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Learning partnerships are powerful processes that are evident across the spectrum of education systems and disciplines. By understanding role and processes of learning partnerships as they operate in educational settings, approaches to supporting learning engagement can be better understood and implemented. The development of a framework to understand social partnerships in learning and the underlying frameworks have focused attention on the underlying relationships that facilitate connections, engagement and decision making between government agencies, enterprises, community members and individuals.

The papers in this journal explore the partnerships in learning across the educational spectrum. These include;

- Partnerships between universities and school districts to prepare highly qualified workers and strong relationships across schools, libraries, home and the family that support literacy skill development,
- Cooperative learning strategies for schools to build teachers approaches to support students to think critically and participate in decision making,
- Partnerships between university and cross sectoral schools to build tertiary and primary students ability to build knowledge and confidence collaboratively and
- Understanding ways to recognise the role of parents as partners with schools in building family literacy and the skills for lifelong learning.

These papers provide a discussion of the key elements in learning partnerships that inform educational policy and practice. Through this discussion we develop shared understanding about partnerships across sectors, disciplines, location and cultures. As the authors demonstrate it is important to recognise and engage partners in the learning journey as an essential activity and opportunity for development in our shared lifelong learning practice.

Are We There Yet? Perspectives from Partners in a Community of Practice

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Abstract

Partnerships are routinely established between universities and school districts for the purpose of preparing highly qualified new teachers. Partnerships for this purpose are especially important in preparing teachers for hard-to-staff schools. Through the resources of a United States Department of Education Teacher Quality Enhancement Grant, researchers worked with school partners to develop a communities of practice. At the end of the first year, researchers took a step back and asked for feedback from the partners. Through a review of the literature researchers determined the characteristics of a communities of practice that included opportunities for situation learning, reflective practice, and a shared cultural and historical heritage. Researchers then surveyed, interviewed, and held focus groups with a variety of participants in the partnership to determine if they had a shared understanding of the communities of practice. This study gives direction to university researchers as they work with their community partners.

Introduction

In light of the statistics of new teacher retention rates, teacher educators must ask what can be done at the university level to ensure that new teachers are entering the classroom with the skills and dispositions to be successful. Teacher education programs and the faculty who teach within the programs must be prepared to support the unique needs and issues that teachers face in their first years of teaching; especially when the first teaching position is located in hard-to-staff schools in rural or urban school districts. Statistics on teacher retention in all settings vary but generally show that the first five years of the teaching profession is when new teachers are most vulnerable. In the United States (U.S.) between 25% and 50% of new teachers leave the profession within the first three years of employment (Fleener, 2001; Voke, 2002; McCann &

Johannesen, 2004). Hard-to-staff schools in rural or urban locations have an attrition rate of 50% of new teachers leaving in the first five years (Morrow, 1999; Darling-Hammond & Sykes, 2003). Most of the graduates of teacher preparation programs do not reflect the cultural background of the children where they take their first jobs (Swartz, 2003; Cochran-Smith & Zeichner, 2005).

The teacher shortages are greatest in low-performing and hard-to-staff schools (Nelson, 2004). Nelson named the quick turnover rates of new teachers in hard-to-staff school settings as the revolving door phenomenon (2004). New teachers are typically hired into rural and urban schools more easily than suburban schools because of the number of openings. Although they accept positions in rural or urban districts, many teachers leave as soon as they can locate a position in a suburban district (Darling-Hammond & Sykes, 2003). The districts with the highest need for experienced teachers are usually not able to compete with suburban schools. Suburban schools hire the experienced teachers away with higher salaries, access to resources, and higher performing students. Most rural and urban districts have very diverse student bodies and teachers are frequently asked to address issues that are more complex than what teachers in suburban schools face (Abbott, 2004). Many of the rural and urban schools have student populations that are almost 100% children of color, more than 75% not performing at grade level based on standardized state testing programs, and as many as 90% living in poverty. The realities of working in schools that are under-resourced, under-performing, and hard-to-staff receive little attention in traditional teacher education programs. Although many teacher education institutions are revising their programs to address the challenges new teachers face in diverse settings, this is still one of the reasons teachers note for leaving their first job a position in a suburban school (Nelson, 2004).

How can university faculty better prepare preservice teachers for the realities of what they will experience in the classroom? The need for teachers with the skills and dispositions to teach children in high-need schools has led university teacher preparation programs to recognize the need for a change in the system of preservice training. One answer to the challenge of preparing highly qualified teachers for hard-to-staff schools is to place preservice teachers in settings for field experiences that are reflective of the schools where they will be employed (Shen, et al., 2004). Another consideration is to introduce new teachers to the realities of the classroom as early as possible in their program. University teacher education programs cannot provide realistic experiences for new teachers alone. They need help and support from school districts

and community agencies.

Background

A university located in the U.S., near an urban area, had worked for many years in partnership with the local school district to give preservice teachers authentic field-based experiences. The school district has over 33, 000, students in grades from kindergarten through high school, attending approximately 90 schools, and 85% of the students receiving free or reduced lunch. Based on state-distributed performance test data for 2004, 75% of the children score below grade level in communication arts. The school district, as a high-need district, struggles to hire enough teachers with appropriate teacher certification each year (School District Recruitment and Retention Office, personal communication, 2004).

The teacher preparation program at the university was completely redesigned between 1997 and 2000 to create a Metro Learning Community Program that provided preservice teachers with field-experiences throughout their program. Students participate in field experiences in urban, suburban, and rural schools districts that surround the city and the adjacent counties. Several university faculty have research agendas with a focus that prepares new teachers specifically for the challenges of working in hard-to-staff school districts. Specifically, coursework and assignments provide preservice teachers with opportunities to learn about families who live in poverty, speak other languages, and who represent diverse cultural backgrounds. This focus requires that the university and school district partner provide opportunities for preservice teachers to gain the knowledge and understanding of the communities where they will be working. Preservice teachers also need the support of community members to learn about the community and be able to meet the needs of families and students living there.

The partnership between the university and school district has provided the director of recruitment and retention at the district with a substantial number of new teachers for the district each year. The university reports that as many as 40% of the graduates from the teacher education program accept jobs in the district (University Teacher Education Office, personal communication, 2005). Unfortunately, approximately 50% of all newly hired teachers leave the district within the first two years' of employment (School District Recruitment and Retention Office, personal communication, 2005). Researchers at the university recognize the need to expand the model of teacher preparation to provide additional support to new teachers accepting positions in this high-need urban district. A three-year Teacher Quality Enhancement Grant

from the U.S. Department of Education (\$3.2 million) provided assistance in expanding the partnership between the university, the school district, and other community partnerships for the academic years of 2004-2007. The purpose of the grant is to develop highly qualified teachers for the urban school district and move the teacher education program from a traditional model to a communities of practice model. The first year of the grant provided needed resources to the urban school district and the opportunity to engage community partners in the preparation of preservice teachers.

This study asks three research questions:

1. How is the community of practice term defined?
2. Is the university moving teacher preparation from a traditional model to a community of practice model with the urban school district?
3. Do the participants recognize the partnership as a communities of practice?

Literature Review

Models of Teacher Preparation

Historically, teacher education programs prepare new teachers through a set of individual courses that lead to a hands-on experience, typically called student teaching, at the end of the educational program (Cochran-Smith & Zeichner, 2005). There has been a wide-spread movement to modify teacher education programs to provide preservice teachers with more field-based experiences in classrooms prior to their final student teaching experience (Perkins et al., 2001; Cochran-Smith & Zeichner, 2005). This effort requires that university teacher preparation programs establish relationships, or partnerships, with local schools so preservice teachers and university faculty have access to the classroom for their field work. One model of teacher preparation, labeled the clinical triad model, has three key partners: the university faculty, the preservice teacher, and the classroom teacher (Murrell, 2001). Each member of the triad usually works in isolation, providing the experience or training that the preservice teacher needs. The preservice teacher is placed in a classroom under the direct supervision of a classroom teacher with periodic visits and observations from the university supervisor. In this model, there is minimal sharing, little inquiry, and little overlap or support between or among the participants. The preservice teacher receives disconnected, and at times conflicting, information from the participants. Community resource partners are not a part of the clinical triad model. Of course, the level of involvement, coordination of experiences, and collaboration varies, based on the

personalities and shared experiences of those involved. Other models, with similar participants identified, also describe the attempt to develop a collaborative or reciprocal relationship between the university and the school using names other than communities of practice (Andrews, et al., 2003).

A model used widely in the U. S., the Professional Development School (PDS), takes teacher preparation to a more intensive level that forms a new institution as a result of the partnership. The new institution is characterized by a long-term university and school relationship that leads to improvement of student learning within the school (Lawrence & Dubetz, 2002). PDS partnerships conduct their daily operations adhering to a set of guidelines, like those developed by The Holmes Group, a U. S.-based support organization for schools and universities seeking to create a new institution based on partnership (Lawrence & Dubetz, 2002). The PDS model provides a place where preservice teachers come to learn about working with children, classroom teachers confer with both preservice teachers and university faculty about the latest knowledge and research in education, and where university faculty can conduct research to develop the newest ideas and theories on teaching and learning (Lawrence & Dubetz, 2002). PDS partnerships have evolved to include criteria to help support the development of highly qualified teachers for urban schools. Additional aspects of working in urban settings includes sharing of resources among members of the partnership and professional development sites, as well as, recognizing that the preparation of preservice teachers may be done in settings that are not exemplary. One of the goals of the PDS is to help the school improve and work toward an exemplary designation through the partnership (Lawrence & Dubetz, 2002).

Communities of Practice

With teacher education models that take into consideration the need to provide intensive field experiences and collaboration between all the partners, why is the turnover of new teachers in hard-to-staff settings still 50% or more each year (Landford, et al., 2002; School District Recruitment and Retention Office, personal communication, 2003 and 2004; Swartz, 2003)? Murrell (2001) suggests that one way to support preservice teachers becoming successful teachers in hard-to-staff schools is for university teacher preparation programs to move from a traditional clinical triad model of teacher education preparation to a communities of practice model. A community of practice model, first named by Lave and Wenger (1991), was not developed specifically for teacher education. It describes the importance of developing strong ties between the individuals within the community and between the individuals and the

community itself. The origin of the communities of practice model was to develop tradesmen and further the apprenticeship of highly skilled craftsmen. Murrell identified a communities of practice framework for education because of the involvement of the community surrounding the school, along with the equal responsibility of the school itself and the university to come together as partners in preparing new teachers for hard-to-staff schools (2001).

Barab and Duffy (2000) discuss other learning models that support the development of a communities of practice perspective. These models, which are also known as communities of learners, communities of inquiry, and learning communities, all emphasize the development of self through participation in the community. They believe that the development of self in a community occurs through legitimate participation in the community. With the development of self being the main focus, more reflective dialogue will occur between varieties of people with varying levels of expertise, thus enforcing the communities of practice (Buysse, et al., 2003). A community of practice is not a playing-field for a preservice teacher to practice their new knowledge. It is a reciprocal community, where learners at all levels collaborate to meet a shared goal. Too many times, field experiences for preservice teachers are conducted as if the classroom is a laboratory for the preservice teacher without regard for the classroom teacher or the students. This has been the case with other theories, such as, the clinical triad model (Barb & Duffy, 2000).

Wenger (1998) defined communities of practice as groups of individuals who share interests, tasks, beliefs, and practices in order to accomplish a specific goal. The community is ever evolving with novices learning the beliefs, norms, and practices of the group. Preservice teachers involved in meaningful and actual activities within the school gives them confidence and hope for their future as a new teacher (Lave & Wenger, 1991). This hope will yield motivation and can lead to the preservice teacher seeing their own role in the school. The more connection a preservice teacher has through being involved and treated like a master of their craft, the more intrinsically motivated they will be. To develop this motivation, the preservice teacher must see the value of and engage in two characteristics of a community of practice: situated learning and reflective practice (Schon, 1987; Lave & Wenger, 1991).

