher in PS III from being a Teacher Associate in PS I and PS II. We felt that understanding this distinction was paramount for preparing teachers to mentor. Between June 2012 and January 2013, five PS III EPOP Workshops were held.

In the feedback for those workshops, all teachers replied positively to the following three statements (Strongly Agreed or Agreed): a) "This workshop helped me to understand and/or clarify my role as a teacher mentor;" b) "This workshop increased my understanding of the practicum and/or program expectations;" and, c) "This workshop helped me recognize the difference between being a mentor and a supervisor." As well, 100% of the teachers replied positively (strongly agree or agree) to the statement: I would recommend this workshop to my colleagues. These responses verified that EPOP sessions were important for clarifying our program's expectations and that teachers were comfortable taking time away from their own teaching to attend the workshop.

In the open-ended question, 100% of the teachers responded with positive statements. Some of these teacher statements included: a) "I've taken many student teachers

and still didn't know a lot of the info." b) "Very helpful discussions and handouts." c) "I appreciate the time afforded to help us do our best to be great mentors and assessors." and, d) "Thank you for helping clarify and update expectations of the teacher mentor." Many other positive comments were related to having a half-day release time for the workshop, the atmosphere and the general overall structure of the workshop. The comments were consistent with our belief that teachers need clarification regarding program expectations and that they genuinely want to do their best for teacher education.

Overall, Teacher Mentors responded positively and constructively to the workshops. Student (Intern Teacher) feedback was equally as positive with one exception. Because Teacher Mentor attendance was not mandatory, some Intern Teachers were not as positive about their experience at the workshop when their Teacher Mentor was not present. For example, one Intern Teacher noted, "I wish my Teacher Mentor was there!" Intern Teachers reported that they felt left out if their Mentor Teacher wasn't present and felt the session would have been more beneficial if their Mentor Teacher had been present.

Overall, Intern Teachers responded positively to open-ended questions. Their comments included: a) "I found it very helpful to be able to chat with my UC (University Consultant) and my TA (Teacher Mentor) and participate in the activities with them;" b) "This was a great workshop for everyone to have a better understanding of what is coming up, and a chance to meet the people they will be working with!" and. c) "I feel better prepared to enter my final internship after this workshop than I did after the orientation. It should be mandatory for all PSIII interns to attend this workshop."

Conclusion

In-service teachers play a significant role training pre-service teachers. Our Faculty has a firm commitment to building relationships with the teaching profession and working together to develop and maintain quality teacher preparation programs. We understand the significance that quality mentorship has in the development of good teachers. As more and more teacher training institutions emerge, there is an increased need to build strong relationships with the teaching profession and to have structures in place, like EPOP workshops, that provide opportunities to clarify the roles and responsibilities of all stakeholders for individual teacher preparation programs. The integration of EPOP workshops benefitted our Faculty by enhancing clarification about the roles and expectations of both Teacher Associates and Teacher Mentors. Significantly, for our program, we must continue to articulate how mentorship differs from supervision, and to build opportunities for in-service teachers to learn about mentoring students. We know mentorship requires building a relationship that includes trust, respect, and willingness to work together. It appears that our PS III EPOP workshops offered a starting point for developing this relationship among Teacher Mentors and Intern Teachers.

Finally, our Faculty needs to spend time with Teacher Mentors and Intern Teachers discussing mentorship and together establishing good mentorship. Research shows that mentees say feeling welcomed and supported while receiving helpful and creative tips made the internship experience a great learning experience and that pre-service teachers find mentorship invaluable for gathering information and experiences they could never get from books (Marais & Meier, 2004). For mentorship programs to be successful, mentees must also understand, and be open to, being mentored.

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Many effective teachers do not always know what makes their teaching successful and working with Interns can help develop that awareness. Clarifying the roles and responsibilities of Teacher Mentors within the PS III EPOP workshops has enhanced understanding among mentors and mentees, and helped set the stage for a successful internship. Through dialogue and shared expectations, both Teacher Mentors and Intern Teachers felt more prepared for mentoring relationships. Although we believe implementing the EPOP workshops was a good first step in enhancing understanding among all stakeholders, as we move forward, we will continue to explore strategies to develop skills for both mentors and mentees.

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Negotiating Liminal Spaces: Purposeful Pedagogy in Diverse Classrooms

Mildred T. Masimira
PhD Student, Department of Secondary Education
University of Alberta
masimira@ualberta.ca

Abstract

This paper starts with a personal exploration of my life as an African immigrant in North America. I inhabit a liminal space, and this paper explores negotiating life as a person "in-between" worlds. Notable theories have been put forward concerning liminality (Anzaldúa, 2002, Ledgister, 2001; hooks, 1984). I discuss the origins of liminality and its various permutations with the aim of clarifying what it means to inhabit this space. Liminality represents a powerful vantage point that accords inhabitants, "not just one set of eyes but half a dozen, each of them corresponding to the places you have been….." (Said, 1988, p. 48). I acknowledge the ability of liminars to analyze circumstances differently, creating alternative ways of knowing and being. My discussion will draw from personal experiences, postcolonial, and feminist theory. In conclusion, I suggest how we can create purposeful pedagogy considering the changing demographic face of our classrooms.

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Introduction

My life has always been filled with the need to understand my place in the world. I believe that it is through understanding myself that I begin to understand others. Back in Africa, I never quite faced the need to define myself and explain who I am to the extent that I have in the period I have lived in North America. As I look back through the years since my immigration, I realize that I always knew that I was treated differently in many instances. Whether it was the more often than not condescending question, "Where are you from?" or the fully exoticising, "I like your accent," or hearing people talk about Africa as if it were a country, a very backward country, I tended to always be on the defensive. I felt the urgent need to defend myself, my country, and my kinsmen (as if I really could speak for everyone).

Now, with children of my own, which I think has mellowed me out quite a bit; I seek to understand things more. Pain is undoubtedly one of the first emotions I feel with each belittling incident I encounter, but as I begin to ruminate on the experiences I find gems of insight that I never saw before. This paper discusses liminality as a concept that has helped me name my own circumstances as an immigrant student, and in turn opened me up to thinking about what we need to consider as we create and engage with pedagogical strategies that will ultimately benefit all students.

Liminality: Origins and its use across disciplines

According to the Oxford English Dictionary, the word liminal first appeared in publication in the field of psychology in 1884, and it refers to "A transitional or indeterminate state between culturally defined stages of a person's life; such a state occupied

during a ritual or rite of passage, characterized by a sense of solidarity between participants."(OED, 2012 ¶1). The word has its etymology in the Latin verb "*limen*" which translates as "threshold" meaning the lower part of a doorway that must be crossed when entering a building. One thing is clear from this definition; there is an anticipation of a "crossing over" that relays a person to another space.

Arnold van Gennep (1960) was a French ethnographer and folklorist, well known for his study of rituals. He coined the term liminality in 1909. He used the term specifically within the context of rituals in small societies that served to change the status of some of its members, for example youth transitioning to adulthood. van Gennep believed his tripartite ritual phases (preliminality, liminality, and post – liminality) signified every ritual to varying degrees (1960). Liminality, which van Gennep also referred to as "transition rites" involves the creation of a clean slate, one that removes preconceived beliefs and ideas about what one should be, how one should act, and carry themselves in society. Though I believe immigration qualifies as a ritual, the idea of the blank state was probably feasible in the context of the actual ritual processes with which van Gennep (1960) was preoccupied. However, I do not see that the same idea can translate into the context of immigration, since, in the liminal, or transitional phase, as van Gennep defines it, immigrants still carry the baggage (norms, values, and expectations) from the both the home and the host contexts.

In his discussion of liminality, which he terms the redressive phase, Turner, a British anthropologist, notes that "the characteristics of the ritual subject (the "passenger") are ambiguous; he passes through a cultural realm that has few or none of the attributes of the

past or coming state" (1967, p. 94), pointing to the uncertainty and lack of structure that exists in liminal spaces. His indication that liminality carries few or none of attributes of the past or future is divergent from van Gennep's view of the clean slate, therefore it renders his definition of liminality, in my view, more believable and more in alignment to immigrant experiences.

Anzaldúa, a Chicana cultural theorist also discusses liminality, and her version of it is *nepantla* a Nahuatl word which means 'torn between ways" (2009). All three authors point to the ambiguous nature of liminal spaces, but she is one that sees the possibilities in nepantla and actually spells them out, as in this quote, "The state links us to other ideas, people and worlds, we feel threatened by these new connections, and the change they engender." (2009, p. 243). There is a clear sense of connection and beginning of change, all created by life in liminal spaces. van Gennep (1960) and Turner (1967, 1970, 1975), working in a strictly ritual context, do so by implication, in other words, to be able to go through certain rites of passage one had to master some degree of strength to "overcome." Anzaldúa (2010) does not end there. In her essay, "La conciencia de la mestiza": Towards a new consciousness, Anzaldúa introduces the mestiza concept that extends the concept of *nepantla* to show the type of worldview that can result from living as a liminar or a *nepantleras* as she calls people inhabiting liminal spaces. This consciousness is also termed the consciousness of the borderlands.

