

Pre-Service Portfolios: A Base for Professional Growth

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We studied first-year teachers who had developed professional portfolios in their pre-service program. Data came from two interviews with 11 graduates. Participants valued the portfolio process, most continuing to maintain their professional portfolios and to use aspects of the process with their students. Two frameworks, "The Portfolio Organizer" and "retell, relate, reflect," supported portfolio use. Factors affecting continued portfolio implementation included first-year teaching pressures, the influence of other teachers, and external expectations. The first-year teachers experienced a positive change in attitude and acquired confidence as they refined their use of portfolios.

L'étude porte sur l'utilisation des portfolios professionnels par des enseignants en formation des maîtres. Les données proviennent de deux entrevues menées auprès de 11 étudiants diplômés. Les participants apprécient la méthode du portfolio ; la plupart les tiennent à jour et en utilisent certains éléments avec leurs élèves. Deux systèmes, « The Portfolio Organizer » et « retell, relate, reflect », favorisent l'utilisation des portfolios. Parmi les facteurs ayant une incidence sur le recours aux portfolios, les auteures mentionnent les pressions inhérentes à l'enseignement lors de la première année, l'influence des autres enseignants et les attentes externes. Au cours de leur première année, les enseignants deviennent plus sûrs d'eux-mêmes à mesure qu'ils raffinent leur utilisation des portfolios.

A portfolio is a purposeful collection of student work that exhibits the student's efforts, progress, and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for selection, the criteria for judging merit, and evidence of student self-reflection. (Paulson, Paulson, & Meyer, 1991, p. 60)

Portfolios are a rather recent phenomenon (Lyons, 1998), introduced into teacher education in the 1980s. Barton and Collins (1993), among others, cite the increasing use of portfolios in teacher-education programs. Educational researchers and practitioners increasingly recommend portfolios for the assessment of teacher learning because portfolios recognize the multidimensional nature of teachers' performance and

achievement; they are situated in classroom contexts; they are based on self- and collaborative assessment; and they measure performance over time (Winsor & Ellefson, 1995). As a tool to integrate learning, foster inquiry, inform professional decision-making, and encourage self-assessment and goal-setting, professional portfolios hold great potential for career-long professional learning and growth (Dietz, 1994; Rolheiser, Schwartz, & Ross, 2001). Additionally, the portfolio process provides a model for pre-service teachers to use in the learning and assessment of their own students.

THEORETICAL FRAMEWORK

In this study, we addressed both the continuation of the professional portfolio process and the use of portfolios with students by first-year teachers through the following guiding research questions: After experience with professional portfolios and an introduction to using portfolios with students in their pre-service year, do first-year teachers

- a) maintain their professional portfolios and continue to use them as a tool for growth?
- b) implement portfolios with their own students?

We speculated (see Figure 1) that if pre-service teachers implemented and internalized the concepts embedded in developing and maintaining professional portfolios, they would increase their familiarity and confidence with this approach. They would, therefore, use this knowledge to foster growth both in their first year of teaching (Goal #A) as well as in their future careers (Goal #C). If they found their use of professional portfolios to be a rich experience for their own learning, they would be more likely to provide a similar experience for their students and, therefore, use portfolios with their students in their first year of teaching (Goal #B). In our review of portfolio literature, we discovered that researchers have not considered these questions together.

CONTEXT

The 11 first-year teacher participants in this study began using portfolios as pre-service teachers in a post-degree, ten-month (1999–2000) Bachelor of Education program. We, the researchers in this present study, were also the instructors in their pre-service program. The professional portfolio was a major integrated component, worth 40% of each of four courses across the pre-service program.

In implementing the portfolio during that pre-service year, we included a specific framework as outlined in *The Portfolio Organizer* (Rolheiser,