Situated learning Situated learning, a concept discussed by Lave & Wenger (1991), is a framework based on the work of Gibson's theory of affordances and Vygotsky's theory of social learning. Gibson (1979) stated that humans scan the environment for tools to use for action. Humans use these tools to improve or live their life. An example of Gibson's theory would be searching for a

smooth surface for walking. Vygotsky (1978) developed the theory of social learning to show that full cognitive development requires social interaction. Situated learning determines that knowledge is acquired and applied in an authentic context. In other words, it is used within a setting that would require the use of the knowledge (Brown, et al., 1989; Cognition & Technology Group at Vanderbilt, 1993, McLellan, 1995). Learning is applied within a social context and is most effective when there is opportunity for social interaction during the learning process.

Reflective practice Reflective practice, not a new term for teacher preparation, was introduced by Schon (1996) as a critical process in the development of skills and knowledge of a specific discipline. It allows for a novice in the discipline to recognize the consonance between what they are doing in their practice and what experts are doing. It requires that the learner is involved in thoughtful consideration of the knowledge while they put ideas into practice as they are being coached by a master of the discipline (Schon, 1996). Amulya (2006) extends the definition of reflective practice to include the development of the ability to explore and be curious about one's own experiences and actions. Some key concepts in reflective practice include struggles when things do not work as well as planned, dilemmas that provide a clash between the learner's values and the approach taken to achieve a goal, and breakthroughs in action or thinking that reveal what was learned and move the learner to new understanding (Amulya, 2006). Like situated learning, reflective practice requires discussion, dialogue, and stories that the learner shares with peers and with the master of the discipline. Opportunity to share experiences with others during the learning experience is critical to learning through reflective practice (Raelin, 2002).

Cultural and historical heritage A third characteristics of a community, as discussed by Barab and Duffy (2000), is identified as the common cultural and historical heritage within an interdependent system that is part of a reproducing cycle. That shared common cultural and historical heritage is the biggest stumbling block for university teacher preparation programs that are preparing new teachers for hard-to-staff schools. How does a preservice teacher enter a community that is not reflective of his or her own culture or historical heritage and engage in a meaningful and effective collaboration? The interdependent system within the community provides a way for preservice teachers to connect to something larger than themselves (Buysse, et. al., 2003). Rather than staying isolated within the university or within the individual classroom where they are completing field experiences, the preservice teacher must make authentic connections with classroom teachers, families, and the children they are working with

(Andrews, et. al., 2003; Abbott, 2004). Authentic connections are made when preservice teachers move about within the community and learn about the daily events in the neighborhoods where the children live. Intensive coaching by experienced university faculty and classroom teachers will help preservice teachers build the bridge between their home culture and the children's home culture (Fleener, 2001; Cochran-Smith & Zeichner, 2005).

The reproduction cycle of a community describes the process where new teachers are welcomed into the community each year and the teachers who were previously new are eventually the experienced teachers. Preservice teachers come to the school with university faculty to complete field-based requirements that include the culminating experience of student teaching. These preservice teachers learn about the culture and community of the school and become familiar with the children and families. Hopefully, they are hired into the school as a new teacher when they have completed their teacher preparation program. As more preservice teachers come to the school with university faculty, the newly hired teachers are mentored and supported as they complete their first years of teaching. Eventually, they become the mentors and collaborators for the next group of preservice and new teachers. This example of a reproduction cycle works to support and develop new teachers working in and committing to staying in high-need schools.

Development of models Murrell developed his model of the circles of practice for teacher education from the communities of practice literature (2001). The circles of practice add to the three partners of the clinical triad model. The clinical triad only identified the preservice teacher, the university faculty, and the classroom teacher. Through this variation on communities of practice, teacher education programs expanded the focus of preparing students for teaching careers. Circles of practice include community partners, additional university resources other than the teacher preparation program, and school district resources (2001). The focus becomes making sure that new teachers are working within the cultural constructs of a community to meet the needs of the children and families within the community. In communities with children at-risk for school failure, teachers need to know more than effective teaching strategies in order to meet the educational needs of the children. Collaborations among school personnel, community partners, university faculty, and families are needed to make sure that the children attending the schools are going to be successful.

Reviewing the characteristics of teacher preparation models highlights the need for teacher education programs to move from the clinical triad model to the communities of practice model in order to adequately prepare new teachers to enter into a setting where they are not culturally

or historically competent. Also, creating the interdependent system requires university faculty to move outside of the university classroom to bring together community resources and school personnel to help with the education and development of new teachers. University faculty will need to participate in supporting the development of the reproduction cycle by placing preservice teachers in schools that will provide authentic field experiences and that have hired recent graduates from the teacher education program. The presence of the university faculty will facilitate the development of the cycle by helping new teachers connect with experienced teachers and community resources. Preservice teachers will participate in the cycle by supporting and learning from both new and experienced teachers as they access community resources.

Methodology

In order to answer the three research questions, how is a community of practice approach defined, is the university moving teacher preparation from a traditional model to a community of practice model with the urban school district, and do the participants recognize the partnership as a community of practice, researchers reviewed the body of research already established surrounding the development of models of teacher preparation, including the development of communities of practice perspective. Through the review of literature the researchers were able to identify the key characteristics of communities of practice. The researchers also looked at the body of research about university and school district partnerships to identify potential characteristics to measure the progress of the local partnership. They were able to review and compare different models of teacher preparation in order to develop a list of questions to ask partners in the project. The questions that were developed were used for a survey, a list of interview questions, and a list of focus group questions.

At the end of the first year of the grant, researchers gathered information from preservice teachers who were participating in course-based field experiences or as a student teacher, classroom teachers who hosted a preservice teacher, principals and school administrators, and university faculty and staff (n=44). All the people were surveyed, interviewed, and/or participated in a focus group during May and June following the end of the first year of the grant. They were identified to participate in the data gathering if they had spent any of the years in one of the designated partnering elementary schools.

Results

The university was working with a hard-to-staff, urban school district in a traditional clinical triad model of teacher preparation when a federal grant was received. During the first year of the grant the university worked to use the resources to move the preparation of teachers for the school district from the traditional clinical triad to the communities of practice model (Murrell, 2001). The clinical triad and the communities of practice models are different in two main ways with respect to how the university relates to its partners. Field-based experiences are the key to helping a preservice teacher work successfully in a high-need school. Field-based experiences were not new to the university teacher preparation program. However in this model they are the key to the development of the community. Preservice teacher preparation was centered in the field experiences rather than at the university. University faculty had to begin moving more of the coursework into the schools. The second difference that resulted from adopting a community of practice perspective was that it became more important to involve parents, community stakeholders, and other faculty members of the university in the teacher preparation model to expand instructional strategies, the efficacy of the preservice teachers, and the efficacy of the classroom teachers (Murrell, 2001).

The review of literature was used to answer question one of this study. The data collected from the surveys, interviews, and focus group was used to answer questions two and three of the study.

Question One: How the communities of practice term defined?

The first question of the study asked, how is the communities of practice term defined?

It was answered through a review of the literature. The researchers identified three key criteria of a community of practice:

Participants in a community of practice have a shared history and cultural background. Knowledge is developed through two experiences: situated learning and reflective practice. These three criteria are shared, recognized, and valued by all members of the community.

Do the members of this community of practice recognize the three key criteria that the researchers identified? The information gathered from a review of the literature was used to develop nine questions; all were used for a survey, participant interview, and a focus group of participants to answer research questions two and three. The questions developed are located in Appendix A. The responses to the questions are summarized in the emerging themes discussed

below and reflect that not all participants share, recognize, and value this definition of a community of practice.

Question Two: Is the university moving teacher preparation from a traditional model to a community of practice model with the urban school district?

For questions 2 and 3, surveys, interview responses, and focus group transcripts were reviewed and emerging themes identified. The answer to the question 2 is yes, based on the answers to the questions and the criteria of a communities of practice that were identified from the review of literature. The emerging themes indicate that preservice teachers, classroom teachers, specialist teachers, principals, curriculum specialists, and university faculty and staff all recognized and valued aspects of the communities of practice model. Specifically, university faculty and principles noted the need for teachers to share the history and culture of the children in the classroom. Classroom teachers, principals, and university faculty noted that preservice teachers need to engage in situated learning through authentic experiences working with the children in the classrooms. Classroom teachers also saw their role as one of supporter and teacher for the preservice teachers. Participants are described in Table 1.

Table 1. Partners

Participant Description	Number of Participants	Data Collection	
Classroom Teachers	25	Survey	Classroom teachers were teachers who hosted a student teacher or intern in their classroom. Classroom teachers represented seven different schools.
Preservice teachers	6	Focus Group	Preservice teachers are from 2 schools.
Principals/Vice Principals	7	Interview	Principals represented 6 different elementary schools.
Curriculum Coach	2	Interview	Serve as curriculum support.
Specialist Teachers	4	Survey	Representing Title 1 Math, library media, vocal music, and technology.

Two principals' interviews were excluded from the analysis because they attended a year two information luncheon (after principal interviews started) that discussed in great detail the goals of the partnership. Their answers during the interview reflected what they had heard at the luncheon.

Question Three: Do the participants recognize the partnership as a community of practice?

The answer to this question, based on the identified criteria from the literature review, will be determined when all participants recognize and participate in the three key criteria of the definition. The answer to question one is that communities of practice are defined as groups of people with a shared history and cultural background, participation in situated learning, and engaging in reflective practice will be used to measure whether or not the partners have developed a community of practice. After the first year of the partnership, the partners are not able to identify themselves as a community of practice. Although, among the different partners, several recognized and participated in at least one of the criteria identified, no participants recognized or participated in all three of the criteria.

Emerging Themes

Two emerging themes that reflected the motivation for participation and the goals and purpose of the partnership were identified when reviewing the answers to the surveys, interviews, and focus group questions.

Motivation for Participation Questions 2 and 3 of the survey, interview, and focus group questions (See Appendix A) give insight into the motivation of the partners for their participation in the partnership. The answers varied among groups. One theme that emerged for both the preservice teachers and the classroom teachers was that their participation in the partnership was a requirement and not a choice. Preservice teachers in the focus group said they were participating in the partnership because of graduation requirements and they did not feel they had a choice. Similarly, seven cooperating teachers answered that they were participating in the partnership because they were told to do so by their administrator and there was no personal choice involved. Classroom teachers said:

-“My administrator requested that I participate”,

-“My school is participating, so I have to”,

-“It was for all grade levels,”

-“...I wasn’t given a choice not to.”

However, many classroom teachers (8 out of 25) said their reason for participating in the partnership was for personal growth. They recognized that they could learn from the student interns/teachers with answers such as:

-“...to strengthen and enrich my teaching experiences”,

-“I learned from my student teacher...there are so many new techniques that I was not aware of in teaching...”,

-“...to bring new ideas to my teaching...”,

-“The partnership allows me to grow along with the student teacher.”

There was also overlap in the reason given for participating by the classroom teachers and the curriculum specialists. Both groups of teachers said that they were participating so that they could give advice to preservice teachers and to share knowledge of pre-existing skills. Five classroom teachers mentioned their reason for participating in the partnership was for passing on knowledge to preservice teachers:

-“I feel that I can bring a lot of experiences and advice to new teachers,”

-“I want to develop preservice teachers”,

-“...help the interns in any way possible.”

Three specialists stated that their reason for participating in the partnership was to share their skills:

-“...it gives me an opportunity to provide additional non-fiction books during their library class”,

-“The expertise that I demonstrate hopefully will motivate and support the preservice teacher to become successful teachers.”,

-“I wish to share my literacy knowledge with preservice teachers.”

Purpose and goal of the partnership The perceived goal of the partnership, and this was common to all groups, was the need for authentic experiences to be arranged for preservice teachers who

take positions in urban schools. For the most part, the partners all had a general idea of what the common goal was for the placement of preservice teachers in field experiences in hard-to-staff schools. They generally understood that the goal was to prepare high quality teachers for the schools. They also all recognized the need for a collaborative relationship with area schools and the opportunity to engage in activities that build school and university partnerships as necessary for new teachers to be successful.

Increasing student achievement as a goal was also an emerging theme with classroom teachers, specialists, and principals. Classroom teachers and curriculum specialists noted that the partnership would improve the achievement of the children in the classrooms where the preservice teachers were assigned. Principals also mentioned that the partnership would benefit the children in the schools. The preservice teachers, however, did not identify their role as beneficial to the children.

University faculty and staff, along with the principals, noted that a goal of the partnership was to advocate for quality education and social justice for all children:

-“I believe in quality urban education...”

-“...education is the vehicle to social justice.”