A *mestiza* is defined as, "one who continually walks out of one culture into another" [one who is] "in all cultures at the same time" (2010, p.254). When we consider the fact that culturally, politically, geographically people are on different planes, and yet have so

many fundamental things in common, we get a sense of our interconnectedness. Hence Anzaldúa sees herself as one who alternately walks in and out of cultures. I see this mestiza consciousness at work in my own experience, especially when I switch languages depending on my context; I mostly use English in academic and professional settings, and my native language at home with my family. For Anzaldúa, the consciousness is reflected in her code switching when she writes or speaks in both English and Spanish. It is this mestiza consciousness that speaks to the advantages of living in liminal spaces.

My life in North America: Experiences with liminality

Before emigrating and en route to North America, I experienced a different type of liminality that had more to do with my fear of the unknown (ideological) and this gave over to what I would like to call "liminality in daily life" which explains particular encounters where liminality manifests in real time and place. It is the latter version of liminality that is the focus of this paper. To illustrate liminality in daily life, I introduce two vignettes that mark my experiences with liminality, after the literal "border crossing" from Zimbabwe, followed by my thoughts about these experiences.

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I am looking to register my daughter for the new school year. I walk into the school that I have selected with the hope of getting my child registered. I get to the reception area and the lady at the desk looks up for a brief moment and goes back to her work. I can tell that she is not really paying attention to me, and I think I know why. It's almost as if she expects, or rather, dreads to get into conversation with yet another immigrant, whose documentation she will need to verify, both for authenticity and appropriateness for school registration. I

can also tell that she dreads talking to yet another person who cannot speak English properly. When I greet her and explain the reason for my visit, she is visibly taken aback, and I can actually see her mental readjustment to the phenomenon of the English - speaking immigrant in front of her. She is curious to know what I do for a living and when I tell her I am a student, her attitude changes even more. She begins to answer my questions fully and satisfactorily.

I am at a gynaecologist's office. It's a fairly small space and though patients tend to speak in hushed tones when they get to the desk, other patients in the waiting area can make out what they are saying. A pregnant lady walks in, she is Pakistani, she is late for her appointment and she looks very flustered. The nurse at the desk tells her she is late and she cannot be accommodated. The lady, whose English would be regarded as sketchy, struggles to explain why she did not make it on time. Nobody is really listening because they keep telling her that she cannot be seen. She acknowledges that she understands that but she needs to reschedule, so she can rush to the other lab before she is late for that appointment too. The nurse at the desk starts inquiring about a translator, who is obviously absent, because she cannot understand the 'heavy accent." I bristle in my seat because I am thinking at that very moment: Nurse, you hear an accent, she hears an accent, and I hear an accent too. This is not a one sided thing. I stand, walk towards the desk and ask if it's ok if I get the directions so I can show her where she needs to go, since I do not speak her language either. The nurse seems to hear me fine and we get the directions and I escort the lady to the lab.

The two vignettes presented above, in my view, show experiences of liminality or inhabiting the third space in two distinct ways. The first shows me living in the liminal space, and the second shows my perception of someone inhabiting a liminal space.

"I inhabit this liminal space."

The first vignette was one in which I felt I lived in the third space because I was regarded as the other. I needed help; I sought out a place where my needs could be addressed, just like any other parent who wants their child in school. I did not anticipate being met, especially in a school setting, with a cold demeanor, and a palpable disdain for difference. So in this instance, the only resources I had at my disposal, my reasonable command of the English language, and upon the receptionist's further inquiry, the fact that I was a doctoral student in university, served to get me what I needed. The interface created by my use of the English language and the divulging of my own education became the currency (the bridge) that was needed for the transaction of registration to take place.

"I look at you, and I see myself: I am you, and you are me."

The second type of liminality was one I felt vicariously through the experience of a fellow immigrant. In a sense, I understood what the lady was going through because I had gone through the same in various instances. Liminality is a powerful state/space to be in because it can induce the type of empathy necessary for reaching across differences, again building some type of bridge that enables communication and coexistence. I remember a classmate's account of her experiences as an immigrant who did not speak English, her struggle to learn the language and the isolation she felt in class and in society. She took her children everywhere so they could help her read things written in English.

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 In that moment of storytelling, the emotion in the class was raw, and I believe in that instant all the classmates were taken to the threshold, to this third space with her and knew, albeit for just a moment, what it was like to be a non - English speaking immigrant in an environment where English is the language of instruction and the language for living. For the lady at the doctor's office, frustration gave way to humiliation as she tried to speak in even lower tones but the nurse continued talking within earshot of everybody. The immigrant's "heavy" accent seemed to be another culprit in the conversation, but I was sitting there thinking, "I hear an accent when the nurse speaks too: how is it that this never comes up in conversations." I wonder what would have happened if, when the nurse talked about an accent, the lady would have responded with, "I hear an accent too. Let us bear with each other."

 All the same, my intervening put an end to the whole scene, much, I believe, to the relief of everyone involved and present. I am still nagged by some questions though. Why did I intervene? Was it out of pity? Out of empathy? Did I see the lady, and therefore myself embarrassed and belittled by the whole conversation? The room was full of women, some with their husbands, but no one said anything. They were all quiet, some looking on, others peering intently into magazines. I was the only other visible minority in the room, so did they assume that I should be the one to help out, and if so why? If not, then why did nobody do or say anything?

 I came to the conclusion that with liminality, one has to realize one's stake in a particular scenario to actively participate in it. Aboriginal activist Lila Watson appropriately summed up this recognition of the interconnectedness of humanity and our stake in life

when she said, "If you have come here to help me, you are wasting your time. But if you have come because your liberation is bound up with mine, then let us work together" (1995).

In the first and second vignettes, I, as well as the Pakistani woman in the second vignette, forced by circumstances to face the fact that we are immigrants in a foreign country who have to cope with stereotypes that are ingrained in the culture. Our actions in both circumstances are negotiations of sorts, as we seek to achieve what we set out to accomplish.

Liminality as a space of strength

If liminality produces such painful emotions and stressful situations as portrayed by the vignettes above, why then should it be a concept that we cling to as a mode of creating purposeful pedagogy. For me the answer is this: Liminality is the doorway that allows the individual to experience a situation, to name it, and strive to alter it so everything is back in balance again. Freire (1970,p.47) alludes to this when he says, "To surmount the situation of oppression, men must first critically recognize its causes, so that through transforming action they can create a new situation, one which makes possible the pursuit of a fuller humanity." I mentioned earlier that I always knew that I did not belong, in fact, I saw myself as existing in - between worlds (Anzaldúa, 2002, 1987). There I was, an immigrant from Africa, in North America, experiencing a different way of life, a different value system than I was accustomed to. I wanted to feel at home but I could not, and this was in part because of all the questions I was asked and the implied "You should be going back home at some point." Hence this liminal space became the impetus for the way that I look at life

experiences now. The vignettes I shared were as direct result of this feeling of "not belonging" one that Turner refers to when he writes, "liminal entities are neither here nor there; they are betwixt and between the positions, assigned and arrayed by law, custom, convention and ceremony" (1967, p. 95). By inhabiting this liminal space, I have become more aware of myself and those around me, thereby allowing me to achieve a balance between myself and the space I occupy.

Creating purposeful pedagogy

In an era when understanding immigration has become crucial in understanding both formal and informal education, around the world (Trueba and Bartolomé, 2000), it is essential that educators find ways to incorporate their students life – worlds into their pedagogy. Curriculum theorists have emphasized the need to attend to the "hidden curriculum" (Snyder, 1970). I wonder if we as educators and educators to - be really grasp what this means for our teaching. Paying attention to the hidden curriculum speaks to the idea of an "engaged pedagogy" according to hooks (1994) which is engaging fully in our students' lives so we teach things that matter to everyone involved. The following are some of the ways that educators can use to rethink their current pedagogy and spur them on to making their pedagogy more purposeful in their classrooms.

1. *Understanding the symbol of the Bridge*

The metaphor of the bridge has become a very useful one for many people living in liminal spaces (Anzaldúa, 1987, 2009; Koshy, 2011; Keating, 2007). The bridge conjures up images of a continual process of walking out of one culture into another because it is necessary that we do so. A bridge always comes from someplace and leads to another

place. Anzaldúa says, "Bridges are thresholds to other realities, archetypal, primal symbols of shifting consciousness. They are passageways, conduits, and connectors that connote transitioning, crossing borders, and changing perspectives" (2009, p.243). Like liminal encounters, the bridge has a starting point and an end point. The space in – between the two points represents the transformation, conscious or unconscious that takes places as the status quo is shaken by various events, in my case, immigration. As shown by the first and second vignettes, as soon as I (other) step out of my house, I become the immigrant, "resident alien" as Spivak (2002) describes it. I cross bridges every day when I code switch linguistically, psychologically and physically to adapt to daily life in the host country, while simultaneously trying to hold on to the culture from the motherland that I try to preserve within my own house. It is the same "bridge crossing" mentality that will allow teachers to edge into the uncomfortable territory of difference and create alliances across those differences and enable a pedagogy that has purpose.

2. *Working towards a new consciousness*

The land of "in- between" calls for a type of understanding, not only of the other, but also of self. It focuses on the reconceptualization of self into a form we ourselves understand and one that is open to listening to others. Bambara (1981) refers to this as the "habit of listening to each other and learning each other's ways of seeing" (xlii). According to Anzaldúa, we can only acknowledge other people's ways of seeing if we have "the knowledge that we are in symbiotic relationship to all that exists and co- creators of ideologies – attitudes, beliefs and cultural values -- motivates us to act collaboratively"

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(2009, p. 244). Acknowledging the inextricable relationships that we have with each other allows us to look at each other differently, like co- authors of knowledge, instead of rivals.