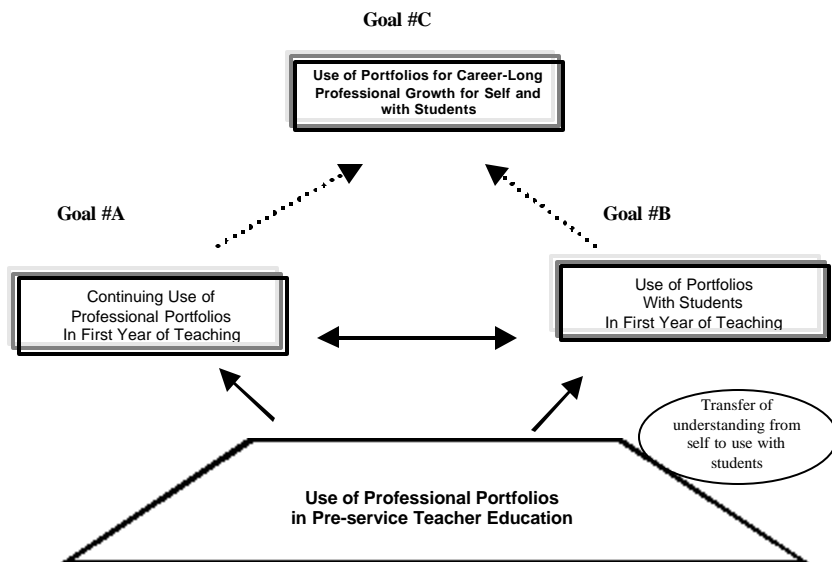


Figure 1: Pre-service portfolios as a base for continued use by first-year teachers (for self and students) and as a tool for career-long growth

Bower, & Stevahn, 2000). This framework targets 10 categories for decision making in portfolio planning and implementation: determining the basics of student portfolios; selecting categories for entries; identifying learning expectations and criteria; learning samples; reflections; storing and organizing portfolios; sharing the learning; setting goals, evaluation and grading; and getting started with students.

Using the framework, we made basic decisions about portfolio implementation, including identifying the purpose (i.e., assessment), type (i.e., growth), audiences (i.e., peers and teachers in schools), and time frame for the portfolio (i.e., September to April). As a performance-based tool, we used the portfolio to encourage pre-service teachers to demonstrate growth and understanding toward six key outcomes or images of an effective teacher: diversity; ethics and legalities; curriculum, instruction, and assessment; active learning; collaboration; and philosophy. We used these six key outcomes or images as the main categories for pre-service teachers to organize entries for their portfolio. At the beginning of the portfolio process, we outlined clear evaluation criteria, complete with descriptors, a rubric, and a self-evaluation component, and we reinforced these criteria throughout the year.

Pre-service teachers included portfolio entries (learning samples with written reflections) as evidence of their learning. The written reflection, a critical component of the portfolio process, strengthens metacognition as candidates think about their own learning and, ideally, identify strengths and areas for growth (Rolheiser et al., 2000). To facilitate reflection, we introduced a framework — “retelling, relating and reflecting” (Schwartz & Bone, 1995, p. 26) — that provided prompts and questions to promote pre-service teachers’ higher level thinking in their portfolio entries. Pre-service teachers were prompted to retell (“What is your entry about?”), relate (“Why did you choose this as an entry?”), and reflect (“What did you learn? How did you grow?”) (Rolheiser et al., 2000, p. 154).

Throughout the year, the pre-service teachers met in pairs or groups for an event called “Portfolio Carousels” where they shared their entries and wrote responses to the portfolio entries of numerous peers. We also expected these pre-service teachers to independently generate and collect peer responses over the course of the year and include these responses in the final submission of their portfolios.

Sharing also occurred in other ways. At intervals throughout the year, pre-service teachers reflected on their own progress, looked at their strengths and challenges, articulated their goals, and decided actions to achieve those goals. In December and April conferences, a team of university instructors and field-based personnel asked each pre-service teacher questions about his/her portfolio. The team and their peers provided pre-service teachers with feedback. Through this practice, instructors made the learning process public because each individual listened and responded to three other peers. The combination of this feedback and their own self-evaluation helped them to set goals for future development.

During another event, the “Portfolio Institute,” pre-service teachers and associate teachers shared experiences in a full-day professional development session focused on how to use portfolios with students in schools. During this day, grade-8 students and their teacher presented their own portfolios, answered questions, and shared their learning. The pre-service teachers then presented their portfolios and responded to questions from the grade-8 students. The impact of this activity was evident in the pre-service teachers’ observations, which included comments about the articulateness of the grade-8 students, the skills evident in their portfolio organization and use, and their depth of reflection.