The university faculty, staff and principals saw the purpose of the partnership affecting change at a larger scale (e.g. social justice, believing in the system, recruit new staff). However, the classroom teachers, curriculum specialists, and preservice teachers did not note any purpose beyond the immediate classroom or their own personal gain (insight or passing on knowledge). Many of the classroom teachers and preservice teachers were not able to discuss the overall value of the partnership or identify the various benefits. Several noted that the communication between the university and the school was lacking. It was recommended that more information be shared and all partners be made aware of resources that were available.

Discussion, Conclusions and Implications

The researchers identified three key criteria of a community of practice framework to use as they monitor and evaluate the development of a partnership between the university and the school district for the purpose of preparing highly qualified teachers. The three criteria are making sure that all of the partners have a shared historical and cultural background; they value, engage in, and recognize the need for situated learning, and participate in reflective practice. Sharing the

criteria will help the project directors focus the activities of the project and provide experiences for all of the partners that will lead to the establishment of a community of practice.

Although it may not change individual motivation for participating in the partnership, understanding the criteria will help participants recognize their place in the preparation of highly qualified teachers. Also, recognizing the need for authentic experiences for preservice teachers, and then providing the experiences through opportunities to work with children in the classroom can provide preservice teachers with the historical and cultural background that they do not have.

In the survey, interviews, and focus groups, none of the participants identified reflection as a key aspect of learning to teach in a hard-to-staff school. Preservice teachers and university faculty engage in reflection, both written and oral, on a regular basis. Yet, neither group mentioned reflection as critical to the development of the communities of practice. Perhaps this is because the purpose of the reflection is not clear to the preservice teacher or the university faculty. One future research question to ask would be, how do you use reflection to expand on situated learning and development of a common history and cultural perspective? Also, it would be important to ask preservice teacher and university faculty how they use the many written reflections that preservice teachers prepare. In addition, reflection needs to be part of the work of all members of the community and used to further the goal of the community. If principals, classroom teachers, curriculum specialists, and university faculty also engage in reflection, the potential for reflection to be used to guide the development of the partnership would be enhanced.

The reasons given for participating in the partnership seemed to be imposed from administration for the classroom teachers and from university faculty for preservice teachers. Both groups were not able to identify the overall benefit of the partnership to the academic achievement of the children or the development of highly qualified teachers. They also did not note that the partnership could produce a recurring cycle of support for new teachers. Principals and university faculty recognized all of these potential benefits from the partnership and saw the potential greater good to society. More information on the impact of community partnerships needs to be provided to both preservice and classroom teachers. Also, the information and experiences about the culture of the students in the community surrounding the school that is given to preservice teachers needs to be connected to the preservice teacher's role as the

classroom teacher. Connecting that information to the classroom will help preservice teachers see their role as an advocate for the children in their classroom.

A reoccurring response from all participants was a lack of communication from the university partner about opportunities to access resources through the partnership. Clear goals for year two of the partnership include distributing more information about resources, clarifying the purpose of the partnership, providing more details about what can be accomplished, and specifying the roles of each partner. Overall, the university and school district are on a path that is leading to establish a productive community of practice. With increased communication, the development of a system to establish reflection, and use of the system for reflection to improve the preparation of the preservice teachers, the partnership will meet the three criteria identified for a communities of practice.

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Appendix A

Participant Questions

The following questions were used to develop a survey, interview questions, and focus group questions.

1. Please describe the partnership as it impacts you and your position.
2. Why is your institution participating in this partnership?
3. Why are you personally participating in this partnership?
4. What is the goal of the partnership?
5. What has been accomplished through the partnership so far?
6. What do you hope to accomplish through the partnership in the future?
7. How can the partnership be improved?
8. What people and agencies are active participants in the partnership and what are their roles?
9. Is there anyone or any agency that you think needs to be part of the partnership?

Building Family Literacy Skills among Parents and Children in Developing Countries: An Impressionistic Account in Uganda

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Abstract

Building family literary skills among parents and children will enable them to access and use information for national development. The existing literature reviewed shows that the three common approaches of family literacy include: the family and social life, home-school relationships, and the use of libraries and readership development. A descriptive, case study research design based in Kampala district, Uganda was conducted in all five divisions of the district to assess and establish the best approach for enabling parents and children to acquire family literacy skills in Uganda. In addition, published and unpublished documents regarding the subject, including information on children, families, education, community development, library development, and literacy were reviewed. Although the family and social life, the parent, school and teacher relationship, and libraries and readership development have been adopted in Uganda, there is lack of information access skills to ensure that parents and children acquire sustainable lifelong learning. In order to integrate information skills in the development of family literacy, parents are obliged to assume a leading role in developing and promoting the child's social, educational and information needs. A family information literacy programme (FILP) will ensure that a child builds abilities of exploiting the available opportunities to access information for lifelong learning. The paper provides strategic directions for this programme that target increased access to information and books for parents and children to ensure the attainment of a literate and informed society.

Introduction

Most of the things a modern human being enjoys in his/her everyday life have been invented or discovered through trial and error by our ancestors. Literacy too has evolved from medieval systems of writing, such as hieroglyphics invented by Egyptians using papyrus sheets, and cuneiform by the Babylonians characterised by writings on clay tablets. The meaning of literacy has evolved from a mere "ability to read and write" to include the ability to address the practices and outcomes of education in the information age (Barton, 2004: 2). Being literate in this sense means possession of a minimum capacity both to understand the moral implications and to act upon the demands of competence of what a particular society defines as responsible participation of a person in that society (Hillerich, 1993:10). In fact, Barton (2004:2) associates

literacy to a particular process by which available information can be more easily understood by a particular society.

Information literacy comprises a set of abilities that enable individuals to recognise when information is needed and the capacity to locate, evaluate, and effectively use that information (Council for Australian University Librarians, 2001:1). To develop any other literacy [like family literacy], information literacy is required as a tool for empowering individuals and societies to develop the abilities of learning how to learn. Learning how to learn requires a literate person to have the ability to recognise a need, and to locate, access, evaluate, organise, and effectively use information to satisfy that need (Barton, 2004:2). To utilise information, societies (e.g. families) need to be literate about the needs, roles and rights. According to Meyers and Jeeves ([Sa]: 36), the way one trains a child affects the way the child behaves within the environment. This question is based on parental duty as laid out in Proverbs 22:6, which says: “Train a child in the way he should grow, and when he is old he will not depart from it”. It is therefore important that families in developing countries refocus their approach to enable parents and children to acquire information literacy skills for lifelong learning.

Literature Review

There are a number of approaches, including the family and social life, home-school relationships, the use of libraries and readership development that have been used globally in building family literacy.

Family and Social Life Approach

The family and social life approach engages children to participate in domestic responsibilities such as cooking (Herbert, 1994:77). In this approach, “we are more interested in how the child develops his potential rather than how he does in relation to others” (Serwanga, 2001:21). This approach requires interaction between a parent and a child to contribute to the child’s development through storytelling. Accordingly, parents act as a role model to their children. As a result, children will develop the traits possessed by the parents within the society or environment. This approach is, however, based on informal learning and does not integrate the formal education programmes to enable children become lifelong learners.

Parent, Children and Teachers (PACT) Approach

To develop family literacy in a home, there should be a friendly and co-operative relationship between the school and the home (Rukundo, 1999:21). This approach requires keeping parents well informed about their children's progress at school and child development progress at school (mental, physical, social and emotional). This enables the parent to monitor and participate in the child's language and reading activities, and speech and language development (Feinberg, 1946:54). In a sense, parents are potential 'co-teachers' and have responsibility towards a child both at home and at school, and offer informal teaching that respects societal ethics, morals, and spiritual values. In this approach, schools take parents as critical friends, advocates, and partners in the educational process.

Indeed, Hancock and Gale (1996:15), while referring to authors such as Bissex (1980) and Minns (1993), maintain that literacy embedded in the social process and cultural traditions of family life is more likely to be sustainable for the development of lifelong learning among children. The PACT approach enables parents and children to search for and read books together at school, which opens up an opportunity for closer home-school understanding. In fact, reporting on the progress of a family literacy project in South Africa, Machet and Pretorius (2004:45) state: "We have to help parents and caregivers who do not have high levels of literacy to use the books to ensure that children become lifetime readers".

Libraries and Readership Development

Libraries play a role in the development of family literacy. They inculcate in children and parent the love for books and for literature, and encourage them to read and practise reading skills. For instance, in some religious societies, reading a Bible or other religious text is reported in the literature (Moon, 1998:6) to have exerted a significant influence on the development of information skills. The literacy approach of reading the Bible as a text is not only relevant to contemporary readers but also gives more attention to the linguistic and literary materials used (McKnight, 1985:10).

Readership development is about creating and supporting readers [users], widening people's horizons and helping them (Thebridge et al., 2001:25) to access information. Applying the Socratic method of teaching, Aristotle taught Alexander and other companions to look for facts and patterns among a variety of sources and integrate them in solving specific problems (Bose, 2003:41). Aristotle's teachings sparked in Alexander a deep interest in reading, which in turn influenced him to build Alexandria as a centre of art, culture and education (Bose, 2003:183) and

conceive the idea of creating the first public library and a museum in the area to serve the community. In fact, Ptolemy [Alexander's successor in Egypt] developed interest in reading and became determined to make Alexandria's dreams come true. Later Ptolemy III [grandson to Ptolemy] had the Torah translated into Greek to benefit the children of the Ptolemy family. In this approach, children become more interested and engaged with their environment if guided and encouraged to make real choices based on their individual needs.

The above approaches involve interactions between the children and parents, teachers and libraries without a defined programme for integrating information literacy skills in family literacy. A strategy to build information literacy skills among children and parents is therefore required.

Methodology

This paper is based on a descriptive case study research design (Busha and Harter, 1980:167, and Powell and Connaway, 2004:61). The study reviewed literature and documents that relate to children, families, education, community development, library development, and literacy. A field study was conducted in all five divisions of Kampala district to assess and establish the best approach for enabling parents and children to acquire family literacy skills. These divisions are Central, Kawempe, Makindye, Nakawa, and Rubaga. Kampala district was selected because of the social problems associated with most homes and families in cities, including inadequate accommodation and the busy schedules of parents in business and office work. Kampala district having been selected purposively, two parishes in each division and consequently one village for each parish were purposively selected. The families selected were those with both parents (mother and father), and at least a child. In Uganda, a child is defined as a person below 18 years (Uganda Bureau of Statistics, 2003:11). In total, 10 families were selected and studied, two from each division. One child was identified in a family as part of the study and his/her age and a class of study was also recorded. The fathers' age ranged from 34 to 52 years whereas the mothers' age ranged from 25 to 45.

The majority of the men had attained education to the level of a diploma (4), and fewer (2) had completed only primary education. The majority of the men were businessmen while the women were housewives. The age group of the children considered for the study ranged from four (for nursery) to 12 (for P6). From each family, the study attempted to establish the approaches used to enhance family literacy. The challenges met by families in attempting to acquire skills to

promote family literacy were established. Data was analysed based on the theme and the existing literature. For instance, to detect trends and patterns of data obtained from the study, the data was subjected to some systematisation and categorisation according to the themes of the content of this study (Slater, 1990:122). Information obtained from government documents, Acts and other legislations, and the statistics or census documents were utilised to analyse the data (Birley and Moreland, 1997:32). This called for sensitive interpretation of the information collected to communicate the findings in this paper.

Findings and Discussion

Through interviews conducted and the documentary review made, data on the approaches to family literacy and their challenges was obtained.

Approaches to Family Literacy Activities in Uganda

There have been attempts at parent-school interactions in some families. For instance, children bring their homework to parents for help. Parents also give guidelines on assignments given to the children at school. The government considers education to be a fundamental human right and has re-affirmed various international aspirations in its national development programmes. Some of these international aspirations include the World Declaration on Education for All, the World Summit for Children (1990), the World Conference on Human Rights (1993), the World Conference on Special Needs Education (1994), Forum on Education for All (1996), and the International Conference on Child Labour (1997). Most of these aspirations have declared the need for reducing illiteracy (UNESCO, 2001:27), which has placed education for all as a strategy for poverty eradication.