With the realization that we are *nepantleras*, (Anzaldúa, 2009), we break with dualities because we realize we will be forced to pick sides and instead accept that we have morphed into a hybrid species, one that is insider, outsider, and more all at once. We also accept that our current lives are not the same as the various identities our liminality/hybridity stems from. In Rutherford (1990), Bhabha notes that the ever - fluid identities in the third space are rethought, extended and pre-existing principles are translated anew. The concept of insider-outsider is echoed by Ledgister (2001) who realizes that the only way he could be comfortable in any place was by making each place home. Home was wherever he happened to be and this process was foregrounded by his uncanny ability to "slip into different milieu with a considerable amount of inside knowledge, but without being an insider." In creating purposeful pedagogy, seeing the "other" as "self" becomes useful because difference will not be treated as deviance, but rather as a part of the self that sees differently, ultimately enriching the whole learning experience.

3. Recognizing the sub text (a sign of deep conocimiento/awareness)

The idea of the sub text has been a preoccupation of mine since I took graduate courses in women's studies. The context of the subtext I refer to is the classroom since this is where I have mostly observed this phenomenon. Part of the subject matter in feminist, postcolonial and other classrooms is naming dominant power structures as well as finding ways to negotiate engagement between different groups of people (Keating, 2007; hooks, 1994; Anzaldúa, 1981; Lorde, 1984; Spivak, 2002)). Feminist and postcolonial authors

acknowledge that power structures privilege some and disadvantage others. As a result I have noticed a peculiar thing over the years, especially in classrooms, which are diverse in nature.

Within the context of this paper I define text as the conventionally accepted/mandated subject matter that we engage with in the classroom. I am intrigued, however by the subtext, which I define as the interactions among the people discussing the text within the classroom. In curriculum studies, this phenomenon has been termed the hidden curriculum (Snyder, 1970; Giroux & Penna, 1983). I have noticed that though we are engaging with subject matter in ways that are profound, the subtext tends to mimic very much the power structures or the status quo that we are critiquing. Some examples of classroom subtext include, total negation of students' comments by other students or by teachers, or mainstream students belittling minority students' comments or attempting to speak for them during conversation without affirming the speaker's intent or relevance to their statement. Such ambivalence within a classroom is problematic. If change is going to start in the classroom, then there is a need to engage with issues of power or relational dynamics within the classroom, so they do not replicate the problems that we are trying to overcome. Silences in classrooms can also point to the operation of the subtext to which I refer. In their discussion of pedagogical frameworks for social justice, some authors (e.g. Adams, Bell and Griffin,1997; Trueba, and Bartolomé, 2000) note how students from both dominant and marginalised groups maintain silence out of fear of polarising the class, out of anger, anxiety, and the perceived ignorance of each other's life experiences. A recent example from another classmate shows how classrooms can be liminal spaces or places where negotiation takes place. This classmate first related the way he employed silence in

school; initially in resistance to a corrupt regime, and later as a symbol of his feeling of being maligned in a North American classroom. The interesting factor is that all these explanations for silence are triggered by the idea of difference. The silence becomes a part of the subtext that may not receive much attention but is important as the text itself.

Yet again, reconceptualising difference, not as deviance or negativity but as a source of endless possibility, can be the starting point that can move the classroom to a purposeful pedagogy. Lorde (1984) says difference is not something to be tolerated, as is touted in most multicultural discourses, but rather, "be seen as a fund of necessary polarities between which our creativity can spark like a dialectic" (p. 107). Anzaldúa complements this statement by saying, "diversity of perspectives expands and alters the dialogue, not in an add - on fashion, but through a multiplicity that's transformational, such as in mestiza consciousness" (2009, pp. 246-247). In other words, both authors see difference as a positive thing that can lead to enriching conversations.

4. *Using the master's tools: Acknowledging what it takes to use the English Language*

Lorde's (1984) famous essay "The master's tools will never dismantle the master's house" has been cited as relevant work in understanding the impact of mainstream epistemologies in colonized peoples' endeavors to change the status quo for disenfranchised groups of people. Language has always been a major player in the discourse of colonization. During and after the colonial era was over, more native people started learning English and the "etiquette" that went along with it. Through this process today I can sit in a graduate class in North America and converse, as well as write in English. It is also the reason why,

in the vignettes provided earlier, I could talk to the receptionist at the school, and intervene at the doctor's office.

In the diverse classroom, the use of English is taken for granted, or more aptly, it is expected. Educators and others students alike may not realise just how much work it is to daily converse and think through concepts in a language that is not one's own, the language of the coloniser. It is a tenuous relationship based on the fact that most people acquired the language by the process of colonisation. English is also a useful in this age where it is the major mode of communication. And more often than not, as in the case at the doctor's office, people hear an accent when immigrants speak English, but do not realise that they too have an accent. For some students the accent was enough to silence them in class. (Adams, 1997). It is important that educators pay attention to such nuances because for some students comments such as those can be the difference between a lively discussion and a one sided discussion that does not benefit anyone in the long run.

The notion of "us-them" is alive and well in our classrooms, but granted, is slowly being blurred, because of globalization and movements of people across "their" borders. We are inextricably intertwined, or as Anzaldúa (2009) would say, "we are implicated in each other's lives" (p. 243). Though Lorde (1984) would argue that the master's tools cannot dismantle the master's house, they can chip away at the old house in ways that can benefit those who dwell in liminal spaces.

5. *Adopting transcultural approaches*

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According to Hoerder, Herbert & Schmitt (2006), transculturalism is, "the process of individuals and societies changing themselves by integrating diverse cultural life-ways into dynamic new ones" (p.12). The term transculturalism was coined by Fernando Ortiz (1940). He was using it during colonial era rule; its main intent was to show the possible alliances that could take place after the colonial era. In essence, transculturalism becomes a form of survival, as, according to Hoerder, Herbert and Schmitt, it allows people to "re-conceptualize difference and diversity as negotiable, as intersectorial, as strategic, and as capital" (p.15). This indicates that the authors see the negotiation of difference as a process that promises positive change within society. Oh (2011) has also embraced the idea of transculturalism, showing its benefits in an era where many people from different places are living together within the same societies than at any previous time. Using transcultural approaches in creating pedagogical strategies ensures a more holistic curriculum that represents everyone involved in the learning process.

Conclusion

Educators continually strive to be the best they can be when it comes to teaching because more than ever they realise the need to tailor their classroom dynamics to suit the ever changing demographic face of the classroom. Great strides have been made as various educators adopt strategies that will work for their students by engaging with them and their lives (hooks, 1994; Adams, 1997). Continued transformation in teaching will result foremost from educators' genuine interest in their students' lives so they understand not just the student, but the person as a whole.

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Building a Teacher Education "To Do List"

Jim Parsons, Larry Beauchamp, and Kelly Harding
Department of Secondary Education
University of Alberta
Edmonton, Alberta, Canada, T6G 2G5
jim.parsons@ualberta.ca
larry.beauchamp@ualberta.ca
kelly.harding@ualberta.ca

Abstract

This paper reviews current practices in preservice teacher education to suggest possible improvements that, if practiced, might help mediate many pressures young teachers face. Here we (1) synthesize our recent research in the area of in-service teacher professional learning to inform teacher education programs and (2) use these research findings to suggest possible changes and improvements to pre-service teacher education programs. Synthesizing the research, we generate a "To Do List" of six activities we believe would improve pre-service education programs. We believe such instructional activities and pedagogies can become essential foundations that would help build more efficacious teachers, help stem the exodus from teaching, and help our teacher education programs begin to educate teachers for the wellness of long and healthy careers.

Purpose of this paper

The purpose of this paper is to (1) review and synthesize our own recent research in the area of in-service teacher professional learning as a way to inform teacher education programs and 2) consider and use these research findings to suggest possible changes and improvements to pre-service teacher education programs.

Perspective or Theoretical Framework

As long-time working academic researchers, we have engaged – over our more than 80 combined years of academic work – in regular research over a wide variety of educational topics. More recently, since 1999, our work has concentrated in schools where we have had the great fortune to work side-by-side with teachers who are engaged in site-based action research. We have come to believe that such research engagement increases teacher learning and self-definition/self-image. The collected years of our partnerships with schools and with teachers as they have "worked their research" have impacted our thinking about how teacher education might be constructed. We have considered what we have seen occurring "in the field" and we have become thoughtful about how we might translate what we have been seeing into our own academic agenda – teacher education. Here we attempt to synthesize what we have seen and learned from teachers to apply to teacher education at the university undergraduate level, as we attempt to build teacher education programs that educate teachers towards improved student learning.

Our perspective focuses on the practical aspects of the applied research we have completed over the years and the conversations and insights we have had with teachers during that time. Specifically, our original research projects have asked and answered three

questions: (1) What? {What did we find?}; (2) So What? {What do these findings mean?}; and, (3) Now What? {What should we do after we make sense of the findings?}. This paper focuses on analyzing and sharing findings in question #3.