At the “Portfolio Institute” *The Portfolio Organizer* framework (Rolheiser et al., 2000) was explicitly introduced so that pre-service teachers might transfer their understandings about portfolios for use with their

own students. Because we wanted to understand more about this transfer during first year of teaching, we decided to probe this phenomenon during our research interviews.

METHODOLOGY

The 11 participants in this study began their first year of teaching in September 2000 in elementary public schools in the Toronto area. On the last day of their pre-service year (see Context section) we surveyed 49 elementary pre-service teachers. Participation was voluntary. The questionnaire items surveyed three areas: the effectiveness of the implementation process of professional portfolios, perceptions about the usefulness of the portfolio process for growth and development as professionals, and willingness to implement portfolio assessment with their present and future students. From this group of 49 we selected a sub-group of 11 pre-service teachers who were extremely positive about the portfolio process. Their survey responses yielded high scores on the scale measuring perceptions of the contribution of portfolio instruction to pre-service teachers' professional growth and high on the scale measuring their willingness to use portfolios in teaching.

We interviewed these 11 pre-service teachers (now first-year teachers) after their first two months of teaching (October) and again at the end of their first year (May/June). In this article we report only the interview data. In these interviews we explored perceptions and experiences with professional and student portfolios during their first year of teaching. The interviews took 40 to 60 minutes each. We conducted the first set of interviews via telephone, writing detailed notes. Nine of the 11 second interviews took place face-to-face, where we tape recorded, transcribed, and sent transcripts to participants for checking. For both sets of interviews, we used a semi-structured guide, probing for participants' use and perception of the portfolio as a tool for their own professional growth and as an assessment tool with their students. We have used pseudonyms and disguised any other identifying information to ensure anonymity.

Data analysis from the first set of interviews included developing a coding scheme and identifying patterns and themes, using analytic induction and constant comparison (Miles & Huberman, 1994, p. 58). Using NUD.IST 2000, a software program for qualitative data analysis, we coded, sorted, and organized data from the second set of interviews. We revisited the themes that we had identified from the first set of interviews and checked to see if these themes were still evident or changed. Credibility of the findings was enhanced through recording data accurately (audio-taping

interviews, transcribing, and doing member checks), time sampling, and peer debriefing. As well, we increased dependability by maintaining an audit trail over time by creating lists of connections and counting instances (Miles and Huberman, 1994), by using code-recode strategy, and by peer examination (Anfara, Brown, & Mangione, 2002).

FINDINGS

In the analysis of the qualitative data from the October interviews of the 11 new teachers, we determined a number of themes. For the follow-up interviews at the end of the first year of teaching, we probed to find out if these themes were still valid. The themes include factors that both support and hinder the implementation of professional portfolios and the use of student portfolios.

Theme 1: Maintenance of Professional Portfolios and Implementation of Portfolios with Students During the First Year of Teaching

All first-year teachers continued to maintain their professional portfolio in some way, such as collecting artifacts and storing them in their portfolios. Three added full written reflections, while seven recorded written notes on sticky notes, which they attached to each artifact. These teachers found the professional portfolio process a valued activity that most willingly continued in some way. Among these teachers, only Brandon (pseudonym) consistently maintained the written reflections as experienced in his pre-service year.

I've continued right from where we left off. . . . I've gone with the same format as last year, the six key images. I find that's easiest. I tie in my entry to those six images. I like structure. I like thinking about things like diversity, curriculum, ethics, and legalities. . . . After my first teacher observation, I wrote about the experience, and I shared it with the vice-principal. (Brandon)

We found mixed response about implementation of portfolios with students. By the end of the year, nine of the 11 new teachers had implemented some aspect of the portfolio process with their students. For example, Jesse and Melissa, intermediate teachers, used portfolios with their students in one particular subject area because their school or district required the use of portfolios in language arts. Antoine and Brandon made personal decisions to replicate the process as they had experienced it during their pre-service year. Brandon said, "I got the students interested by showing them my portfolio, and telling them what I did with it. I told

them that their portfolios would be much the same as mine.” Antoine began the portfolio process with his students the first week of school. “They are structured exactly like we did last year. . . . I modeled it [the portfolio process] exactly as our class did because it’s excellent how we did it. I couldn’t think of a better system.” By the end of the year, however, because of health problems and personal challenges in meeting the demands of first-year teaching, he reported being disappointed by his inability to continue the focus in the way that he had envisioned it.