Parents are the pillars of family literacy and provide leadership to the entire family. A family is the natural and fundamental group unit of society. In Uganda (2003), a family is defined as a husband and wife and their children, if any. It is the duty of the parents (spouses) to maintain their family, including offering opportunity to the children to have access to education. It was found that parents teach their children regarding culture, discipline, and how to settle disputes in society. Furthermore, parents contribute to exposing their children to some home economics activities like cooking, washing, and engaging in crafts (like weaving baskets), which build their skills in co-curricular activities. In addition, parents participate in domestic activities with children such as storytelling - including stories that deal with superstition - , and imparting

proverbs, and this contributes to the development of family literacy. Here, parents are engaged in reading and playing together with their children, telling stories, dancing and singing together. Some parents are involved in guiding children in culture and sex education. For instance, participation of parents in sharing life experiences that relate to children studies (for example how people are dying of AIDS) helps children to appreciate what they learn in class. Furthermore, some parents and children have been participating together in family visits, attending community meetings, attending to the sick in hospitals, in burial activities, and wedding parties and this has helped children understand what they learn in class. Parents have also been instrumental in teaching their children table manners while eating together. In many cases, families observe Sundays, Christmas days, Easter days, birthdays of children and parents, and other occasions on which they organise parties, picnics and outings. The majority of the families pay visits to their friends together with their children. On such occasions, parents interact with their children and take advantage of showing practically how they want their children to behave and be in future. In fact, the Children Statute 1996 provides (Uganda, 1996, Section 7) puts the duty and responsibility of looking after a child on the parents. The majority of respondents indicated that children's environment helps them to socialise and learn how to communicate, to develop language and empowers the children to fit into the socio-economic environment.

Participation by other family members and the community facilitates information literacy within the family. For instance, in most families, elder children teach their siblings skills such as swimming, reading, writing, and reading and in many cases get involved in taking them on outings. In such outings, parents identify the difficulties which children encounter and that require help in the development of family literacy. Relatives and cultural leaders help to teach cultural practices and customs among the children. They give advice based on their past experiences, and the expectations of a child as he/she grows. Through such interactions, children come to understand their culture, decent ways of dressing, ways of showing respect, and issues related to privacy, which help in the development of family literacy. Furthermore, interaction with the community enables children to participate in activities that create opportunities for children to learn together with their parents. Strong community participation was noted in religious involvements. For instance, in many of the families, children and parents attend church services, group fellowships, Bible studies, and read Bibles together and participate in church choirs with their children. As noted earlier, Mood (1998:6), Kigongo (1994:22) and McKnight (1985:10) demonstrate the need for respecting God through reading the Bible. According to the study, in the majority of families, children and parents say their prayers

together before going to bed. This is not a surprise in Uganda as its motto is “For God and my Country”. Fearing God has contributed to the spiritual growth of many families and instils in children some good norms and practices, such as respecting parents, and loving neighbours and friends to avoid conflict. This is why Nkawake (2003:91) believes that “there is every reason why parents should play a role in enhancing family literacy”. In fact, the 1995 Constitution of the Republic of Uganda states: “Every effort shall be made to integrate all peoples of Uganda while at the same time recognizing the existence of their ethnic, religious, ideological, political, and cultural diversity” (Uganda, 1995, Article 1).

Consulting books and reading together by parents and children have helped in the development of information literacy skills in the family. Some of these cases are exhibited in the use of newspapers, especially youth-targeted ones such as *Straight Talk*. This has helped to bridge the communication gap between children and parents. Some newspapers incorporate education and children pullout sections on specific days. For example, *Children’s Vision*, which is inserted into the Saturday edition of the *New Vision*, enables children to learn about various issues like dressing, drawing, design, puzzles, pen-friends, happy birthday messages, etc. In a few instances, parents buy educational books for reference (like books on health), newspapers and magazines for children to be read at home. Some of the parents listen to radio and watch TV together with their children. For instance radio and television (TV) stations have special programmes for children. Examples of such programmes are the Children’s Club and *Emiti Emito* programmes on Wavamuno Broadcasting Services (WBS) TV, which increases access to learning among the children. Through such attempts, some educational programmes on TV concerning how children are being tortured, kidnapped, defiled, etc as learning lessons for children enable children to learn new things. In other instances, families visit places like wildlife education centres, recreational centres, cultural centres, museums and others. In other cases, families play indoor games, such as scrabble, playing cards, snakes-and-ladders and chess together with their children. Indeed, this builds on the co-curricular activities incorporated in the school curricula. Article 34 ((2) of the Uganda Constitution, Article 28 (1) of the Convention on the Rights of the Child, the African Charter on the Rights and Welfare of the Child, and Section 6 (1) (a|) of the Children Statute all protect the right of children to education (FHRI, 2000:63).

It is indeed true that there have been attempts at applying the family and social life approach, the parent, school and teacher relationship, and libraries and readership development in the Ugandan context. Most of these attempts have been made at the individual family level and no programme

is in place to integrate the information literacy skills. There are a number of challenges that limit such efforts.

Challenges to Family Literacy

Interviews and documentary reviews indicated poverty as one of the most common challenges affecting the majority of the families in the country. According to the respondents, some families are too poor to afford school fees, to provide essential needs like scholastic materials, meals and others requirements to their children, and this has forced children to move from school to school and in some cases to dropout. According to them, children in some families have to work in the evening to raise money for school fees. This assertion is clearly confirmed by UNICEF (2007) which states that in Uganda, there are 700,000 children aged 6-14 who have never been to school and 2.7 million children who are working because of poverty, and that 62 percent of the population of Ugandans living in poverty are children. With a population of 24.7 million, of whom 12.1 million are male and 12.6 million female (Uganda Bureau of Statistics, 2003:1), Uganda has a high rate of illiteracy. This situation is more common as a result of the HIV/AIDS scourge that seen the number of orphans increase. The 2002 Ugandan population census indicated that 15 percent of the children were orphans (UNICEF, 2005:37), and about 3.2 percent had lost both parents, 2.2. Percent had lost their mothers and 8.4 had lost their fathers, while 15 percent of the children were engaged in child labour (Uganda Bureau of Statistics, 2003:15). This situation is happening despite the introduction of Universal Primary Education (UPE) in 1997. However, the Government of Uganda developed a number of programmes, including the Poverty Eradication Action Plan (PEAP), with the aim of reducing mass poverty by the year 2017, to ensure that ‘individuals who are intellectually developed, skilled, productive, purposeful in life, prudent, earn meaningful incomes, save and invest, are well provided for and enjoy socio-economic security and reasonable standards of living. Skills for families are required to ensure better health, nutrition and family life, and the capacity for continued life long learning.

To meet the above family life demands, parents have tended to be too busy with their businesses and jobs to contribute to attend to the children learning needs. This has resulted in lack of time for and contact with children on the part of parents. For instance, the business and work commitments of both men and women, and of parents working abroad or outside families affect the children’s social contact with their parents and this limits their levels of family literacy. For instance, the pressure of work on parents means that they return home tired, and thus do not have the energy to pay attention to their children’s educational needs. It is sometimes difficult

for parents' job commitments to allow them to fit into family activities. Consequently, children are more used to teachers and thus some do not trust what their parents tell them. In many cases, parents believe that it is the duty of the teacher to teach the children; after all they pay the school fees, so they should not be burdened with children's homework. Lack of interaction between children and parents is more pronounced in cases where the children attend boarding schools or stay in hostels. Although there is evidence that such students perform well, they miss the social contact of the parents and this affects their capacity for life long learning. Those parents who have attempted to spare time for their children noted that some children dodge them, claiming that they are tired or sick, which limits the opportunities for parents to participate in reading and learning together with their children. Indeed, some children may be sickly and others slow learners, while others may be just shy. This affects the rate at which the parents participate in reading and learning with them.

Parents too have contributed to the lack of interaction with their children. For instance, drunkenness and the associated late coming home have affected the development of literacy levels in families. It was noted that some parents are rude to their children, which has affected their learning abilities. It was further noted that in families where both parents drink, they find it difficult to get any free time to share and learn together with their children as a family. Demographic changes, changes in family life, divorce and the subsequent legal battles for the children, single parenting, and working mothers have limited child nurturing and thus family literacy.

The communication gap between parents and children has significantly affected family literacy. For instance, there is evidence of lack of openness among parents regarding certain issues (such as their AIDS/HIV status) and this limits children's learning. It was noted that some children obtained information about their parents through peers, and that this affected them psychologically. The generation gap too has inhibited family literacy. For instance, some parents are frightened of the possibility that their children might laugh at them in case they fail to answer some questions with which the children want help. Furthermore, the children's choice of TV channels and programmes differs from those of their parents. The children's love for pornographic movies and other adult movies and newspaper sections affects the parent's participation in learning with their children. The differences in the nature of the language used by family members affect the role of parents in reading and learning together with their children. Whereas teaching in most Ugandan schools is done in English, the majority of homes

communicate using the mother tongue. This makes it difficult for the parents to understand and translate the child's work from English. A different approach that ensures that children are able to understand parents better is required.

Non-availability of libraries and an environment for readership development has inhibited family literacy. For instance, some families live in single rooms and others hardly have any space to sit down together and learn as a family, which is one reason why some parents return home late at night. In other homes, there is lack of reading materials. The only books that could be available are the class textbook given to the children. Some families have no access to and lack the capacity to buy reading materials, such as newspapers and magazines. Although there are chances of using the school libraries in the area, there is no strategy that ensures that children use such books at home. Besides, there is no motivation for using such facilities. Although a number of development partners have attempted to address the family literacy programmes, information access skills to sustain such an effort has been limited. Some of the family literacy programmes in Uganda include UPLIFT-Uganda, Complimentary Opportunity for Primary Education (COPE), Alternative Basic Education for Karamoja (ABEK), Basic Education for Urban Areas (BEUPA), Family Basic Education (FABE) and Literacy Adult Basic Education (LABE). These programmes, however, have limited information access strategies to ensure sustainable lifelong learning. To ensure that parents utilise schools and participate together with their children, the Uganda Library Association, the Reading Association of Uganda and the National Library of Uganda and National Book Trust of Uganda have participated in organising and hosting reading camps in the country. At such events, the parents are invited to participate together with their children in reading competitions, writing, storytelling and quizzes (Ukech, 2004:21). The children get to learn and reflect on their culture and traditional values (Gafabuse, 2004:1). For instance, the Masaka Kitabiro Community Library in Masaka district targets various stakeholders, including churches, community groups and families, to ensure that parents get to know about what their children like to read, and that they should be encouraged to make use of the library (Batambuze, 2002:12). This is why UNESCO (1999) adopted the School Library Manifesto that all members of the school community, regardless of age, race, gender, religion, nationality, language, profession and social status. In addition, the Government of Uganda, through the Ministry of Education and Sports, is developing a School Library Development Policy to implement the principles of this manifesto. A strategy to integrate such developments is required in families.

Synthesis, Summary, Conclusions and Implications

Synthesis

This paper attempts to explain the conditions for building family literacy skills among children and parents. Parents are the pillars of family literacy and provide leadership to the entire family literacy programme. This requires a positive and supportive environment for parents to gain skills and the confidence needed for a sustainable family literacy programme. There are a number of family literacy programmes and efforts that have been undertaken, ranging from constitutional provisions, government policies, and international declarations to development partners' initiatives. Many of these programmes attempt to help and strengthen families in relation to issues such as poverty eradication, conflict resolution, education and training, and the protection of children, and they all have a link with family literacy. Participation, partnerships and collaboration between various community networks, including family members, schools, religious institutions, development partners, and central and local governments are therefore crucial in enhancing family literacy. The integration of family literacy agendas into such networks and stakeholders' programmes will ensure that information literacy skills are imparted to families for lifelong learning.

However, the challenge of poverty in most families limits the acquisition of such skills. This has inhibited interaction between children and parents, which has increased the communication gap between parents and their children, and this has significantly affected family literacy. The non-existence of libraries and right environment for readership development in families and communities too has hampered the acquisition of such skills. This is why a strategy to integrate the information literacy skills into the various family literacy programmes for sustainable lifelong learning is required.