Because this practical conceptual framework suggests best practices, this paper is intended to thoughtfully consider what our research might imply for remodeling or adding to teacher education programs. Our logic for constructing this paper stems from simple connections between what teachers say and show. In other words, we believe that the same activities that teachers say increase their own learning and efficacy might also increase the learning and efficacy of teacher candidates. Specifically, if teachers (over the course of our research with them) suggest that collaboration with colleagues increases their own efficacy, we believe that said same activity will also work to increase the efficacy of teacher candidates.

Methods, techniques, and data sources

To complete this paper, we have considered implications from research we have completed over the past twelve years. First, this paper synthesizes our work with teachers working with the Alberta Initiative for School Improvement (AISI) since 1999. Our second research project was a two-year Alberta Teachers Association (ATA) sponsored case study of five effective elementary schools in Alberta. Third, we conducted a extensive literature review on *Student Engagement* and wrote a long report for the Alberta government as well as published an article on the same topic. Fourth, we interviewed Alberta teachers to author *Little Bits of Goodness* (2009) – a compilation of ten years of success stories from AISI. Fifth, we are currently engaged in a two-year, research project on teacher professional learning

and teacher efficacy that includes ten schools in five school divisions in Alberta. As we have worked on and completed this research, we have considered together the implications of the findings on teacher education programs.

Results, conclusions and/or interpretations

This paper considers what this research might mean for teacher education programs. We have attempted to make sense of these research insights to create a data-informed "To Do List." Before new teachers take control of their first classrooms and build their teaching identity, we believe the following "To Do List" will aid them in their preparation:

To Do #1) Engage Teacher Candidates in Action Research

During our coursework, instruct and engage students in action research processes, ethics, and methods. Field experience can provide a lens through which pre-service teachers can focus on specific and relevant issues they will be challenged to address after they attain their degree and find themselves in their own classrooms. In research conducted with first year teachers, one common theme emerges – they do not feel prepared to deal with many of the realities in contemporary classrooms. Knowing and feeling confident in the processes of identifying and tackling context specific problems empowers beginning educators and ensures a substantially effective learning space for students.

Create and engage in real-to-classroom research – exploring issues of diverse learner abilities, language delays or deficiencies, multi-cultural populations, mixed socioeconomic communities, or external pressures of high stakes testing, for example. Empower pre-service teachers to seek information they can use to mitigate these realities; assign presentations of

findings both within the classrooms and outside. Position education students as 'idea leaders.' Support processes for critical thinking: identify challenges; research the field; make informed decisions; engage ideas and solutions; try them out; keep track of the data; come back to discuss what you saw; what worked? What didn't work? What can be changed? In other words, do action research.

To Do #2) Engage Teacher Candidates in Collaborative Work

Engage young teachers in collaborative work. Working together to explain ideas, agree on a problem's root causes, determine a plan of action, agree on resources and task responsibilities, inspire colleagues, take learning risks, negotiate different personalities, build peer capacities, overcome barriers or unforeseen complications – such collaboration matches work taking place in successful schools. Much of this work reflects the core beliefs and philosophies of the school's teachers and its culture.

Teacher education activities should explicate the processes of translating teaching philosophies into actual classroom activities. Teachers often use pedagogies based upon their own learning experiences. If we want classrooms to become collaborative, innovative, and creative spaces where critical thinking and thoughtful reflection are the norm, then pre-service teachers must learn and practice collaboratively in creative spaces where innovation, critical thinking, and thoughtful reflection are the norm – modeled and expected by their professors.

To Do #3) Engage Teacher Candidates in Community, Agency, and Service

Build classroom cultures that support community, agency, and service. (Community

centered on working together. Agency simply meant the belief that one could make a difference. Service centered upon doing "good things" for others. In our experience speaking to young teachers, these three characteristics are what encouraged teachers to become teachers in the first place). Our research synthesized these three characteristics as motivators for teacher engagement. Supporting community, agency, and service might mean engaging in community-based projects outside of the university classroom that help young teacher candidates grow to believe they are capable of making a difference. Knowing that one's actions can make a difference encourages one to take these actions.

To Do #4) Engage Teacher Candidates in Real Classroom Issues

Our research found that, as teachers came to share leadership within their own school, they were both able to solve real, site-based issues and concomitantly empower their own agency. School leadership broadened; the school population came to "ownership" of their shared space; and community building ensued. Teamwork worked well. Thus, we believe teacher candidates can and should work to solve real classroom issues, and do this work transparently. Allow students to become part of the classroom planning. Openly discuss issues about teaching and assessment. Help teacher candidates discuss the issues that matter to them as students, from the perspective of teacher. We believe a pre-service teacher education course can be a space where young teachers work with experienced teachers to think openly about all aspects of teaching – including the goals and assignments of the course being taken.

To Do #5) Engage Teacher Candidate in Celebrating Diversity

Work to allow and increase individual skills and interests. Celebrate diversity. Not

all teachers have or need similar skills, so encourage young teachers to be more "at home" with their own abilities and provide opportunities to employ these diverse skills within the university classroom. This diversity might mean allowing differentiated instruction and different major assignments. As young teachers learn to accept their own diverse skills, they gain insights into how to accept their students' differences. And, these issues of diversity and how to engage it can also be part of To Do #4, where students work together to solve real classroom issues.

To Do #6) Engage Teacher Candidates in Building Culture

Allow young teachers to actively consider and discuss the kinds of cultures they hope to build in their classrooms and schools and practical ways those cultures might be built. Openly discuss how they will relate to their students in an age of social networking. Our experience in teacher education and the research we have engaged and read suggest that these activities can and should become explicit choices available in preservice education programs. Such instruction can become essential career foundations.

Instead of attempting to explain the exodus – like an autopsy that attempts to explain the cause of an untimely demise, our teacher education programs can begin to celebrate the wellness of a long and healthy career.

Significance of the work

What would it mean to actually build this list into a teacher education program? We believe our To Do list offers practical ideas that will both help teacher candidates become more evidence-based practitioners as well help teacher candidates better match pedagogies they engage in as students with pedagogies that have proved effective in teaching. Our hope

is to help build activities into our teacher education programs that would, indeed, help our

young teachers begin to build identities and practices as "Master Teachers."

Jim Parsons, Larry Beauchamp, and Kelly Harding

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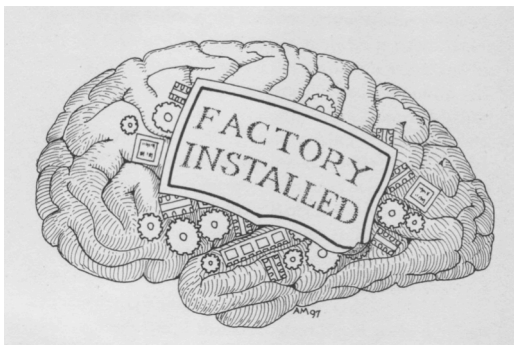
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Scientism, Philosophy and Brain-Based Learning

Gregory M. Nixon, Assistant Professor
School of Education
University of Northern British Columbia
Prince George, BC, Canada
Email: doknyx@telus.net, nixong@unbc.ca

Abstract

Since educators are always looking for ways to improve their practice, and since empirical science is now accepted in our worldview as the final arbiter of truth, it is no surprise they have been lured toward cognitive neuroscience in hopes that discovering how the brain learns will provide a nutshell explanation for student learning in general. I argue that identifying the person with the brain is *scientism* (not science), that the brain is not the person, and that it is the person who learns. In fact, the brain only responds to the learning of embodied experience within the extra-neural network of intersubjective communications. Learning is a dynamic, cultural activity, not a neural program. Brain-based learning is unnecessary for educators and may be dangerous in that a culturally narrow ontology is taken for granted, thus restricting our creativity and imagination, and narrowing the human community.

Introduction

Human experience is a dance that unfolds in the world and with others. You are not your brain. We are not locked up in a prison of our own ideas and sensations. The phenomenon of consciousness, like that of life itself, is a world-involving dynamic process. We are already at home in the environment. We are out of our heads. (Alva Noë, 2009, p. xiii)

Science has become much more than an experimental procedure for creating knowledge of the objective world. We are living in an era when the objective reduction to material facts and processes that can be measured defines what is real and true while subjective experience is considered unreliable (and likely a mere product of processes such as biological evolution, genetic codes, and, of course, neural functioning). Historically, schools readily lent themselves to scientific measurement and management practices, but only more recently have we turned to neuroscience and cognitive science in an attempt to directly manage the learning process itself by studying the human brain.

All knowing is done within a context and that context will have layers from the many perspectives within the individual to his or her social circles to the various overlapping cultures to an emerging global zeitgeist and back again; such is the layered nature of personhood. Much in the way we presume a fish is unaware of the water it is in because its milieu is so pervasive it cannot be observed, so we are often unaware of our cultural contexts and even more unaware of the predominant worldview that is experienced as though it is self-evident. In technologically advanced nations with a strong industrial base and a unified system of higher education, the scientific worldview of objective, mechanistic materialism has clearly become predominant. Our overwhelming success in technology, especially computer technology and the internet, has so changed our

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communication practices that we have begun to experience each other as disembodied

minds (minds that function on computational processes at that). This situation has helped

neuroscience and cognitive science become arbiters of truth with the final say about how

knowing becomes knowledge. However, reducing the person to the computational brain is

not science, but is instead *scientism*.