Interestingly, both Antoine and Brandon were seen to be strong proponents of the portfolio concept during their pre-service year. Brandon used portfolios with students in his second practice-teaching setting and shared entries and the portfolio concept with some teachers in his practicum school. Antoine, who had graduated with an exemplary portfolio, talked about the portfolio process as a highlight of his pre-service year. When these pre-service teachers had a positive experience with portfolios, they, as new teachers, wanted to provide these same benefits to their students. Because they experienced the actual process themselves, they immediately applied their knowledge and understanding about portfolio use with their intermediate students who they believed could handle the process.

A few of the other new teachers did not implement portfolios in a comprehensive way but used their portfolio knowledge and experience to implement journals. Donna, who was working with students with special needs, used portfolios to monitor progress: “more of a tracking of their writing. . . . I wanted them to have a good collection, . . . to be able to look back at the end of the year, to look back at the beginning work they did.” For Stella, journal writing was similar to the portfolio process because it represented a way for her students to record their reflections.

We don’t have them [student portfolios] in the traditional sense. We do journal writing. . . . I ask them all sorts of questions. . . . [T]here’s some reflection. . . . I think teaching kids how to explain “why” is teaching them how to reflect. It’s a step. . . . In the beginning of second term, I had them write in their goals and I had them discuss them when their parents came in for interviews. . . . It wasn’t a portfolio and I didn’t call it a portfolio. . . . I was thinking of a portfolio but the way I presented it was “think about what you’ve done, think about what you’ve accomplished, what you want to improve on, what do you want to keep, what were your challenges, what were your successes,” and that’s the way I positioned it to them. (Stella)

These new teachers shared a strong intent to maintain their own professional portfolios and use portfolios with their students. At the end of his year, Clarke was determined to continue to use portfolios for

professional purposes and with his students.

I don't care how busy I am, that 40 minutes is going to be my portfolio time, even if it's just 40 minutes scratching away, just inputting into the computer. . . . I know for sure next year, when I have grade one, [I will use student portfolios] because they will be able to write as the year progresses." (Clarke)

Theme 2: The Impact of Frameworks to Support Action and Reflection

Two frameworks were used with the pre-service teachers in this study. *The Portfolio Organizer* framework increased coherence and ease of implementation of portfolios for these new teachers. Terry said, "The Organizer certainly taught us how to use portfolios for ourselves. . . . [I]t was that whole package. . . . I think it's a process. . . . [I]t wasn't just here's how to do it. . . . I'm using it more as a reference [with my own students]."

One dimension of the Portfolio Organizer that assisted the new teachers was "categories for entires" — in this case the six key images of teaching. Some first-year teachers reported that the structure of the six key images contributed to their understanding and implementation of portfolios. Brandon summed up his benefits at the end of his first year of teaching.

It really helped having that structure, for instance, having those specific categories, like "ethics and legalities," or "active learner," so I could focus more on important and single events. I think without that structure, what might have happened is I'd reflect on three or more experiences at once so I wouldn't really have cohesive entries. (Brandon)

Most participants, like Yolanda, talked about the use of the "retelling, relating, reflecting" (Schwartz & Bone, 1995) — or the 3 Rs framework — as a useful starting point for reflection. "It was an excellent framework for portfolios because in the beginning, I was only retelling. . . . [T]he 3 Rs forced me to dig deeper, . . . to think about what my entry was really about. . . . [I]t's an excellent tool to really get to the bottom and meaning of your thinking." Only Stella thought that the 3 Rs provided too much structure when people used it too stringently. "One caution is that some people used the structure too much."

Once internalized, these first-year teachers no longer consciously used or needed the 3 Rs framework; it became a process that they used naturally. Clarke mentioned that knowing this framework made his thinking, talking, and writing more evident or explicit. "I think that using the relating, the reflecting, and all that, it's almost embedded in the way that I plan on writing about the artifact. It impacted in the sense that it made it [my

writing] much more explicit.”

Theme 3: Influences of Other Teachers on Portfolio Implementation

Just as pre-service teachers were influenced in their practica by what associate teachers thought and how they used portfolios with students, other professionals (mentors, team members, staff colleagues, and administrators) influenced these new teachers in maintaining their professional portfolios and in using portfolios with students.