This paper provided an impressionistic account on approaches for building family literacy skills among parents and children in developing countries. The paper was based on premises that information literacy skills enable individuals to recognize when information is needed and the capacity to locate, evaluate, and effectively use that information. From literature, it was noted that there three many approaches that have been adopted and used globally in an effort to promote the development of family literacy, including, the family and social life, home-school relationships, the use of libraries and readership development. Although the available approaches showed interaction between the children and parents, they lacked strategies for integrating information literacy skills. A descriptive, case study research design conducted in

Kampala District in Uganda was therefore adopted to assess the approaches of building family literacy skills among parents and children and establish the challenges that limit such in Uganda. It is indeed true that there have been attempts for applying the family and social life approach, the parent, school and teacher relationship, and libraries and readership development in Uganda in the development of family literacy. However, most of these attempts do not integrate the information literacy skills. The level of poverty in most families, inadequate time for interaction and communication gap between parents and children and absence of libraries and a conducive environment for readership development has contributed to such.

Conclusion

There is hardly any information skills programme in Uganda that enables the building of family literacy. Lack of libraries and an environment conducive to readership development have inhibited the development of family literacy. In order to integrate information skills in the development of family literacy, parents are obliged to assume a leading role in developing and promoting the child's moral, social and educational needs. Therefore, developing a Family Information Literacy Programme (FILP) to ensure that a child builds abilities of exploiting the available opportunities to access information for lifelong learning is required in developing countries.

Implications

The FILP programme recognises the role of various stakeholders, including family members, religious institutions, communities, libraries, non-governmental organisations and the government, among others. Family members should establish family clubs/groups for small groups of parents and children to promote book-sharing strategies. In such endeavours, a mixed-age grouping should be encouraged to enable older children to offer support to younger ones who can function as 'master players'. Such groups could visit learning centres like the Wildlife Education Centre, children's parks, the museums, fellowships, etc to help children learn with the involvement of parents. In such clubs, members would be able to borrow books and read together, and parents would not only encourage but monitor the children's networks and groups. Such clubs/groups would entail an outreach programme that promotes the use of books for infants and young children to promote the love for reading amongst them. In turn, families or homes could endeavour to establish a FILP corner or box to make sure the children have a place to keep books and reading materials. A FILP box can work as a mobile library from which books can be borrowed by several families. Projects or programmes for best readers, storytellers,

writers, etc could be established. Under such projects, parents would establish incentives (like giving prizes) to provide motivation to children. Under FILP families and communities could have defined roles, terms of reference and activities. For FILP to succeed, the following conditions would have to be met:

- Schools and community/public libraries should integrate the FILP programme to ensure sustainable reading and learning among families so that they develop information literacy skills.
- The government and the communities should encourage and promote the establishment of libraries and community resource centres. Communities should establish and encourage information services such as computer use and the Internet to enable families to utilise them. The existing community centres would facilitate the coordination, mobilisation and sensitisation of family members within the community.
- Development partners like professional societies, NGOs, the government, religious institutions, schools, and local councils should introduce, encourage and integrate FILP programmes and scholarships to ensure interaction between parents and children within those programmes. Such development partners should promote the use of libraries, from which parents and children can borrow books to enable them to read at home. They should also integrate promotional activities, including discussions, exhibitions and demonstrations of FILP, to ensure that parents and children appreciate the need for such a programme.

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Cooperative Learning Strategies Pilot for Northern Territory Classrooms

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Abstract

Cooperative learning strategies are an important tool in working towards equipping students with the necessary skills to be valuable participants not only within educational settings but also within the community and employment sectors. This paper examines the use of cooperative learning strategies within a primary school setting over a three-month period by four teachers who utilise these strategies within different contexts. The research is based upon the process of Action Research. The findings examine the emerging relationships as a result of the implementation of cooperative learning strategies, social skills requirements necessary for the successful implementation of cooperative learning, and the flexibility inherent with the knowledge associated with utilising cooperative learning strategies.

Students at all levels need to be able to think critically about issues and then to be able to participate in effective decision-making processes. Cooperative learning strategies are an effective method of communicating this process. Not only do these formal cooperative strategies provide the learner with an opportunity to be involved in the planning of their learning experiences but they also provide students with the framework and structure to make decisions and accept their consequences.

'The knowledge of the cooperative learning strategies changed the way that I teach. I now feel confident planning my lessons based on students working together because by using the strategies the students became accountable for their contributions to the group. When I had tried to use group work before it didn't always work because sometimes some groups would stay on task but most of the time they would be talking about what happened on the weekend. The main difference for me between using formal cooperative learning strategies and informal group work was that when I used the informal methods it was difficult for me as the teacher to ensure that the outcomes that I had intended were actually achieved by all of the students. The formal cooperative learning strategies provided a clear and defined structure for the students to complete an activity within and provided me with a way to check that desired outcomes were being met, the students were accountable for their work.'

Personal communication; participating teacher

Introduction

The teachers' comment above made by a participant in a study of cooperative learning strategies reflect those within Australian society., James Watson, Nobel Prize winner (co-discoverer of the double helix) makes the point that 'nothing new that is really interesting comes without collaboration' (in Kim-Eng Lee 1999:42). Our society is increasingly demanding that people have the ability to work together in an effective way and within diverse and demanding situations. Participation in education and training is considered vital for a flexible and responsive workforce (OECD 2001) in a Western society characterized by an emphasis on a learning society, a knowledge economy and life long learning (Kearns 1999, OECD 2000) This is reflected every week in the local and national papers employment sections, within employment selection criteria and within Curriculum Framework documents nationwide.

Learning is a social process embedded in relationships that need to be recognised in pedagogy and teachers' professional learning. Wenger (1998:4) described learning as based on the idea that people are social beings, knowledge is generated and interpreted in relation to activities and enterprises and the meaning placed in those activities. Learning and knowing processes are understood as a function of the interconnected elements of social participation. Learning, thinking and knowledge structures are generated by the activity that people engage in and their relationships within the systems of a socially constructed world. Bennett (2004) argued that the process of achieving cooperative and collaborative skills is not being reflected in many traditional education settings where students are expected to compete against one another in an educational system with an individualistic focus.

This paper will initially consider the notion of cooperative learning as it provides background information for the study. Johnson and Johnson (1998:1) note that cooperative learning was virtually unknown 30 years ago but is now a 'standard educational practice in almost every elementary and secondary school and many colleges and universities in the United States, Canada and a variety of other countries'. Cooperative learning exists when student's work together to accomplish shared learning goals (Johnson and Johnson 1999). Formal cooperative learning methods need to be carefully structured by the teacher to achieve the two features of individual accountability and positive interdependence. If this careful structuring does not occur Bennett (2001:141) explains that, 'group work that is not structured thoughtfully is one of the least effective approaches in the teaching and learning process'.

Through a research pilot study, based on the Bennett's work exploring the concept of cooperative learning, teachers explored the relevance of cooperative learning strategies for Northern Territory classrooms. This paper describes the research, the theoretical framework that underpins the use of cooperative learning in more detail and outlines the methodology of action research utilised in this pilot study. This professional learning study offered an opportunity to consider the implications of implementing cooperative learning strategies through critical reflection with teachers. Three themes emerged as a result of this action research process: - the emergence of a number of significant relationships, the need for social skills and the flexibility associated with the use of cooperative learning strategies.

In the first theme, through the use of cooperative learning strategies, significant relationships began to develop. Relationships developed between teachers and the students, between the students themselves and between participants in the study group. The second theme noted that the cooperative learning strategies need to be utilised in conjunction with the active and committed communication and modelling of social skills. Finally, and unexpectedly, the third theme to emerge from the study demonstrated the ease with which teachers, when equipped with the knowledge associated with formal cooperative learning strategies, could transfer this knowledge to facilitate effective cooperative learning which reflected their individual teaching styles and diverse and complex learning environments.

Cooperative Learning

The notion of cooperative learning strategies has been popularised in Australia based on the results gained through extensive research conducted particularly in the United States of America and Canada by researchers such as brothers David and Roger Johnson, Spencer Kagan and Barrie Bennett. Cooperative learning is more than simply putting students into groups. Cooperative learning is about 'structuring groups of students to work cooperatively' (Johnson and Johnson 1994:1). Formal cooperative learning methods share two common features; positive interdependence and individual accountability (Kim-Eng Lee 1999:43). Positive interdependence ensures that each student must contribute if the group is to reach its goal. When students know that their performance depends on their team-mates, they make sure their team-mates stay on task. Thus, as research suggested by Johnson, Johnson and Stanne (2000) and by Kagan (1994: 1:3), students are likely to spend more time on academic tasks in cooperative classrooms than they do in traditional classrooms. In this way, the formal

cooperative learning methods differ from informal collaborative groups. The informal groups often do not ensure that the contribution of each member is necessary for success (Kagan 1994: 1:4).

The second feature of formal cooperative learning methods is individual accountability which ensures that every member of the group is held responsible to demonstrate that they have accomplished the learning (Bennett 1991:33). There are other elements of cooperative learning methods that Bennett (1991:33) and Johnson and Johnson (2000) suggest that teachers need to structure for: face to face interaction among group members, actively teaching and motivating students to use social skills, and group processing where groups reflect on their goals and how the group is functioning. The results of such research into the effective use of cooperative learning strategies were used as the basis for a study into their effectiveness within a Northern Territory classroom.

The Study

Background

To examine this notion of cooperative learning, a three-month pilot study entitled Cooperative Learning Strategies Pilot for Northern Territory Classrooms was conducted in a typical small primary school setting. The school was typical as it represented a cross section of students from various socio-economic and cultural backgrounds. The school largely reflected the local community, an urban primary school in a multicultural community with a significant proportion of Indigenous community members. The group of participants in the study represented a diverse range of experience, ideas, background and age. The study group of four teachers included a beginning teacher, a special needs educator and two experienced teachers. Teachers' participation was voluntary.

This study investigated the notion that cooperative learning strategies when implemented using the Northern Territory Curriculum Framework Documents (2002) assist teachers in working towards achieving one of the EsseNTial Learnings, the Collaborative Learner. The Collaborative Learner is someone who: -

- Listens attentively and considers the contribution and viewpoints of others when sharing own ideas and opinions.
- Uses constructive strategies to resolve conflicts.

- Fulfils their responsibilities as a group member and actively supports other members.
- Uses appropriate language that is sensitive to audience and culture within a range of contexts.

(NT Curriculum Framework 2002)

The Northern Territory Curriculum Framework documents establish in the *EsseNTial Learning* and focuses on students' outcomes, in this context students can be collaborative learners as it applies to improved outcomes. For the collaborative learner outcome to be achieved it is necessary that teachers be given the opportunity to explore in an informed way the tools of cooperative learning strategies. This is because not only do these strategies follow the objectives of the Northern Territory Curriculum Framework but cooperative learning strategies are also founded on extensive research (Kagan 1994:31). The consistency of the results and the diversity of the cooperative learning methods provide strong validation for its effectiveness (Johnson and Johnson 1998).

Methodology

This project utilised an action research methodology enabling participants to be essentially involved in the learning process and investigate the needs of teachers to implement and evaluate the use of cooperative learning strategies in the classroom. Action research can be described as 'a form of self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or education practices, their understanding of these practices and the situation in which the practices are carried out' (Kemmis cited in Wals 1996:302). 'Action research is a flexible spiral process which allows action (change, improvement) and research (understanding, knowledge) to be achieved at the same time' (Dick 2002:2). 'The understanding (that is associated with action research) allows more informed change and at the same time is informed by that change' (Dick 2002:2). The responsiveness and engaged nature of action research allowed it to be used within this study to develop notions from the data as the process evolved over a relatively short period. This responsiveness of action research also generates both action and research outcomes.

In the case of this pilot study both outcomes were regarded as being important, namely, action taken on behalf of the participants to facilitate effective cooperative learning within their classrooms and research into how this action can be achieved across a broad spectrum of

teachers within the context of Northern Territory classrooms. This definition of action research is based on the methodology outlined by Checkland (1981) and also encompasses the critical action research approach taken by Carr and Kemmis (1986). 'Within all of these definitions there are four basic themes: empowerment of participants; collaboration through participation; acquisition of knowledge; and social change' (Masters 1995:3). The process of action research could and should be ongoing but even within this short pilot study a range of valuable outcomes were noted which could be used as the basis for a bigger project.

This action research process was initiated with the study group through a workshop conducted by an action research consultant. The process was developed by facilitating a series of workshops based on using specific cooperative learning strategies in the classroom. After the initial workshops outlining the action research process and a brief introduction to cooperative learning strategies and the underlying theories, the group then chose to trial the same strategy every two-week period over one term and meet to reflect on their implementation and the outcomes.