Scientism takes the foundational principles of empirical or mathematical

investigation and assumes them to constitute reality. Scientism functions as an overall

worldview in the way belief systems like religion or ideology do. It is not scientific

exploration so much as the presumption that such exploration is already or will soon be

complete. All will be answered by science via experiment and reductionism – quantitative

measurement – within materialism. It is claimed that even the human mind (private

sensations, thoughts, emotions), which each of us experiences so directly, can be now be

explained away by studying the brain. However, such scientism does knowledge an

injustice by ignoring ways of knowing that will not be contained within the scientistic

worldview including the reduction of consciousness itself to pre-determined effects of

brain activity. In this way, the experimental and theoretic sciences have sometimes become

so authoritative (if not downright *authoritarian*) that they can declare ultimate truth, not

just explore or explain its mechanisms, and in so doing leave their underlying ontology –

mechanistic materialism – unquestioned. To avoid disturbances from other quarters that

might provide ontological alternatives, scientism has not only overruled the insights

provided by religious symbols and the arts, but has also taken the position that philosophy

itself has come to an end in the face of scientific revelation (e.g., Hawking & Mlodinow,

2010).

This worldview of scientism has become so well established in our time that it is considered time-wasting *philosophy* – the utmost in bad taste – to even question it. Stephen Hawking, one of our premier scientists, has declared that "philosophy is dead. Philosophy has not kept up with modern developments in science, particularly physics. Scientists have become the bearers of the torch of discovery in our quest for knowledge" (Hawking & Mlodinow, 2010, p. 5). Philosophers have, of course, protested, "To the contrary, when philosophy is excluded from the discussion, then tacit philosophical assumptions – in all likelihood metaphysical assumptions! – go unquestioned" (Globus, 2009, p. 110). Exactly. Scientism (and much of real science) has precisely the ontological assumptions I have indicated. Philosopher and scientist, Alva Noë (2009), states that "neuroscience today depends on a somewhat stagnant set of philosophical presumptions" (p. 189), one of which is that the brain *is* the mind. It is not wild-eyed spirituality to suggest that a person is more than a brain, or that reality may turn out to have at least as large a subjective (experiential) as objective (material) component. In what follows, I will question some of the unspoken philosophical (ontological) assumptions of scientism that have led to faith in brain-based learning and other forms of biological reductionism in education – especially those to do with consciousness and personhood.

The Neuroscience of Brain-Based Learning

I make specific reference here to *brain-based learning*, though I recognize that this is an umbrella term for a wide variety of theories, methods, and proposals, as well as for various competing marketing strategies. (The brain as computer approach bears striking similarities.) I will attempt no comprehensive survey here – historical, comparative, or otherwise – but will assume a generic understanding of the concept.[i] It is claimed that

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everything from instructional practice (Laster, 2007) adult education motivation (Materna, 2007), special needs learning (Sousa, 2006), gifted learning (Sousa, 2009), behaviour management (Tate, 2006), social adjustment (Sylwester, 2003), to students brought up in poverty (Jensen, 2009) can be solved or at least ameliorated by brain science. But I will not pause to dissect these texts. My goal is to question the philosophical assumptions behind brain-based learning (brain-based instruction, educational neuroscience, teaching to the brain, call it what you will). The increasing number of pamphlets, expensive training workshops, books, and online ads (often aimed at educators) devoted to brain-based learning bears witness to the rising popularity of these biological approaches to learning. I wish to suggest that brain-based learning is probably unnecessary for educators and may even be dangerous in that a culturally narrow ontology is taken for granted, thus restricting our creativity and imagination, and shrinking the human community.

I am not about to engage in a belaboured postmodernesque philosophical exegesis of minds, brains, and words, but I do want to raise the question of exactly how brain-based learning is to be understood. Clearly, if learning is taking place, there must be a learner. If learning is something the brain does (as *brain-based* implies), can the learner himself or herself be anything (or anyone) other than the brain? (Check out the brain-based literature and you will lose count of the number of times El Cerebro is personified.) To put it another way, *are you your brain*? This may seem an absurd question to many, but there is no shortage of scientific *and* philosophic research that insists precisely on this. Brain-based learning avoids this question by depending on rarer currents of neuro- and cognitive science that emphasize degrees of neural plasticity (from epigenetics to radically responsive neural mapping) that indicate the brain responds to environmental stimuli,

perhaps leaving room for conscious self-agency in that interaction. For mainstream

cognitive science, however, the assumption is that the brain represents the world and

directs the body to meet its needs in that world, so such self-agency is an illusion. In this

case, the material brain has absorbed or simply done away with the immaterial mind (i.e.,

conscious selfhood). How have we managed to install or dissolve our identities into a

jellylike 1400 gm lump of pink-grey matter? When and how did we become our brains?
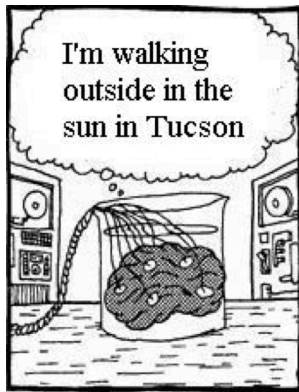
Mainstream Neuroscience. The metaphor for the brain as learner

and director of bodily behaviour is the machine – either a *meat*

machine that, like the proverbial brain in a vat, controls our

experiences by controlling our illusions; or a computer, that

analyses all inputs, stores them in data banks, and computes the

best actions to take. Either the brain is seen as the central

command for the workings of the body and the mind or,

metaphorically, it is the computer hard drive that keeps the reality show software going.

Both the wetware or hardware view indicate we could be learning and acting just as well if

our conscious minds were ineffectual or if we were not conscious at all since unconscious

directives or computations are all that's required.

The brain-as-selection organ and brain-as-computer crowd do not deny the brain's

plasticity, but usually relegate such changes in response to the environment as occurring

before birth or in the first weeks of a child's life. The mainstream neuroscientists do, of

course, accept the brain's evolutionary changes across the species (meant to enhance

reproductive success).[ii] However, such neuroscientists or computer scientists agree that

the information processing structures of the brain are basically unchanging after the infant years, one's behaviour *and* experience are determined by brain functioning, and consciousness is most often understood as unnecessary – an *epiphenomenon* – or at most an after-the-fact feedback system. This position is known as *eliminative materialism* since the efficacy of the mind and often its reality are eliminated by recognition of the primacy of material (brain) processes. Not only scientists but also influential philosophers like Daniel Dennett and Patricia Churchland take this position.[iii] Note that the mind or consciousness is not only regarded as without influence on behaviour but often its very existence is in question, an illusion dismissed as folk psychology or the subjective position taken in discourse.

This hard science view of brain determinism seems to be largely unknown or at least ignored by the purveyors of brain-based learning. It is certainly not a popular position among educators or learning theoreticians because it implies there is little we educators can do to change a mind already set within the predetermined genetics of a particular brain. Mental experience as an illusion of the deterministic brain goes at least back to La Mettrie (*L'homme Machine*, 1748). Physiologist Pierre Jean George Cabanis (1757-1808) is said to have written, "The brain secretes thought as the liver secretes bile" (in Copleston, 1961, 6:51).

More famously, Francis Crick, the Nobel-winning molecular biologist, biophysicist, and neuroscientist, explained away inner experience this way:

> The astonishing hypothesis is that "You", your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behaviour of a vast assembly of nerve cells and

their associated molecules. As Lewis Carroll's Alice might have phrased it: "You're nothing but a pack of neurons!" (1994, p. 3)

Neuroscientist Michael Gazzaniga (1998), known for his pioneering work with split-brain (severed corpus callosum) patients, makes his stance against the brain's plasticity quite clear: "The intriguing hypothesis that real-world experience sculpts neurons back from their exuberant growth overlooks a major point. Most exuberance and subsequent pruning happens before birth, leaving moot the possibility that this neural development is under psychological guidance" (p. 56).[iv] No need to be concerned about choosing actions to guide the brain's learning from the deterministic neuroscientific perspective. Gazzaniga continues:

> Everything from perceptual phenomena to intuitive physics to social exchange rules comes with the brain. *These things are not learned*; they are innately structured. Each device solves a different problem. Not to recognize this simple truth is to live in a dream world. (p. 170, my italics)

In 2003, outspoken neuroscientist V. S. Ramachandran began his Reith Lectures with these remarkable words:

> Even though it is common knowledge these days, it never ceases to amaze me that all the richness of our mental life – all our feelings, our emotions, our thoughts, our ambitions, our love lives, our religious sentiments and even what each of us regards as his or her own intimate private self – is simply the activities of these little specks of jelly in our heads, in our brains. There is nothing else. (Lecture 1)

Clearly, in this situation, *you are your brain*: "There is nothing else". Moreover, *you* (the conscious self) are not the central command or even an influence in this brain but merely a byproduct (in the way indicated by Cabanis above) – since it seems neither the environment, social interactions, nor personal choice are inputs that directly affect your experience and behaviour, at least until these things have been appropriately processed by the brain and indirect choices made for you. Note that Ramachandran refers to the world-

creating brain as "common knowledge", which seems to be the common view amongst neuroscientists. It is hard to see how such worldview that denies external sources of learning and even a degree of human free will could be in any way amenable to educators who depend on the social exchange of teaching and learning and the power of students to think for themselves. This is mainstream neuroscience, not the minority version of neuroscience that views the brain as a receptive organ that continually *changes* – brain plasticity throughout life – as the result of influences from the body, the environment, or the culture.