First-year teachers reported great support from assigned and informal mentors on staff in terms of curriculum guidance, classroom management strategies, and resource materials. However, none of the new teachers saw other teachers in their schools using portfolios with students in a concerted and systematic way. As a result, these new teachers lacked role models to expand their knowledge and implement portfolios with their students. Some reported that teachers in their schools used portfolios with students, but they did not discuss their practices or share openly. Jesse, a teacher of intermediate students, reported in October that teachers in her school were expected to use portfolios with students but she saw little evidence of implementation. “It’s encouraged, but people don’t talk about it.” Only a few new teachers in the study, like Antoine, reported having conversations with their principals about them. Terry saw the professional portfolio being used mostly for those aspiring to formal leadership roles. None of the new teachers reported professional or student portfolios as a focus of staff development.

Theme 4: The Impact of External Expectations on Portfolio Implementation

External expectations and accountability mechanisms influenced the implementation of both professional and student portfolios. When the use of portfolios appeared as a contextual expectation, either by the requirements of a course or by a district or school, teachers reported using portfolios. Melissa was prompted to continue using a professional portfolio when she enrolled in an additional qualifications course. “During the summer, I took an additional qualifications primary course and as part of the course requirements, we had to keep a portfolio. I kept the same format.” She also reported that her school board required teachers to maintain professional portfolios. “I’ve maintained my own portfolio. In this board, teachers have to have portfolios and have to take them to interviews.”

Similarly, when district policy included the expectation that teachers

implement portfolio assessment with students, the participants in this study reported implementation in their first few months of school. Melissa noted, "It's part of this board's policy that all students have portfolios. . . . We use them for parent interviews and to showcase students' best work and to show growth over time, although they emphasize best work."

Theme 5: Impact of the Pressures on First-Year Teachers

The challenges and intensive demands of first-year teaching had an impact on interviewees' abilities to maintain professional portfolios or implement them with students. In both the October and June interviews, many teachers described their initial eagerness and intent to maintain their own professional portfolios and to implement portfolios with their students, but the challenges, the intensive workloads, and their extremely busy schedules overwhelmed them. They were initially very focused on self and finding a comfort level with teaching. In survival mode, many spent sleepless nights; they had little personal time because of the demands and challenges on them. Because they had to meet the expectations of the curriculum and find time to accomplish everything that needed to be done, most participants experienced anxiety. Many of them, like Terry, worked extremely long hours and became physically exhausted, trying to juggle personal and professional lives. "There's just so many things to do, and having a family, you know, I can't be here really late . . . and I can only take so much work home, because I fall asleep by 8:30 or 9:00. . . . I'm physically drained . . . with so many pulls on my attention."

Gloria, one of the two who did not implement any aspect of student portfolios, described the overwhelming impact of first-year teaching.

It's not that I wasn't willing to really work hard, or put the effort in. I just think it's an overwhelming experience in our first year, being able to teach all the curriculum, the five strands in math, science. . . . [I]n the second year, you know you're going to do it, but the first year, it's a little overwhelming. (Gloria)

With many challenges in their first year of teaching, these teachers had difficulty maintaining their own professional portfolio as they did in their pre-service year, and/or implementing portfolios with their students.

Theme 6: Valuing the Portfolio Process

Participants in our study valued the portfolio process highly. Clarke, a kindergarten teacher, saw the portfolio process as one of the more important things teachers can provide students. Antoine, an intermediate teacher,

highlighted how he valued the portfolio process and noted how it benefited his students.

Using portfolios, through trial and error, or just working with the specific kids you have, each year, you can use it to really get them to see what's important for their own learning, their own learning style, how they like to learn, what they don't like to do, how they like to do things, and the more and more they think about those things, I think the better learners they are going to be. I know that I never had that opportunity when I was a kid. . . . As educators and teachers, I think that's pretty much the most amazing thing you can give someone. (Clarke)

When I did my own portfolio, I found deep satisfaction. . . . Portfolios helped me to see where I wanted to go and how to get there, . . . enabled my own reflections/goal-setting and helped me to make sense from my experience. . . . It's a record of my goals and a package of my learning experience, and my evolution as an educator, and how there's a record of my desire to achieve excellence in everything I do, so it would be that sort of tool for them [my students]. (Antoine)

New teachers valued the portfolio process as a positive experience and elaborated on three specific potential benefits. First, they saw the value of the portfolio process in their own writing. In using the professional portfolio during their pre-service year, teacher candidates wrote reflections to accompany each artifact selected. These reflections, over time, improved from short, superficial responses to deep and insightful pieces of writing. Pre-service teachers experienced first-hand the process of writing, and in their portfolios clearly demonstrated their growth. Additionally, the teachers who used portfolios with their own students saw benefits to student writing.