The study group met periodically throughout the 10 week study period to reflect on experiences during the previous research cycle and to discuss and select the next course of action. Kemmis (1988) outlines this cyclic nature as follows, plan – act – observe – reflect and then repeat the process. This allows the researchers to involve the participants directly in the research process. Through this cyclic process the effectiveness of cooperative learning strategies in achieving specific learning outcomes as outlined in the Northern Territory Curriculum Framework was then evaluated and critically reflected upon.

Data collection was conducted using three sources. The initial source involved data being collected from the fortnightly meeting via the use of digitally recording the conversations that took place. These recordings were then analysed by the primary researcher. The teachers involved were also asked to keep journals outlining their reflections and processes involved to be able to successfully implement and evaluate the use of these cooperative learning strategies in Northern Territory classrooms. The participants would use these journal entries and other material, such as examples of work conducted in their classes to participate in the fortnightly discussions. In this way, the project, while brief in time, documented emerging trends, which are discussed below. The research team also collected their own reflections on the process and outcomes

Results

Through the use of action research the end result began to emerge from the data being collected and some limited conclusions could begin to be drawn. A number of themes emerged as a result of this action research process. These were:

- Emerging relationships
- Social skills
- Flexibility

One of the unexpected areas of interest that was demonstrated through the emergence of these themes related to the ease with which the participants were able to adapt the strategies and ideas to effectively reflect their own personal teaching styles and teaching environment.

Emerging Relationships

The following vignette demonstrates a number of points surrounding the issue of emerging relationships. This example illustrates effectively the development of both conflict resolution skills and the ability to value and involve everyone's opinion as a result of utilising cooperative learning strategies.

'The discussion after (using a cooperative learning strategy) was just brilliant, easily a 40 minute discussion after it, they had a great time with it, everyone had fun and everyone was involved and nobody took control, easily a 45 minute lesson, I am going to use it again for sure.'

'What about the bossy students who you were having trouble with?' – researcher

'No, no they were really good, I said everyone had to have a pen and they could all go for it'

'Any negatives, (associated with using the cooperative learning strategies)?' – researcher

'I don't think so, everyone was involved, and the only negative was that I had to explain it a couple of times.'

These reflections were made at the end of the study. The teacher had recently used a particular cooperative learning strategy for the first time within their classroom. At the beginning of the investigation this participant had encountered problems when trying to implement cooperative

learning strategies due to some dominant class member personalities. The teacher experienced success in achieving effective cooperative learning within the classroom within a relatively short period of time and was very positive about continuing the process of facilitating cooperative learning across educational settings and about sharing with others the successes that had been achieved.

As a result of employing cooperative learning strategies and analysing the outcomes of the action learning project, a number of significant relationships emerged. These relationships were evidenced in the following three areas.

1. Between students
2. Between teachers and students
3. Between participants in the study group.

Between teachers

The three teachers in the study group consistently reported that, as a result of using the cooperative learning strategies, students were being equipped with strategies to deal with conflict and that the students began to appreciate and value the opinions of all members of the group. *'The use of the (cooperative learning) strategies relaxed me, I felt that I didn't have to solve all of the problems all of the time.'* This accords with Bennett's (2001) observation that formal cooperative learning strategies allow for teachers to no longer be the sole source of information and students are no longer passive recipients.

Teachers reported that as part of the implementation of cooperative learning strategies it was important to actively teach, based on student input, effective and appropriate ways to deal with conflict when working with others. This had a flow-on effect into other areas. As a teacher reported, *'one of the things I found really helpful as we worked through things, whenever a dispute came up with something, I could say you go and work it out yourselves and they were much better and everyone could. Very quickly they could come up with a solution. A lot had to do with all of the talking we did before when we started with cooperative learning strategies.'*

Between students

Another teacher reflected on an incident during lunch between a number of students who were asking her assistance to deal with a dispute. *'I reminded them about their strategies from their cooperative learning activities in class and they then were able to settle the dispute without my help. Dealing with these*

conflicts every day can be really time consuming and frustrating especially when I think of everything else that I need to be doing'. Conflict resolution is a very valuable skill for students to acquire to facilitate effective working with others throughout their lives both in professional and personal arenas.

Between participants in the study group.

The third area of interest, in terms of relationship development, involved the participants in the study group themselves. *'We ask a lot of the kids, we want them to work together cooperatively but how many of us do and we can only begin to imagine the homes that some of these kids come from. It is hard because cooperation is not reflected in the way we often live and work'. The process of action research contributed to the emergence of significant and meaningful relationships within the study group. They themselves became more cooperative and collaborative as a working team. The processes associated with action research enabled communication channels to be opened and strengthened between the participant group. At the end of the study there was a strong sense of the positives associated with working cooperatively and further desire to involve other members of the school community.*

Social Skills

Through the study the emergence of strong relationships between the students demonstrated the strong connection between working cooperatively and the need to actively teach the social skills required for this collaboration to occur.

'I needed to go over the strategies that the class had come up with concerning listening and taking turn. When I don't, they forget and I have found that I need to reinforce certain social skills needed for the groups to work well. The strategies are good but they don't work by themselves. As the teacher I need to know the strategies but I also need to teach social skills regularly.'

'I feel the more we do cooperative groups the better children are learning to work together and respect each others ideas and opinions. The strategies also give me a chance to observe children and to note any skills, particularly social skills that need improving.'

'Once we went through them (conflict resolution strategies) the students began using them and this helped, there was less arguing.'

'I should have gone through the rules about listening and taking turns.'

The participants reported that cooperative learning strategies in isolation are not enough to achieve the outcomes of developing a collaborative learner who is able to listen and consider the viewpoints of others, possesses conflict resolution skills, participates as a group member and is able to use appropriate language (NT Curriculum Framework 2002). Students need to be actively and explicitly taught often and in a variety of ways, to cater for all types of learners, the particular social skills needed to be able to work with others. Assumption of these skills was very significant in the failure of the strategies. One final point in relation to the establishment of the cooperative learning strategies and the associated social skills is worth noting; that they do take time to establish but, as one participant pointed out *'they take time to establish and then they are a time saver.'*

The social implications involved in engaging the strategies in the classroom link directly to the EsseNTial Learnings as outlined in the Curriculum Framework documents (2002). For students, across the age spectrum of year 2 to year 7, to be able to work cooperatively they need to be actively taught and modelled the social skills and strategies required to be able to effectively participate in group situations. The assumption that students were able to utilise these social skills and strategies, and the subsequent evidence that these skills were not always at the necessary standard to effectively participate in cooperative learning activities, was a recurring theme experienced by participants in the study group.

Flexibility

The final vignette details one of the unexpected findings of this study, which related to the ease with which the participants were able to adapt the strategies to effectively reflect their own personal teaching styles and teaching environment.

'Once I knew the strategies I could use them in situations that I would never have thought would work as a cooperative learning activity. It just takes practice, confidence and a willingness to think outside of the way that we might normally do things. When it goes right the students end up needing me less, they become responsible for their own behaviour and learning, it doesn't happen all the time but when it does, it makes me remember why I became a teacher in the first place.'

All of the teachers took the strategies into very different teaching environments and were able to all achieve success in working towards achieving the collaborative learner outcomes as established in the Northern Territory Curriculum Framework (2002). *'Not once was there an*

argument, if there was I said look at the strategies and work it out yourselves. All participants responded that they would definitely use the strategies in the future and that they would encourage others to try them – *‘next year I am going to introduce them (cooperative learning strategies) at the beginning of the year and then I could write my programs for the year because I could see the dynamics of the students very early on.’*

The teachers were provided with four cooperative learning strategies and a brief discussion on the theories that underlie the strategies. Armed with this knowledge they were able to adapt the strategies to take into account physical restrictions such as limited space and difficult to move desk arrangements, broad ranges of abilities, cultural sensitivities, limited numbers of students and significant differences in teaching experience and teaching philosophies. *‘I could modify stuff not made for cooperative learning strategies once I knew the strategies.’* This reflects Johnson and Johnson (1998:24) who made the point that ‘cooperative learning can be used with some confidence at every grade level, in every subject area, and with any task’.

Implications

The three elements of relationship development, need for social skills, and flexibility that emerged quickly during this pilot study provide strong clues for the broader implications of the study. Many classrooms today do reflect opportunities for students to work with others via group work but have difficulty in achieving cooperative learning where students are able to utilise the social skills necessary for everyone to be involved and where every contribution is valued. During this study it was clear that three important implications emerged for teachers. Firstly, that the use of cooperative learning strategies does assist in developing collaborative learner outcomes as outlined in the NT Curriculum Frameworks Documents (2002). Secondly, that cooperative learning strategies can be adapted to a variety of educational settings. Finally, that cooperative learning strategies provide a structured framework for both teachers and students to work through the process of cooperative learning.

In the first instance, data gathered from this study strongly reflected the ability of formal cooperative learning strategies to facilitate the outcome of the collaborative learner as outlined in the NT Curriculum Frameworks Documents (2002). This is because the common theory underlying cooperative learning strategies as established by Bennett (2001), Johnson and Johnson (2004), and Kagan (1994) suggest that group processes be carefully designed to promote positive interdependence and individual accountability which is reflected in the desired qualities of the

collaborative learner. The generation of positive interdependence is achieved when all members of a group feel connected to each other in the accomplishment of a common goal and individual accountability is accomplished by being able to hold every member of the group responsible to demonstrate the desired learning outcomes. (which Wenger 1998 describes as a learning community) *‘For a change, during group work, I could see who was doing what and I had time to walk around and observe all of the groups. This helped me to be able to determine and reflect upon desired outcomes for all students in the class’.*

The evidence from the data collected in this study suggests that the use of cooperative learning strategies does assist teachers significantly in achieving the outcomes associated with the collaborative learner. Evidence associated with the emergence of relationships as a result of using cooperative learning strategies between students and between students and teachers clearly supports collaborative learner outcomes. Participants frequently reported students having an increased ability to use conflict resolution strategies in an increasing and varied array of situation, not just when participating in cooperative learning activities. Participants in the study frequently reported that, as a result of utilising the strategies, the ease with which they could involve all students in a class was much greater than otherwise. A further positive associated with the study was the flexibility that knowledge of the cooperative learning strategies provided teachers with in programming to achieve the specific collaborative learner outcomes.

Secondly, the study has provided evidence through the relationships that emerged that the use of cooperative learning strategies can indeed contribute to the development of effective cooperative learning within a variety of educational contexts. Participants in the study reflected the view that cooperative learning means so much more than allocating students into groups, and then deciding upon roles such as leader, recorder, reporter and participant. The common complaint from students and teachers alike, based on such an organization, is that it is very difficult for everyone to be involved (Bennett 1991). The same people tend to dominate certain roles and the same people tend to always be carried along in the ‘free-rider effect’ inherent in such group work situation (Bennett 1991). This information combined with knowledge of the cooperative learning strategies resulted in the participants in this study being able to experience success in achieving collaborative learner outcomes in a variety of educational settings.

Thirdly, some broader educational implications began to emerge as a result of the findings during this study. The formal cooperative learning strategies provide both students and teachers with a

structured and accountable framework to complete activities within and that cooperative learning is a social process. The cooperative learning strategies provide both teachers and students with a framework to work within to experience the different social processes that occur as a result of being involved in cooperative learning. This study found that working cooperatively involved more than the implementation of the formal cooperative strategies. These strategies provided the necessary flexible structured framework for both the students and the teachers to work within but the success of the framework depended upon the level of social skills that the participants were able to utilise. The social processes involved in cooperative work played a significant role in the success in achieving the outcomes of cooperative learning strategies of positive interdependence and individual accountability.