It is no mystery why those who benefit from packaging and selling brain-based learning to educators would prefer to keep this *other*, non-plastic, deterministic perspective under wraps. If it were accepted, it would leave little for educators to do beyond the meeting of basic needs, information transmission (still the mainstay of teaching), and, down the road, such physical manipulations as gene splicing or even microscopic neural transplants, probably of nanochips. We could improve the wetware or hardware, but the brain could not be *taught* to learn better, so brain-based learning and traditional teaching would be out of business. This fear is the source of the continuing outcry against the studies of innate intelligence found in Herrnstein & Murray (1994) and Jensen (1998), despite the fact that both these books were formidably researched. It leaves one wondering how something calling itself *brain-based learning*, which claims to base its methods on neuroscientific research, can completely ignore that mainstream neuroscience denies free will and often efficacious consciousness itself.

On closer examination, however, it appears brain-based learning not only ignores a great deal of hard neuroscience, but it also cherry picks that which supports an already well-established program of teaching methods that looks suspiciously similar to the proposals of progressive education promulgated by the extraordinary mind of John Dewey a century ago. Insofar as brain-based learning returns the educational focus to individual development, novelty, and interpersonal practices, it is to be applauded; however, one still wonders why it was considered necessary to side track into brain science to bring about changes most thinking educators already agree are positive. Choosing to focus on the plasticity of the brain with its mutable and interactive neural assemblies responsive to experience in the world, brain-based learning leaves itself with an approach that pretends to focus on *teaching to the brain* but, in most cases, is instead still teaching to the mind – and there *is* a difference – or to the community. Dynamic neural maps indicating new learning may be less a product of well-functioning cerebral structures than interiorized reflections of interactive human experience in the world, that is, the neural changes may reveal experiential changes as they happen.

It should make educators uneasy that an area identifying itself as brain-based learning has such uncertain neuroscience to back it up. Sources are certainly found in theoretic cognitive science, but these are rarely backed up by concrete experimental evidence. Neuroscience deals with the most complex organ in the human body, and its relation to human experience in the world is even more complex, so it should be no surprise to learn that it is still a developing field. John Bruer stated, "Brain science ... can tell us very little about how the brain learns and it is far too early to take what we know at this point and plug it into our curriculum" (as cited in Gabriel (2001, p. 1). In the years

since, it seems neuroscience has moved even more stubbornly into the mechanistic materialist worldview, which begs the question of exactly what version of neuroscience brain-based learning is itself based upon.

Brain Imaging. Still, enough is known about the brain's seemingly modular construction and its extraordinary electrochemical interactions for theoreticians and neuroscientists to imagine that the brain is *learning* when it may only be adapting to environmental circumstances. It should be borne in mind that most of what we know about the brain's activity is through recently invented brain-imaging techniques.[v] Calling these techniques *the new phrenology*, Noë (2009) declares, "It would be hard to overstate the extent to which the fervor about the brain-based view of consciousness is driven by the development in the last few years of new technologies of brain imaging" (2009, p. 19). Noë goes on:

> Brain scans thus represent the mind at three steps of removal: they represent physical magnitudes correlated to blood flow; the blood flow in turn is correlated to neural activity; the neural activity in turn is supposed to correlate to mental activity. If all the assumptions are accurate, a brain-scan image may contain important information about neural activity related to a cognitive process. But we need to take care not to be misled by the visual, pictorial character of these images. Brain scans are not pictures of cognitive processes of the brain in action. (p. 24)

Noë also observes that, because the brain is *always* active and these scans indicate all sorts of things going on during different experiences or physical events, there is no way to identify with certainty what electrochemical activity equates with what experience or event, especially because most of what the brain does is never associated with consciousness. Indeed, when brain activity is observed while the patient is rendered unconscious, electrical activity seems to *increase* in a chaotic fashion, rather than *decrease* as might be expected (ScienceDaily, 2011).

The unidentified author of the ScienceDaily (2011) article quotes the words of Brian Pollard, Professor of Anesthesia at the University of Manchester, which precisely reflect the errors of presumption found in scientism: "We are currently working on trying to interpret the changes that we have observed." This is the key admission of the article and tells us, in general, how little brain imaging techniques reveal about our conscious experience or its loss. No matter what the scientists see on their screens, it is still educated speculation to relate the electronic imaging of brain activity to actual human experience. All the scanning blips or colourful images depend on their interpretation by a human mind that must use words to express meaning. It is not brain activity that is central here, but its conscious interpretation. In short, brain-imaging techniques may *represent* the brain in action but not the mind in action. All scans and images must be interpreted by an observing human mind, which has its own expectations and biases, including the assumption that it is watching a mind when it is really observing only the varied electrochemical activity of a brain. In a convincing assessment, Legrenzi and Umilta (2011) argue that brain scans do not differentiate between conscious and unconscious phenomena, so cannot represent human cognition or psychological experience. However, colourful brain images perpetuated in the media have the effect of equating the person with the brain or body, and this may have a number of sociopolitical consequences, including a tendency toward top-down totalitarianism (society mimicking the body) and identifying personal lived experience with the life functions of the body.

Problems with Plasticity. Still, even without depending on brain imagery, it seems all brain-based learning needs is the widely-supported theory that the brain is *plastic*, that it can learn from its inputs – activities of the body, events in the environment, personal

experiences, and relationships. This seems to be enough to convince many that we can teach the brain to learn better. It's only natural that educators prefer the brain's plasticity and neural constructivism to the neural determinism of eliminative materialism (and I believe there is good reason for such a preference). However, embracing neural plasticity raises other questions that put brain-based learning in an uncomfortable position.

If the brain is so plastic or constructive that it responds to embodied experience in an environment, then the brain is an organ of response as much as it is an organ that determines response (as well as the nature of the world or of experience itself). In fact, the brain evolved in response to changes in the environment. Furthermore, as human experience broke across the *symbolic threshold* (Deacon, 1997) into language, growth in certain cerebral lobes or modules like the prefrontal cortex became necessary when new neural pathways were needed as speech developed and spread. Culture changed the brain or, as Deacon (1997) put it, *language and the brain co-evolved*. Today the brain may continue to be as much a responsive organ (exquisitely complex as it may be) as a determining organ; but, if this is so, what have we to gain by studying its exquisite complexities? If embodied experience in an environment – including an abstract cultural environment – can change the brain's neural codes then why not do the obvious and continue to learn from guided embodied experience in a rich learning environment, as the best schools have done for hundreds of years? If we accept that persons make choices, such choices are reflected in brains but not caused by them. Why study the brain when it can only reflect our own teaching and learning back to us?

This seems an important question for brain-based educators. If the brain is not plastic, then it need only be genetically manipulated by improved technology for better

learning to take place. If the brain is plastic, we have more to gain learning about what we do with each other in the world and less to gain by discovering exactly how learning changes our neural codes.

But the problems do not stop here. Returning to philosophy and the question of *Are you your brain?* we will see how conscious experience – the "you" you know yourself to be – continues to defy an explanation based in cerebral processes, objective-materialism, or scientism of any sort. The *explanatory gap* between conscious experience and brain function remains, leaving the source of your conscious self-identity open to speculation. Furthermore, the objectivist worldview of classical physics has not budged in the face of the farther reaches of physics – discovering that, at the quantum level, the observer directly affects what is observed. These will be briefly surveyed in what follows.

Why You Are Not Your Brain

The Car and the Driver. Many will say, "Of course *I* am not my brain, but I need my brain in the same way a driver needs a car. The car is not the driver, but it may help me to get where I am going if I better understand the workings of the automobile. So it is with the brain. Knowing how it works will help me, the learner, to learn more, learn faster, and retain it better." This reasoning is, however, faulty and depends on several unverifiable assumptions. First, the driver does not need to know how the car works to make it drive from place to place. Second, cars are built by people, so their functioning manifests the work of many human minds working together in various roles. Human brains *always* work together with other brains. This *working together* already exceeds the capacity of any single isolated human brain; it is the medium of human symbolic communication that links

brains, but, note that this medium is not made of neurons, axons, dendrites, cerebral lobes, or even neural assemblies. This medium is human culture and its technological extensions; culture is more the source of the self and the world we experience as our core reality than is the brain. The car does not drive me; I drive it.

Experience or consciousness is always first and last, as radical constructivism and phenomenology have taught us. It is what we are and the true bottom line of knowing and learning. We will never find the smallest bit of reality in matter – be it a subatomic particle, quark, or cosmic string – for the final fact is always our knowledge or experience of a postulated object. There is a sense in which I am my brain, but there is also a sense in which I am my body; and, because that body intermingles with a world, there is a sense in which I am the world (as a living microcosm of it). But what we most immediately and obviously know ourselves to be is our own awareness, which is identical with our being.[vi] If we were unaware, we would neither exist nor have a sense of existence. We would not be. Consciousness matters, or we would be nothing at all. To those who insist they are not their brains, yet insist that understanding the brain's parts and functioning in minute detail will make them better, smarter, and wiser, I note the contradiction: Learning all about automobiles and their workings – even improving on such workings – will not make me a better, smarter, wiser driver. Only my will and choices can do that. Needless to say, I admit that a deficient automobile (or a deficient brain) that can be repaired should be repaired. With technological (or bioengineered) enhancements, my range of my abilities might be extended. The point, however, is that driving skills are not taught to automobiles, and thinking skills are not taught to brains. Both are taught to *persons* whose cars or brains then adapt accordingly.