One of my biggest successes this year was getting my students to understand the writing process, the drafting, editing, revising that's involved in writing. . . . I have them do reflections across the curriculum . . . whether it's science, or math, or gym. . . . They have to practice the conventions of writing. . . . It [the portfolio] forces them to write about different things, it forces them to talk about narrative, to talk about exposition, to talk about curriculum expectations. . . . Portfolios involve writing, creative thought, thinking; it involves retelling, which is getting students to talk about what had happened, getting students to relate. . . . [I]t forces critical thinking, to think for themselves. . . . It's the language arts curriculum in one little package. (Antoine)

Although Stella did not fully implement portfolios with her students, she shared a clear sense of the potential of the portfolio process for writing. She remarked, "I think portfolios can be implemented as an increase to your writing program. . . . Portfolios are another way to show them [students] that there are different ways that we can write, and different

reasons why we write.”

Some saw the portfolio as a way to clarify their philosophy, articulate beliefs and principles, and find out about themselves as professionals. Clarke makes this position clear.

The key reason [for writing portfolio entries] is so that basically it will make your life ten times easier, because if you're reflecting on your practice, on how you're doing, on how you face certain challenges, how you're succeeding, you'll build on it. It's like a staircase. You'll keep going up and up and up, and you'll find that you're not reinventing the wheel and you're enjoying the whole process — the class management, the instruction, all the administrative stuff that you do as a teacher, the relationship with the parents. All of it will sort of gel in. . . . It's like getting snapshots of your philosophy, and you'll sort of piece it together, and the more you know about yourself, and why you do certain things, the stronger you'll become as a teacher as the years progress. (Clarke)

Second, these first-year teachers saw the value of using portfolios to assess and report students' progress, as well as for self-evaluation, goal-setting, and reflection for themselves and their students. Antoine saw the portfolio as “an indispensable assessment tool, an indispensable record of growth.” Others, like Jesse, saw the portfolio as essential for parent interviews. Some, like Stella, saw the potential for the portfolio for self-assessment and goal-setting. Roberta and others used the professional portfolio to reflect on their personal feelings and experiences as a means to release emotions. A number, like Clarke, mentioned the impact of the portfolio process on student reflection, self-assessment, and growth.

I knew I would be having parent interviews and I didn't want to be put on the spot if parents came in saying, or ranting and raving why didn't their child receive this mark. So that's the main reason as to why I did it [portfolios]. . . . It made me more comfortable with the fact that if parents had any say or any arguments about their child's mark . . . I could just pull it out and say your child is doing fine, or doing well. (Jesse)

That's why portfolios are useful to me, because of the self-evaluation. That just happens to be why I used them, . . . because once you self-evaluate, you see where you are, and of course for me the next logical step is where do you want to go. . . . It makes you a better teacher if you really examine what you've done and where you're going to go with it. (Stella)

I'm using it [the portfolio] to sort of vent out my feelings. I'm using it almost like a journal. . . . It helped me tremendously to put a lot of things into perspective. It has taken weight off my shoulders . . . so it's easier if I put it on paper, look at it, . . . reflect back on what I've written. (Roberta)

They [my students] will start to understand how they learn and why they learn, and I

think once kids understand that, I honestly believe you're opening a door, because then they can just walk through it. They sort of get control of themselves, and . . . they start self-assessing, and then they can start using strategies to help them. I think we do that almost unconsciously anyway, but we're just bringing it [self-assessment] to a conscious level. We are just making them aware of it so that they know how they learn and what they'd like to do with learning. They know and I know. It's a partnership. (Clarke)

Third, many of these first-year teachers saw the professional portfolio as a useful tool for job interviews and as a step towards their future leadership goals. Their desire to use a professional portfolio was intensified when they saw its potential for career advancement. For example, when Clarke experienced a leadership workshop where the professional portfolio was highlighted as a tool for administration, he reported a renewed interest in maintaining his own portfolio because he saw administrators using and sharing different models, and this provided him with a vision for his future goals.