Conclusion

The purpose of this investigation was as a pilot study for a larger project to examine, through the use of action research, whether or not cooperative learning strategies when implemented using the Northern Territory Curriculum Framework Documents (2002) assist teachers in working towards achieving one of the EsseNTial Learnings, the Collaborative Learner. Through the course of this study three issues concerning the use of cooperative learning strategies and how their effectiveness in terms of achieving the outcomes outlined in the Northern Territory Curriculum Framework became very clear. These issues related to the:

- Emergence of relationships
- Need for social skills
- Flexibility inherent in the strategies

From the data that emerged from this three-month pilot study into the use of cooperative learning strategies some broader educational implications began to appear. For example, that formal cooperative learning strategies provide both students and teachers with a structured and accountable framework to complete activities within and that ‘cooperative learning is process-driven, that is, those involved engage in a social process and have to pay attention to that process in order for them to achieve their desired end point’ (McConnell 1994:15). This is in line with much of the theory of social interdependence which is said to exist when ‘individuals share common goals and each individuals’ outcomes are affected by the actions of the others’

(Johnson and Johnson 1998:2), and understands the role of the students' community participation (Wenger 1998:4) in learning engagement.

This study illustrated that formal cooperative learning methods have the ability to provide teachers and students with the flexible structured frameworks to facilitate effective group work. This framework allows for social processes to be experienced and for the process to be successful in achieving collaborative learner outcomes then participants need to be equipped with appropriate social skills. Through the use of cooperative learning strategies teachers are able to build the capacity of students to be able to work with others and to value every contribution, to think for themselves critically about different issues and to use appropriate social skills. Recognising the importance of managing and understanding relationships in education underpins the use of effective learning strategies within this project and implies understanding relationships need to be central rather than incidental to education and learning.

All of these skills and processes are necessary to enable and empower students to be able to develop and move effectively through pathways from school to training to skilled jobs. The implications based on these findings that became apparent within the relatively short period of the pilot study are significant for educators. Therefore, this project justifies the need for further study into this area. Such a study would be conducted over a longer period of time and across a broader range of educational settings. This broader range of educational settings, representative and inclusive of educational contexts within the Northern Territory would ensure a set of sound principles of practice in terms of cooperative learning strategies.

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Empowering Teachers in School and University Partnerships

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Abstract

This paper describes a partnership between a university and a cluster of government and non-government schools. Its purpose was to engage early career scientists (tertiary students) to work in the science classroom as peer tutors/mentors with the aim of improving students' attitudes towards science. Using a self-study approach (Loughran, 2004) the author explored the issues of a collaborative process. Data was sourced and triangulated from teachers and administrators, the early career scientists and students, which revealed that successful partnership was dependent on the empowerment of teachers within their organisational culture.

Introduction

To encourage school and university partnerships the Australian government has released a range of initiatives in science education including the Australian School Innovation in Science, Technology and Mathematics projects, ASISTM (2004) and the Scientist in Schools program (Peacock, 2007). Intrinsic to these specific purpose grants is an expectation that schools and universities can readily work together, perhaps due to a generalised but incorrect perception that all educators at all levels share a common cultural paradigm (Dallmer, 2004; Kinsler, & Gamble, 2001).

In reality however, schools and universities are very different kinds of organisations with cultures so diverse that professionals working within them have difficulty understanding one another's needs and values (Sirotnik, & Goodlad, 1988). Collaboration between universities and schools is a complex and challenging domain educators within each of these establishments are deeply influenced by their respective overarching mission which influence their career direction. The mission of the university is to teach, research and build community partnerships (Maurrasse, 2001). The mission of the school is to educate the children within the community. In a partnership these differences must be recognised and accommodated. Even more so when the

challenge requires a triad partnership involving a university, a government school and non-government school as is presented in this paper. As the demand for effective partnership grows, it is essential to identify the underlying principles that facilitate a partnership between institutions that are similar in intent but dissimilar in approach.

Two fields of knowledge underpin this study of partnership. At the organisational level there is the organisational culture (Goodlad, 1994; Kinsler, & Gamble, 2001) and at the individual level there are teacher's beliefs and practices (Ford, 1992; Keys, 2005, 2007; Lumpe, Haney, & Czerniak, 2000). These two domains of knowledge will now be further elaborated upon.

Organisational Culture

Cultural difference between school and university is the consistent theme that emerges from the literature (Dallmer, 2004; Murrase, 2001; Sirotnik, & Goodlad, 1988; Warren, & Peel, 2005). Culture comprises the norms, beliefs and practices/actions of the educator. These may include observed behaviour regularities, the norms, the dominant values espoused by the educator, their classroom practice, the philosophy and rules of working within that institution, and the climate or feeling that is reflected in the physical layout (Schein, 1985; Kinsley, & Gamble, M. 2001).

Sirotnik (1991) describes three attributes that characterise the differences between universities and schools. These are the setting, an ethic of enquiry versus an ethic of action, and a merit system with promotion and tenure versus an egalitarian work ethic. The first attribute—the cultural setting relates to issues of the allocation and constraints of time and space within the school as compared to the flexible time and space allocation within a university. Except in the case of direct school business or emergencies teachers cannot be disturbed while in the classroom, particularly in the case of primary and early childhood teachers.

The second attribute—an ethic of enquiry versus an ethic of action, relates to teachers perspective on the importance of reflective research practice, and with getting tasks completed. Goldston and Shroyer (2000) conducted a study of thirty-three classroom teachers engaged in action research that revealed two major hindrances. Firstly, teachers did not identify themselves as researchers and viewed action research as something additional to their teaching practice. Secondly, teachers felt that their work environment did not provide enough time to engage in action research.

The third attribute is the university merit system with promotion and tenure versus the egalitarian work ethic that exists within schools. Within a number of school systems teachers still operate within a flat, monochromatic career structure where teachers are not promoted on the basis of merit but by seniority (Kinsler, & Gamble 2001). Each year teachers move up to the next pay increment. Generally, there is no provision for three or four year experienced teachers to move to the top of the pay scale because of their outstanding teaching performances. Teachers are usually unable to apply for senior teaching positions until they are at the top of their pay scale. There may be some variation of this merit system between the states and territories in Australia. Nevertheless, the teacher has two career choices: wait out the years to become a senior teacher or move into an administrative role which may allow them to circumvent the teaching seniority requirement. As to whether such work ethic will continue to survive in the 21st century remains to be seen. Nevertheless while it does, the anti merit system with its flat monochromatic career pathway will continue to influence the motivation of teachers.

Teacher beliefs

The second theoretical underpinning of this paper is teacher beliefs. The beliefs of teachers and how they impact and influence teaching and learning is well documented (e.g. , Ford, 1992; Keys, 2005, 2007, Lumpe, et al., 2000). Ford proposed that contextual beliefs, capability beliefs, and goals may hinder a teacher's ability to engage in an initiative such as partnership with a university. Contextual beliefs are the reasons as perceived by teachers for their ability (or otherwise) to implement certain teaching approaches or a curriculum initiative, dependent upon certain favourable context (Ford, 1992). These contextual factors could be the lack of resources, time and support from administration. Lumpe et al. (2000) have taken Ford's contextual beliefs and identified twenty-eight contextual factors that were likely to have a certain impact on the implementation of science instruction. These twenty-eight factors were identified as contributing to the "enabling belief" or the belief of individual teachers to assist their implementation of a more effective science program. Factors included such provision of time, additional science equipment, professional development, teacher support and support from administration.

The second of Ford's (1992) belief or factors is teacher capability beliefs, which are similar to what Bandura (1997) described as perceived self-efficacy beliefs: the perceived ability and judgement of the individual to undertake a certain task. In this study, this refers to teachers perceived ability to conceptualise, plan, and implement a partnership, based upon their positive and negative past experience. Teachers see themselves as not having the expert knowledge to

undertake and lead a project. This may be partly due to their undergraduate training and limited exposure to working within other contexts or how society has perceived their abilities (Hargreaves, 1994). Unless teachers have had the opportunity to engage in research in their post graduate studies or have been involved in research driven projects or a community based projects, then their experiences tend to be practical and classroom oriented. Teachers' undergraduate training has in some institutions focused on there being effective classroom teachers rather than initiators and leaders of externally funded projects. When teachers are employed this focus is reinforced through the continual daily demands of classroom teaching. Opportunities to engage in partnership requiring action research or grant applications for improving practice simply do not arise.

The third hindering factor is teachers' goals. Ford (1992) argued that the link between goals and personal agency beliefs (capability and contextual beliefs) should be recognised within research. Ford stated that, "motivation interventions that do not respect the goals emotions and personal agency beliefs that a person brings to a situation may produce short term effects, but in the long run they are likely to fail or backfire" (p. 202). Like all other individuals, teachers do not engage in a partnership or innovation unless they have a compelling reason to do so (Schwahn & Spady, 1998). Teachers who engage early in an innovation may perceive the motivating factor to be promotion or a means of solving classroom management issues. Alternatively, teachers may see the initiative or project as having long-term benefits for their students. Fetters, Czerniak, Fish, and Shawberry (2002), in an evaluation of a professional development program, found it necessary to communicate the intrinsic benefits of a professional development program, including the collaborative research experience, to the teachers in terms of improved student learning and increased confidence in teaching otherwise the teachers just lost interest.

The Project

The partnership reported on in this paper was a government funded Australian School Innovation in Science, Technology and Mathematics (ASISTM) project. The overall purpose of ASISTM grants was to improve students' literacy, capability and interest in science, mathematics and technology. Schools interested in participating were required to form a cluster with three or more schools and a partnership with outside support agencies. Depending on the nature of the project, the school clusters and their partners were eligible to apply for grants up to \$120 000.00.

The purpose of this particular ASISTM project was to raise the interest and motivation of science among students by recruiting early career scientists —ECS— (tertiary science students) to work alongside teachers in the classroom as peer tutors and mentors to the students. The project was based in a regional university and received a \$120 000.00 grant over an eighteen month period.

The participants of the project included: four schools—one government and three independent schools, including two teachers from each of these schools; and a university mentoring program that recruited the tertiary science students. There were eight teachers at any one time participating in the project, two of whom were replaced because of transfer and other school business making a total of ten teachers over the eighteen month period. The teachers ranged in age and experience: from mid twenties with two years, teaching experience to early fifties with twenty-five years, teaching experience. Their professional background and training varied, with teaching qualifications and experience from the United Kingdom, India, New Zealand and Australia. Their qualifications ranged from undergraduate qualifications in education and science to post-graduate diploma and masters qualifications in education. The teachers' roles within their schools ranged from that of a grade 7 classroom teacher, to science teacher to head of science department, to president of the local science teachers' association.

Partnership was the key element in the management of all the ASISTM projects. The expectation of the funding body was that three or four schools would take the initiative to form a cluster, identify an appropriate project that met the ASISTM criteria, and find a suitable supporting agency such as a tertiary institution to partner with in the submission and implementation of their ASISTM project. However this was not always the process that eventuated. In this case the project was one of the first to be implemented and at that time few schools and teachers were aware that the ASISTM grants existed. It was therefore the initiative of the university (external agency) to bring it to the attention of schools and generate an interest in participating. This was where the challenge began, prompting the focal question of this paper: How do we develop and sustain effective partnership between schools and universities?

Methodology

The research methodology was framed within the domain of self-study (Baird, 2004; Loughran, 2004; Manke, 2004). The purpose of self-study is the improvement of the individual's practice,

and the type of evidence that is used is dependent on the context in which the person is working (Whitehead, J. 2004). Self-study research may be about one's self in practice, or how we understand ourselves in practice, and is not restricted to the classroom (Feldman, Paugh, & Mills, 2004). It is useful in educational leadership where the leader is seeking to address issues of, for example, power, community, and building partnership (Manke, 2004). As the coordinator of this project self-study provided me the platform to analyse and critically reflect on the partnership.

Data Collection

The data was collected and triangulated from multiple sources:

- emails with teachers, and heads of department,
- notes taken at meetings with school principals and administrative staff,
- minutes and transcripts from audio-recorded monthly business and planning meetings with teachers and heads of department,
- electronic journal reflections of the teachers,
- audio-transcripts of debriefing and planning sessions with teachers conducted on PD days; of focus groups with ECSs' and students; and discussions with a critical friend and reference group.

Data Analysis

In the search for common descriptions and issues a constant comparative analysis of the data was undertaken in four stages:

1. The multiple sources of data were analysed and identified using Ford's beliefs framework (1992) and Sirotnik (1991) description of organisational culture that exists within the school. The transcripts of audio-recordings of interviews and focus group sessions were read and re-read and compared with teachers' journals, minutes taken at meetings, and anecdotal records arising from notes taken with meeting with principals and heads of department. From this process, re-occurring events and on-going management issues were identified and categorised.
2. The re-occurring events and issues were presented and discussed with the assistant coordinator of the project and the participating teachers to verify the data and where possible seek further explanation.