The Quantum Observer Effect. Without delving deeply into the complex subject of quantum physics (often confusingly called quantum mechanics since it is ultimately a reality only known via arcane mathematics), I wish only to point out that in the last century at subatomic levels the observer was shown to affect what was being observed, though materialists to this day struggle to find a way around this conundrum (e.g., Hawking & Mlodinow, 2010). The *observer effect*, accepted by the Copenhagen School of quantum interpretation, notes the speed and position of certain subatomic particles or photons cannot be measured simultaneously (the famous uncertainty principle of Heisenberg). To observe or measure one leaves the other indeterminate. Whichever is chosen, the other will become unknowable. Before observation, it is surmised that reality consists of chaotic quantum fields of indeterminate waves held in a *superposition* of potential form. Only upon observation does the wave of near-infinite possibility[vii] collapse into a definable form that allows either position or momentum to be measured.[viii] Some sort of observer must be present for reality (as we know it) to exist. The observer, usually understood as a mind in some form, cannot simply be dismissed from the worldview of physics.

These thoughts, of course, are simplifications by a non-specialist, but they do indicate the reality of the mind and the participation in the unfolding of the real world that actually takes place with each observation. *If matter, at its most fundamental level, is changed by conscious observation (as the quantum observer effect indicates) then matter (including brain matter) cannot be the ultimate source of the conscious observer.* This strange state of affairs has been known for more than a century, yet has been largely ignored by mainstream science, likely because it appears to directly contradict the materialist worldview. It seems that conscious beings are neither separate substances from

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matter (as in Cartesian dualism), nor merely passive observers of a pre-established, exterior, material reality (including the brain), as in scientific dualism. Mind and matter might co-create, mutually implicated in each other.

The Explanatory Gap. The source of awareness is not an easy question to answer, especially since philosopher David Chalmers (1995) made famous the distinction between the "easy" problems and the "hard" problem of consciousness. The easy problems can potentially be explained by the examination of brain activity, which includes most of the content of consciousness. The hard problem, however, is how and why consciousness exists at all. To this point, neuroscience has been no help in explaining this existential fact: "The really hard problem of consciousness is the problem of *experience*" (Chalmers, p. 200). This difference – otherwise known as the *explanatory gap* – was noted as far back as 1879 when psycho-neurologist John Tyndall conceptualized the impossible rift:

> The passage from the physics of the brain to the corresponding facts of consciousness is unthinkable. Granted that a definite thought and a definite molecular action in the brain occur simultaneously; we do not possess the intellectual organ, nor apparently any rudiment of the organ, which would enable us to pass, by a process of reasoning, from one to the other. (Cited in Seager, p. 272)

The recognition of the explanatory gap between lived experience and the functioning of the brain has been long recognized. Even if *neural correlates of consciousness* (NCCs) are found in the brain, there will still be no explanation how they are connected to the immediacy of conscious experience. This gap has been solace for the spiritual minded who wish to believe in a detachable soul, but this belief leads only back into the incompatibilities of dualism (not to mention wishful-thinking). The only sensible choice seems to be that the *material* and, for lack of a better term, the *mental* are one elemental substance or process.

In some way, experience and the material world in which we find ourselves are mutually implicated in each other, a position that certainly includes the apparent anomalies of quantum physics.

Philosophical phenomenology begins with the reality of lived experience (as opposed to beginning with an objective external world) and has long understood world and conscious experience to be co-creative. Phenomenologist Merleau-Ponty (1968) observed that both subjective experience and the material world are mutually united in an observable dance. Radical constructivism (e.g., Goodman, 1978) understands the world as constructed by the unconscious consensus of all minds. Panpsychism (cf. Skrbina, 2005) or panexperientialism (cf. Nixon, 2010) are attempts to grant all material reality varied levels of consciousness or at least experience.

Hawking and Mlodinow (2010) went far enough in this direction to accept that any number of cosmic theories might be true depending on the consistency and coherence of the model constructed to interpret reality. However, they made certain that, despite their *model-dependent realism*, the traditional worldview of objective-materialism was still granted primacy (though certain intellectual contortions were required). The mind-independent worldview of objective materialism becomes hard to defend when it is simultaneously accepted that mind (the observer) is a necessary participant in reality (as model-dependent realism suggests). As I wrote elsewhere: "To objectify a mind-independent reality, then to look for mind in that mind-independent reality, is a bizarre sort of logic to say the least" (Nixon, 1997, p. 16).

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I recognize these philosophical speculations are *out there* for many and provide no incentive to consider themselves anything but manifestations of their brains. Even with a panpsychist worldview, there is still reason to study how brains learn because brains might be the only way that panpsychic (universal) awareness achieves knowledge, intelligence, or selfhood.

The Intersubjective Brain. Simply put, we are not born with knowledge, intelligence, or selfhood. In fact, we must interact with others and the world to learn to perceive and understand what is perceived through our senses (see, e.g., Sacks, 1995). We don't exist as conscious selves first and then learn to recognize the existence of other selves through a *theory of mind*.[ix] Evidence from language studies points to the idea that we are called into selfhood by others who have already attained such selfhood within the milieu of a symbolically interactive culture (e.g., Heyneman, 1992). In other words, interpersonal relationships take place before there is a self-identified person within us (though obviously we experience sensual body awareness). This *primary intersubjectivity* (e.g., Gallagher, 2001) calls forth subjectivity; culture creates the space for the self to emerge and develop, which self will then contribute to and alter the culture within which it began. This self is who you are, even though self-conception is a process that began by identifying with others first.

Why does this matter? Because it indicates you are not your brain but, instead, you extend well beyond it into the world to mingle with the minds of others. Your senses connect you with the natural world of which you are a part, and our culturally invented codes of communication allow us to breach the barrier of the skull to connect with each

other in ways that are often immaterial or at least invisible, though such symbolic

communications may take concrete forms. As linguist Wallace Chafe (1994) put it: "When

language is made overt, as in speaking and writing, it is able to provide a link between what

would otherwise be independent nervous systems, acting as an imperfect substitute for the

synapses that fail to bridge the gap from one mind to another" (p. 41). How obvious this

has become in our time of electronic connectivity and shared imagery!

Noë (2009) adds that the neural plasticity required by brain-based learning may at

least partially originate in the requirement that brains respond to the variety of languages

we speak or to the textured complexity of any of our forms of communication:

> Neural plasticity, properly understood, teaches us that the brain can never be
> the whole story about our mental development. Our linguistic capacity ... is not
> a product of a particular neural structure. Language is a shared cultural
> practice that can only be learned by a person who is one among many in a
> special kind of cultural ecosystem. (p. 52)

The intersubjective mind implies that our vaunted sense of a central command self
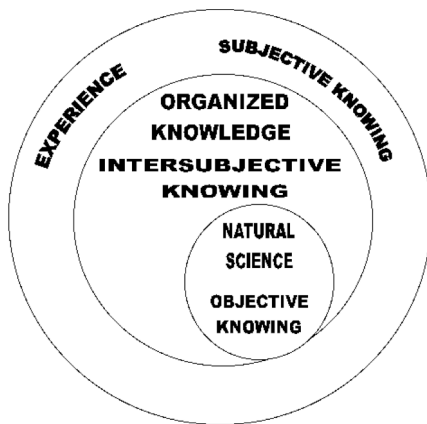
somewhere in the brain is an exaggeration. Our

identities literally consist of each other, as

hermeneutic philosopher Paul Ricoeur has indicated

in his complex exploration *Oneself as Another* (1995).

Thus, our choices are always intricately intertwined

with the choices of others (perhaps difficult for our

proud individualism to accept). From this perspective, not only are we not our brains, we

are not even the independent, isolated minds we each feel we are. (See the figure of

Phenomenological Fields of Knowing, at left.) With multitudes within, free will is

impossible *if* by free will we mean choices made without causes. However, the

intersubjective mind is subject to such a panoply of influences – from the past and future,

from all other minds – that subjective free will must be active to choose which potential

causes will be become actual in behaviour or the person would disperse in a chaos of

contradictions.[x]

Noë agrees that we are not our brains (as his very subtitle – *Why You Are Not Your

Brain* – indicates), and I agree that the brain is *necessary but not sufficient* (as the logicians

say) for conscious selfhood, thought, and learning. Noë insists we are instead equal parts

brain, body, and world, with the latter the foundation of the previous two. I would insist

that symbolic culture should be added to his trinity to make a quaternity because

conceptual self-identity originates from an abstract world of its own. Noë states the brain

responds to the person playing it in an environment. In the same way:

> Brains don't think. The idea that a brain could represent the world on its own
> doesn't make any more sense than the idea that mere marks on a paper could
> signify all on their own (that is, independently of the larger social practice of
> reading and writing). The world shows up for us thanks to our interaction with
> it. It is not made in the brain or by the brain. (p. 164)

Back to Ontology. The mechanisms of human consciousness often seem correlated

with neural activity in imaging scans, but discerning which activity correlates with

consciousness and which with the unconscious is not yet a possibility. Correlation with

non-human animal consciousness is likely to remain impossible because animals cannot

report their conscious states. Intersubjectivity already shows us that conscious self-identity

may be the link between brains that we call *culture*, carried along extra-neural pathways of

symbolic communication. Philosophical phenomenology and social psychology indicate

that the intersubjective connection among many people seems more likely to explain

human consciousness than does the reduction of such consciousness to neural states; if this

is the case, materialism can itself be eliminated as the explanation for consciousness. In fact, it's beginning to appear that individual human consciousness is part of something much larger rather than reducible to a mere epiphenomenon of a biological function.