It was after the portfolio interviews that I realized that, just from a purely professional point of view, how beneficial it [the portfolio process] could be, because in an interview situation, I'd be able to sort of really extrapolate where I was coming from, what my values were, what my philosophy was, and what my classroom would look and sound like, and because with a portfolio, you could include pictures, you could include a tape, and you could pull these things out and hand them to an interview team. (Clarke)

That workshop for the Future Leaders group really opened my eyes. . . . There I was sitting in a room where people were either rookie V.P.s [vice-principals] or the first two or three years as V.P.s, and they're showing their portfolios and why it's important and how they've grown. . . . [A]fter that workshop, I really understood. I found out from professionals on the administrative track. (Clarke)

Theme 7: Changes in Attitude and Confidence

The participants experienced positive attitude change and acquired confidence with continued writing, reflection, and use of portfolios for themselves and with their students. A number of them, like Yolanda, changed their attitude towards portfolios since they were first introduced to them. "I wasn't really understanding so much in the beginning (during the pre-service year), but by the end, I found it [the portfolio process] very comfortable and I knew the purpose."

Clarke made some powerful and insightful comments about the portfolio process and how his initial negative attitude towards portfolios had changed over the course of his pre-service and first year of teaching.

Ultimately, the reason why I was so adamantly opposed to it [the portfolio process] initially was really because I had a fear . . . of not wanting to delve into that unconscious and see "What are the real reasons why I'm in this profession? And what are my driving motivations? What are my passions?" . . . [T]he reality is that who I am as a self, as Clarke, is who I am as a teacher. There really isn't a separation. . . . I realize now . . . using them [portfolios], will really make me just a stronger person and a better teacher . . . and wherever I will be in the field, I will be that much more self-assured and confident. (Clarke)

Clarke saw the portfolio as a tool to discover himself as a person and as a professional. He saw the power of the reflective component of the portfolio and emphasized the "connection between that reflective practice and the portfolio as a tool for that reflective practice. They're wedded. They're inseparable."

Overall, the new teachers who were using portfolios reported increased confidence. The more they used portfolios, both for themselves and with their students, and the more successful they were with them, the more confident they were as teachers. In most cases, overall confidence with teaching grew by the end of the year as their experience and competence with the teaching role increased (e.g., mastering the curriculum). It was interesting to note that the two new teachers who had not used portfolios with their students during their first year indicated a strong intent to pursue the portfolio process in subsequent years, given their greater confidence in having one year completed. In all cases, the new teachers ended their first year with greater confidence and the desire to use portfolios for themselves and their students.

DISCUSSION AND IMPLICATIONS

Early success with professional portfolios had an impact on pre-service teachers' confidence in use of this assessment tool and increased the chances that they might take future steps with it. Our findings revealed that this confidence and success with portfolios were influenced by the use of two frameworks that proved helpful in guiding action and reflection. Teacher educators' use of such frameworks can aid understanding because they serve as structures or scaffolds for the pre-service teachers as they construct knowledge. For example, we introduced *The Portfolio Organizer* framework as an advance organizer to provide implementation support for professional portfolios. We later introduced the same framework explicitly during "The Portfolio Institute" to help transfer the same concepts to portfolio use with students. As well, we introduced the 3 Rs framework of "retelling, relating, reflecting" as a strategy to encourage more in-depth,

reflective thinking and writing. In this study, we found these two frameworks important in the development of pre-service portfolios; the scaffolding they provided in early learning contributed to the initial success pre-service teachers' experience with the portfolio process. The frameworks provided enough structure to guide their initial knowledge development, yet did not restrict the creative and personal approaches to their learning. Interview data suggested that the frameworks also helped them as first-year teachers when they engaged in ongoing portfolio use with their students.