3. Each ASISTM project was assigned by the funding body a critical friend to work with the project, their role and involvement dependent on the nature of project. Because of the critical friend's involvement with other ASISTM projects his input was sort to confirm whether or not events and re-occurring issues were unique or similar to those identified in other ASISTM projects.
4. At the conclusion of the project an outside critical expert reference group of twenty was organised to verify the analysis of the data. The group comprised leaders in science education, national and state government curriculum program managers, and critical friends and coordinators of other ASISTM projects across Australia. The group was formed by invitation at a national science education conference. The session was audio-recorded and fully transcribed. Feedback provided at this session confirmed the issues and experiences that emerged from the data analysis.

Findings and Discussion

The findings of this paper demonstrate how teachers' beliefs and goals were evident within and influenced by three attributes of a learning institution's culture; the setting, the ethic of enquiry versus the ethic of action and the egalitarian work ethic (Sirotnik, 1991). Each of the three attributes are discussed and supported by examples of data representative of the teachers' contextual and capability beliefs and personal goals as related to that attribute. All participants' are given pseudonyms for anonymity.

The Setting

Setting is that domain of time, space and resources (Sirontnik, 1991; Lumpe, et al., 2000) and relates to flexibility of time management and freedom under the direction of leadership to undertake various tasks or projects. These together with the teachers' contextual and capability beliefs served to encourage or discourage teachers' engagement in certain projects or activities based upon their prior personal positive and negative experiences. The teachers' contextual beliefs to work within the time constraints of their school setting first became evident in the early stages of the project through email communication:

Paul, project administrator (email) — *“I have a tutor that is ready for your year 9 class...”*

Samantha, teacher (email)— *“Unfortunately (not now) the Yr 9s have exams next week during their normal science lesson time....It's a bit hectic this end at the moment as we have kids out all over the place”*

This teacher's focus was the upcoming exams for her class. Samantha did not perceive that she had the flexibility to quickly accommodate the introduction of a tutor. It became necessary for Paul to accommodate Samantha's teaching schedule. This issue recurred in the planning and programming sessions and was reiterated in the monthly management meetings:

Paul—*“An issue in terms of planning for next year, is getting timetables as soon as possible. I know schools have got their own issues with getting timetables but as soon as they are available we could then commence allocating the tutors a lot more efficiently.”*

John (science teacher)—*“We don't really have the time to get together and plan a program together. It's hard enough to get together with another colleague at school to plan a program together.”*

Teachers' perception of executive leadership support was also a critical factor in facilitating the sharing of knowledge and the continuance of the project. As part of the teachers' professional development (PD), funds toward release time to visit each other's schools observe the class and exchange ideas was provided. Two teachers from two project cluster non-government schools responded differently to the idea of visiting schools within the cluster. This PD strategy was discussed at length in the monthly management meetings. It highlights the teachers' beliefs regarding their views of supportive leadership:

Samantha (non-government school)—*“I just need to obtain approval from my principal before these visits can occur here. Unfortunately the politics between schools (upper mgmt) has to be considered here.”*

Anila (non-government school)—*“Just to let you know that I will be visiting John's class (government school) next week between 10:00 am to 12:30 pm. I will forward my relief form next week...”*

The issue here was the perception of leadership support when collaborating with non-government or government schools. While teachers may have a variety of motivations for their actions, Samantha's interpretation of the school's leadership is a strong contextual belief that she needed to deal with. As for Anila she constantly asked how and when the PD would take place: school leadership support was not perceived to be an issue. Eventually only Anila took the opportunity to visit another school.

Another incident demonstrating both teachers contextual and capability beliefs was when teachers from one school reported at the monthly management session how the school planned to change the teaching program to incorporate a middle years trial program. This proposal meant that classes and teachers would be dramatically reorganised which in turn would impact on the continued viability of the ASISTM project in their school. Senior teachers—John and Marissa took immediate action and approached the school executive, reminding them of the signed agreement, and were able to persuade the executive to delay its decision. Marissa was the head of the science department and John at that time was the president of the local science teachers' association. Their status and experience is most likely a contributing factor accounting for their perceived beliefs and success in influencing the executive leadership of the school. This, reinforces the view that teachers' contextual and perceived capability beliefs (Ford, 1992; Lumpe, et al. 2000) determine the likely response or behaviour. Beliefs held by teachers may not necessarily be an accurate reflection or interpretation of their work environment but are nevertheless real obstacles or, as in this incident, opportunities, within the mind of the teacher.

The ethic of enquiry and the ethic of action

The project involved the teachers' collaboration in the planning, implementation and participation in participative action research (PAR). Evidence was found that reflected Ford's (1992) description of teacher capability beliefs in undertaking these three aspects of the project.

When the schools were invited to participate many teachers expressed a lack of confidence and time in undertaking a grant application. The teachers commented in the staffroom, *"We don't have the time or know how to go about the project," and were appreciative of our initiative and support* (notes taken at meetings). The drafting of the project proposal was left with my colleague and myself. The teachers were asked at the planning meetings to check through the draft and discuss any concerns that they had. The minutes taken at the planning meetings documented the level of participation from each school. This varied extensively from full cooperation and attendance and review and evaluation of each aspect of the project through to a passive acceptance and infrequent representation at the planning sessions. What stood out clearly in this project was that the majority of the teachers did not have the requisite process knowledge or experience.

As part of the project the teachers agreed to engage in participative action research (PAR). This involved critical reflection on their current practice and develop strategies that may be beneficial when having an ECS in their classroom. To assist the process the teachers were provided training in action research and paid release time to attend professional development days that

focused on their action research. The teachers' lessons were also videotaped at the commencement and various stages of the project. These videos were provided to the teachers to assist them in their critical reflections. In the early stage of the project the video footage was emailed to the teachers together with some helpful guidelines to assist them in their analysis. However, the naivety of that idea was quickly realised when the teachers failed to respond. An ethic of enquiry was not their priority. The teachers were more concerned with their day-to-day school tasks—an ethic of action.

Matthew expressed his frustration at a PD meeting: *"I have got to be honest and say that I haven't really planned it as well as I could have. I'm not trying to make excuses but I'm going to...everything is always coming at me like this then he (the ECS) will turn up at my class and I think s**** I have got you again today haven't I. What am I going to do with you?"*

Only two of the ten teachers were known to have some prior experience in action research and were making a consistent contribution to the research. Even with the provision of paid leave some of the teachers found it a challenge to attend. Whilst they valued having an ECS assisting in the classroom—an ethic of action, they were less willing to engage in action research—an ethic of enquiry (Goodlad, 2004).

Anila (verbal apology provided at the PD)—*"Jenny sends her apologies she had to complete her year 11 tests."*

Emily (email)—*"I'm very sorry for the short notice but Matthew and myself are unable to attend this afternoon as we have meetings and reports to complete."*

Matthew (email)—*"My apologies for not being able to attend (the PD) today. My leave for the day has not been approved as camps and other excursions are also on today."*

Eight months into the project, not all of the teachers were taking ownership of their own professional development as anticipated. This is not a negative reflection on the teachers; just the reality of teachers' capability beliefs within the school culture. For some of the teachers, learning to engage in an ethic of enquiry was to take the duration of the project. Nevertheless over time, through encouragement and sharing with the teachers, the value of an ethic of enquiry began to be recognised, and the process applied. At the conclusion of the project the teachers were able to define the role of an ECS and develop strategies that would facilitate that role in the classroom to be shared with their colleagues.

The egalitarian work ethic

Within the school setting, teachers work within a flat monochromatic career structure. The implication for the ASISTM project was how to motivate the teachers to value the project and take on a leadership role. For teachers to prioritise the project they needed to see it as an opportunity to enhance their promotional prospects or improve their role within the school. This was shown by one of the teachers who decided not to continue with the project.

Joanne (email)—*Dear Phil, as I am taking on some other leadership roles (at school) this year I feel that it would be unwise for me to continue with the ... program...*

This teacher's perception was that the project did not fit into the school mould for furthering her career. As a young career-oriented teacher, she had been teaching for about five years and was making some serious career choices. The demonstration of leadership within the school appeared to be was first and foremost in her mind.

The project was faced with a work ethic that failed to encourage teachers to engage in activities that were not considered part of their teaching responsibilities nor perceived by the teachers to be a part of their overall role. Furthermore the teachers' individual personal goals within the project needed to be addressed. It became clear in the interviews and feedback sessions that some of the teachers viewed the project as addressing their immediate classroom management needs:

Year 9 student focus group interview —*“And she (Anne – ECS) used to work with Anthony a fair bit... He's a kid who needs some help in our class. ... I think he just has problems concentrating.”*

Emily (the teacher of the above-mentioned Year 9 class)—*“... the literacy kids talk about anything but science. And so that's what I used Anne for and what worked really effectively... she fitted in really well with them and kept them on task and she wasn't sort of afraid to discipline them and keep them on track”*

The purpose of the project was to use the ECS as someone that would enhance the teaching and learning of science and not to manage student behaviour, however some teachers at a PD revealed other intentions:

- keep students on task and manage behaviour
- focus is on the misbehaving and disinterested students and not on the struggling student.

- a person who can be accessed for expert knowledge in science
- assist with some preparation of a unit of work

(summarised notes taken from the white board at the first PD)

The above list shows a conflict in the purpose. The last two activities closely aligned with the intent of the project whilst the other two did not. John a senior teacher, continued to remind the team of our overall purpose: *“I think that’s going down a different direction ... from what I thought of the program.”*

Alignment of each teacher’s personal goals with that of the project goals was essential. It was a continual challenge to remind some of the teachers of the need to think beyond their immediate classroom management needs. The senior teachers proved to be a valuable asset in maintaining the purpose and direction of the project.

Conclusion

The intention of this paper was to critically reflect on the partnership between school and university with the aim of improving current and future partnerships. The findings of this study revealed that the empowerment of the teachers was very much dependent upon teachers’ context and capability beliefs and alignment of their goals to confidently engage in a productive partnership (Ford, 1992). The teachers needed to believe that they had the endorsement and support of the school to undertake the project and that the project was highly valued. The teachers needed to be confident that they had the knowledge and professional capacity to engage in the project from its conceptualisation through to the research and evaluation. Teachers’ goals had to be acknowledged and aligned as closely as possible with the partnership goals without stifling teachers’ motivation and losing sight of the overall purpose of the project. It was necessary to bring each of these sets of beliefs and goals into the partnership equation. So what were the lessons learned and the implications of this partnership?

Unless teachers are empowered through PD or in-service programs then partnerships will be solely initiated and driven from the university. Without the involvement of teachers the nature of the projects may be limited in scope. Projects will be driven by the perceptions and understandings of those outside of the school. There will be a lack of understanding by outside providers of some of the complex issues that exist at the ‘grass roots level’ both in the classroom and in the community.

The quality and sustainability of a partnership in a project can be hindered by teachers' lack of knowledge or their perceived capability to undertake a partnership. Teachers need to achieve self-belief in their capacity to lead a project and outsource roles and tasks where and when needed. They need to be provided the necessary skills and knowledge to engage in a partnership. Not all teachers are interested in partnership and would rather be concerned with the immediate needs of their class. Nevertheless, there are those teachers willing and able if empowered to make a valuable contribution to the partnership by bringing a richer understanding of the complex issues that exist at the 'grass roots level'.

To achieve this goal of productive sustained partnership, pre-service teacher education programs need to broaden their programs to include partnerships, project management and leadership either within existing practicum programs or offered as electives (eg., Central Queensland University and Charles Darwin University). Government and non-government schools need to encourage their teachers to participate in professional development that focuses on project management, grant applications and research. The schools' executive leadership need to cultivate a culture that empowers teachers, so that perceived obstacles of time, resources and leadership are no longer a hindrance in the formation of partnerships.

To move forward into partnership effective strategies need to be identified for empowering teachers. There needs to be a cultural paradigm shift within the school community that recognises teachers as more than just classroom operatives. Teachers need to be encouraged to be initiators and leaders of partnerships outside the confines of their immediate classroom and recognised for their efforts. The future of partnership between school and university is embedded in the empowerment of the teachers.

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