The explanatory gap indicates that science cannot conceivably explain the hard problem of awareness in itself, of which human consciousness may be but one manifestation. Such awareness – known as *psyche* in certain Western traditions[xi] – would include the unconscious but responsive experience of human beings, other animals, and other life forms. In truth, there is no logical reason to exclude that which science regards as inorganic (as Eastern philosophy has long understood), for at what point could we say that awareness enters the material world? No entry point is conceivable, so we may have to face the notion that all existence is (in a sense that still escapes our limitations) alive and aware. The quantum observer effect seems to hint at just such an extraordinary, if literally inexplicable, reality.

Materialism (reductive, mechanistic, and objective) is a *monistic* (singular) ontology; that is, it takes for granted that all existence is one thing, in this case non-living matter and the related interactions of measurable (material) energy. Idealism, on the other hand, basically believes in an ultimately spiritual ontology out of which the material world is created. Materialism is objective and idealism is subjective, so we have the basic split of human consciousness reified in our metaphysics. But other endeavours conceive an ontology, i.e., an ultimate reality, that attempt to escape this dualism. Dual-aspect monism is an attempt to imagine one reality with aspects of both mind and matter (two sides of one coin), but the problem of imagining one reality apart from its aspects remains unsolved. Perhaps mind and matter (or spirit and material) are ultimately the same thing (neutral

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monism),[xii] where ultimate reality is imagined as neither matter nor mind and is in effect

neutral and panpsychism, which sees matter as embodied psyche (e.g., Skrbina, 2005).

But providing an acceptable alternative to materialism is not my purpose, though I want to

point out that our current predominant worldview – which, as noted, many scientists

consider proven – is not the only conceivable ontology. Ultimate reality may not be

knowable by us speaking primates on this planet, but our finest philosophers have not

abandoned the attempt to find words to indicate what is, by definition, beyond words.

Merleau-Ponty used the concept of *the invisible* to lead us – *via negativa* – toward this

intangible, inconceivable ultimate:

> It is … not a de facto invisible, like an object hidden behind another, and not an
> absolute invisible, which would have nothing to do with the visible. Rather it is
> the invisible *of* this world, that which inhabits this world, sustains it, and
> renders it visible, its own and interior possibility, the Being of this being. (p.
> 151)

However, I am not here to explore ultimate reality but to reveal forgotten blind spots in the

smothering materialistic vision of scientism, which in many parts of the academic and

popular world, purports to be unassailable. If mind and matter are mysteriously and

inextricably intermingled, materialism cannot be the whole story, and you cannot be

merely a product of brain activity. Ultimately speaking, *you* are much more than your brain.

Conclusion

The above indicates that brain-based learning is at least unnecessary. A brain does

not learn on its own; *we learn*, and we are not our brains. The brain responds to our

learning and experiences our active embodiment in the natural world and in the mutually

creative process of culture. It is fascinating to study the brain and how it changes as the

person learns, but there is unlikely to be any benefit in terms of new learning techniques. If

the brain is a pulsating grey machine, it is as determinative and functionally structured as a machine; we can do little but attempt to improve its functioning via technological adaptations or molecular bioengineering. If the brain is as plastic as brain-based learning prefers, it is also neither determining nor predictable. A thoroughly adaptable *plastic* brain will continue to learn from and adapt to human interactive experience in the worlds of culture and nature.

But other voices see brain-based learning as not just unnecessary. Insofar as brain-based learning represents the broader continuing paradigm shift into scientism – the reductionist ontology of mechanistic-objective-materialism – the authenticity of the lived reality process in which we are each creative participants is thrown into question, if not disrepute. For those of us who see our ultimate truth in the human experience, brain-based learning is a sign of dehumanizing times. Wittgensteinian scholar Peter Hacker – interviewed by Garvey (2010) – recently addressed the danger of scientism in no uncertain terms:

> The main barrier is the scientism that pervades our mentality and our culture. We are prone to think that if there's a serious problem, science will find the answer. If science cannot find the answer, then it cannot be a serious problem at all. That seems to me altogether wrong. It goes hand in hand with the thought that philosophy is in the same business as science, as either a hand-maiden or as the vanguard of science. This prevailing scientism is manifest in the infatuation of the mass media with cognitive neuroscience. The associated misconceptions have started to filter down into the ordinary discourse of educated people. You just have to listen to the BBC to hear people nattering on about their brains and what their brains do or don't do, what their brains make them do and tell them to do. I think this is pretty pernicious – anything but trivial.

Finally, neuroscientist *and* philosopher Raymond Tallis (2011) truculently observes:

> The distinctive features of human beings – self-hood, free will, that collective space called the human world, the sense that we *lead* our lives rather than simply *live* them as organisms do – are being discarded as illusions by many, even by philosophers, who should think a little bit harder and question the glamour of science rather than succumbing to it. … [B]iologism is not only bad science and bad philosophy – bad enough – but also bad for humanity. And even if we are not worried when various modes of biologistic pseudo-science are ubiquitous in our talk about ourselves, surely we should worry when they are starting to be invoked by policy-makers. (pp. 8-9)

Brain-based learning is a symptom of this scientism; it is neither good science nor good philosophy. So, at the end of this exegesis, I repeat: brain-based learning is at the least unnecessary, but the ontology it assumes might be philosophically dangerous. It supports a narrow worldview peculiar to scientifically advanced societies, ignoring other expressions of the human spirit. Of course, anything that encourages teachers and learners in their learning is worth pursuing to some degree, but the hidden motivations of those who advocate brain-based learning, teaching to the brain, or other educational fads should always be considered; and, more important, the larger worldview assumed by any educational movement should be open to critical or philosophical inquiry lest it simply becomes "self-evident" due to passive compliance, assuming the mantle of the only acceptable truth.

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NOTES:

[i] Aside from numerous websites, some oft-cited foundational names include Cercone (2006); Caine, Caine, & Crowell (1999); Jensen (2008); Sousa (2010); Sprenger (2010); Sylwester (1995, 2003); Tate (2006); Weiss (2000); Zull (2011).

[ii] "Evolution works by selection, not by instruction" (Sylwester, 1995, p. 19).

[iii] See, for example, Churchland (1986) and Dennett (1991). Churchland is so taken with the brain she called her book *Neurophilosophy* and sees herself as neurophilosopher.

[iv] Gazzinga's "moot" of self (*psychological*) guidance, however, is the neuroscientific view embraced by brain-based learning, which appears to believe that our knowledge of brain functioning will enable us to choose actions that will assist the brain in choosing actions to aid us in our learning. (I trust the circularity of this reasoning is obvious.)

[v] These range from the older EEG and PET scans to fMRI imaging and to the most recent 3-D technique – "functional electrical impedance tomography by evoked response (fEITER)" (ScienceDaily, 2011).

[vi] It might be noted that esoteric thinking as found in early Buddhism would say that *I* – my awareness or ego-consciousness – is but an aspect of a larger infinite Awareness limited by constraints of nature (e.g., brain and body) and culture. So, instead of referring to "my" awareness, it may be more accurate to say that "I" am but a local focus of Awareness itself.

[vii] The actual form into which the wave collapses can be usually inferred by probability theory, but there is never a guarantee the merely probable will occur.

[viii] There numerous attempts to explore quantum-mind interdependence from which I am generalizing, but I would recommend Stapp (2007) or Globus (2009) for attempts to explain this abstruse area.

[ix] Basically ToM (theory of mind) theories suggest we come to believe others have minds like us since we observe them react in similar ways to the ways we would react – and we *know* firsthand that we have minds. If primary intersubjectivity is true, however, we identify with others' minds before our own.

[x] This does not deny the findings of neuroscience that show a *readiness potential* in the brain precedes all conscious choices by a notable time margin – as recently outlined by neuroscientist (and proud atheist), Sam Harris (2012) in his little volume against free will – but it also supports the earlier findings of neurophysiologist Benjamin Libet (1985) that showed free choice can veto the movement that the readiness potential was initiating. With so many complex influences on us every second, so many contrary impulses demanding action, such veto power may be the essential key to our ongoing sense of a freely choosing self.

[xi] *Psyche*, from the Greek for soul or spirit, has a rich tradition in mythology, Platonism and hermeticism as the *anima mundi* or world soul. In C. G. Jung, it refers the universal awareness of the collective unconscious: "Sooner or later nuclear physics and the psychology of the unconscious will draw closer together as both of them, independently of one another and from opposite directions, push forward into transcendental territory, the one with the concept of the atom, the other with that of the archetype" (Jung, 1951, p. 412).

[xii] Both dual-aspect monism and neutral monism may originate as interpretations of the metaphysics of Baruch Spinoza.