The emphasis during this teacher-education program for these pre-service teachers was on their own use of professional portfolios, having them experience *The Portfolio Organizer* model that could be adapted for use with students. In addition, during their pre-service year, they participated in a full-day professional development session, the "Portfolio Institute," where they saw first-hand how portfolios were used with grade-8 students. Despite these steps, our findings revealed that some new teachers were not sure how to implement portfolios with their own students. This finding leads us to believe that pre-service teachers may need more explicit experience, modelling, and practice with the actual details of using portfolios with students before they, as new teachers, feel comfortable experimenting with their students. This finding reinforces the belief that learners of all ages require many concrete experiences with new concepts, and processing of these experiences, to build understanding and confidence. For example, teacher educators cannot assume the process will unfold with a mere introduction of the portfolio idea; rather, the process necessitates ongoing guidance, input, monitoring, encouragement, and support for greater transfer to occur during first-year teaching. Teacher educators need to be very conscious of concrete strategies to use to promote this transfer of learning, such as site-supported assignments or selection of practica sites where support for specific innovations like portfolios is present and available.

In our research we found that however successful pre-service teachers are in creating professional portfolios, they will be challenged as new teachers to transfer their knowledge and experience for use with students unless certain conditions are in place. That is, if teacher colleagues, mentors, and administrators of new teachers are supportive of portfolios and are using and modelling the use of portfolios for professional reasons and/or with students, then the chances of implementation rise. This includes mentors being keenly aware of the need for the one-on-one support and guidance that some new teachers may require when they begin to implement new ideas.

None of the new teachers in this study reported portfolios as a focus for school professional development. This finding has implications for staff developers and administrators to ensure support for innovations that new teachers may have acquired from their pre-service teacher-education programs. Research has shown that when on-site support or job-embedded learning is available for such innovation, teachers can co-operatively solve problems associated with implementation (Labonte, Leighty, Mills, & True, 1995; Murphy, 1995). The transfer of any innovation introduced in a teacher-education program needs to be grounded in the contexts within which new teachers work. Partnerships and work with associate teachers and schools hosting teacher-education programs can increase support for pre-service teacher experimentation and learning of specific innovations like portfolios. However, such support is for naught if similar support is not available in the schools and districts when new teachers enter the profession. We encourage teacher educators to follow their graduates in the early stages of their careers to better determine the enablers and challenges of the transfer of learning.

In addition, if external expectations or accountability associated with the use of professional or student portfolios (e.g., a district or school focus) are present, these greatly facilitate the use of portfolios by new teachers. New teachers find it difficult to establish priorities and make decisions about use of time. External expectations can help them make choices about the use of time and can facilitate their decision making. That is, where there is policy and procedure alignment, or encouragement of particular assessment practices, chances are greater that new teachers will continue such innovation. Clearly, pressure (i.e., external expectations) and support (i.e., job-embedded) go hand in hand.

Finally, the needs and concerns of new teachers, including the intensive demands that they often experience early in their career, may impact on their ability to implement the range of innovations that they might value. If new teachers can view portfolios as an integrating strategy that helps them achieve many goals in their programs for students (e.g., curriculum content, instruction, assessment, knowledge of the learner), the chances of implementation success may increase.

CONCLUSION

Professional portfolios have gained greater attention because educators look to this process as an integral part of pre-service, in-service, and leadership education. Researchers have often cited benefits, including an

increase in reflective thinking about teaching and learning (Berry, Kisch, Ryan, & Uphoff, 1991; Biddle & Lasley, 1991; Borko, Michalec, Timmons, & Siddle, 1997; Richert, 1990; Wade & Yarbrough, 1996). However, the need exists to better understand the explicit frameworks and processes that might develop more fully such reflective thinking in pre-service teachers. In this study, we anticipated that such habits of mind might create a base for ongoing professional growth. Accordingly, some valuable themes and understandings have emerged from this study to guide the ongoing exploration of portfolio use for professional growth and student success.

This study has encouraged us to think further about the value and many benefits of portfolios, and has pushed our thinking about the role pre-service portfolios can play in creating a base for professional growth. The collection of meaningful professional artifacts, and the reflection that accompanies these, can encourage clarity of purpose and foster self-assessment and goal-setting during pre-service and beginning years of teaching. As well, ongoing professional learning occurs as new teachers consider how to apply the portfolio concepts they have experienced and internalized in their learning, to working with their own students. Our continuing research will determine how new teachers will reconcile their valuing of portfolios with the practical, ever-changing demands of life as an educator.

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