

Impacting Academic Achievement With Student Learners Teaching Digital Storytelling to Others: The ATTCSE Digital Video Project

[Candace Figg](#)

Brock University

[Robin McCartney](#)

University of Louisiana at Lafayette

Abstract

University researchers, teacher candidates, language and technology instructors, student learners, and families from diverse backgrounds partnered in an invitational teaching/learning experience—middle school student learners teaching their VIPs (very important persons) how to create stories and construct digital movies with reference to their family history. Prior to a university-based workshop, 2 weeks of structured activities using the Model of Digital Storytelling (Figg, 2005) focused on rich language development, oral history, and movie-making technology in a community-based summer enrichment program designed for underachieving student learners. Teacher candidates facilitated the workshop interaction between student learners and their VIPs. Data sources included interviews, exit surveys, reflective journals, research field notes, and student/parent-created artifacts. All participants were positively impacted through this digital storytelling process. Noted improvement of writing and technical skills, increased motivation due to VIP involvement, and greater awareness of future educational opportunities for student learners were among the key findings of this study.

Scheduling authentic field experiences for teacher candidates in the College of Education can be problematic at a university, because access to student learners from surrounding schools is difficult to arrange in the summer months. As an alternative, we decided to collaborate with a community-based summer enrichment program to present teacher candidates, defined at this institution as an undergraduate education major participating in field experiences and methods classes prior to student teaching, with an appropriate field experience. Doing so would also provide our project with the same population of student learners.

This paper reflects Year 2 of a 3-year longitudinal research study integrating writing, technology, and diversity, with a focus on developing technology, pedagogy, and content knowledge (TPACK; Harris, Mishra, & Koehler, 2007; Mishra & Koehler, 2006; Thompson & Mishra, 2008) in teacher candidates. Other goals included improving technology and writing skills in at-risk student learners using the Model of Digital Storytelling (Figg, 2005; Figg, Ward, & Guillory, 2006) and inviting parents or “very important persons” (VIPs) to participate in educational opportunities with their children (Purkey & Novak, 1996). VIPs were often parents of the children, but included adults selected by a child because they had significantly impacted that child. Many of the VIPs were grandparents or other relatives.

The term *student learners* will be used in this paper to represent the children, ages 9-12, who participated in this workshop. The term, *teacher candidate*, will be used for the university students to differentiate them from the K-12 pupils.

Background of the Project

We observed that teacher candidates were designing lessons that were inappropriate from a TPACK perspective—they were teaching the tool and not teaching *with* the tool. Teacher candidates could benefit from an experience that developed the technological pedagogical skills (TPK) of facilitation and chunking, or teaching of procedural knowledge by chunking the procedure into steps to scaffold student learning. As well, we were interested in an experience for student learners that would be perceived as an authentic use of technology.

The BellSouth Foundation (2003) found that children perceived they were working with and using technology as a tool to support learning *only* when they controlled the design of the topic and the structure of the learning environment. These findings led us to explore expanding the project so that student learners could design the topic and structure the learning environment by teaching their VIPs—thereby, inviting their VIPs into the educational process.

The project was designed so that roles were reversed—the student learners became the teachers and the adults became the learners. In order for the student learners to become the subject matter experts, the focus of the digital storytelling projects shifted to content directly related to these student learners and their VIPs—biographies and family histories. A 2-week training session at the community summer enrichment program prepared the student learners to teach the essentials of digital story making to their VIPs. The acronym, ATTTTCSE, was developed and provided the project with a name for the Year 2 program: Amazing Technologists Think Teach and Create Stories of Excellence. The acronym also stood for the steps in making a movie:

Amazing – *A* stands for artifacts and importing images into video editor.

Technologists – *T* stands for timeline and sequencing events into a storyboard.

Think – The second *T* stands for transitions inserted between slides.

Teach – The third *T* stands for title and silent screen slides.

Create – *C* stands for credits portraying the creators of the movie.

Stories – *S* stands for sound, including music and voice-over narration.

Excellence – *E* stands for added effects and export video.

The steps in the process were also taught to the teacher candidates, who became facilitators to student learner/VIP pairs, thereby creating a Team of Three (i.e., the group consisting of one teacher candidate, one student learner, and the VIP of that student learner). Teacher candidates were required to support student learners through facilitation techniques and the use of procedural instruction rather than tool instruction.

Review of Literature

Three specific areas of the literature directly impacted the design of the project in order to promote writing improvement and technology skills in student learners and provide teacher candidates with a rigorous field experience. These areas included the development of TPACK for teacher candidates in a technologically enhanced field experience, the development of 21st-century opportunities for at-risk children, and the use of “invitational education” (Purkey & Novak, 1996) to support and strengthen the connections between student, community, and school.

Development of TPACK in a Technologically Enhanced Field Experience

Educational technology specialists preparing teacher candidates to integrate technology into their daily instructional practices understand the difficulties inherent in developing TPACK (Harris et al., 2007). TPACK was described by Thompson and Mishra (2008) as

the three kinds of knowledge (Technology, Pedagogy And Content) that we believe are essential building blocks for intelligent technology integration....These three knowledge domains should not be taken in isolation, but rather that they form an integrated whole, a “Total PACKage” as it were, for helping teachers take advantage of technology to improve student learning. (p. 38)

Shulman (1986) explained the specific knowledge that teachers possess in order to transform content knowledge into instructional components in his conceptual model of pedagogical content knowledge. Mishra and Koehler (2006) added the technology component to the model by including these three areas of technologically based knowledge:

- Technological knowledge (TK), or computer skills plus competent personal use,
- Technological content knowledge (TCK), the understanding of how technology tools enhance content learning, and
- Technological pedagogical knowledge (TPK), or the use of specific pedagogical strategies or techniques to teach with technology so that content knowledge is enhanced.

Jaipal, Figg, Atack, and Orvitz (2008) identified specific pedagogical strategies and planning techniques that are essential to successful TPK, including chunking procedural skills/processes and presenting these chunks in an instructional setting so that the teacher serves as a facilitator of that process rather than a sage on the stage teaching steps to using a technology tool (Cifuentes, Davis, & Clark, 1996).

Providing teacher candidates with a field experience that promoted TPACK for the project would require teacher candidates to possess TK, or the personal knowledge and use of basic technical skills with the technology tool being used in the process (in this case, movie making with iMovie). They would also need specific TPK in areas such as those identified by Jaipal and Figg (2008), including a working knowledge of the process (ATTCSE steps) and an understanding of facilitation versus lecturing. Because novice teachers “teach as they were taught, and not as they were taught to teach” (Steen, 1991), master technology teachers designed the learning event and modeled the technology integration (Harris et al., 2007), while providing teacher candidates with practice in facilitation.

21st-Century Skills for At-Risk Children to Promote Writing and Language Arts

Successful living in the 21st century requires children to become skilled communicators and critical thinkers with abilities that allow “analyzing, accessing, managing, integrating, evaluating, and creating information in a variety of forms and media” while working in teams to solve problems (Partnership for 21st Century Skills, 2004). Tompkins (2005) also described abilities that focus on “the empowering role of both oral and written language” in such a way that all six language arts—writing, listening, talking, reading, viewing, and visually representing—are used to communicate, solve problems, and persuade others to a course of action as part of literacy (p. 22). Prensky (2005) portrayed today’s children as the generation already adapted to working in new learning environments, including

new systems for communicating (instant messaging), sharing (blogs), buying and selling (eBay), exchanging (peer-to-peer technology), creating (Flash), meeting (3D worlds), collecting (downloads), coordinating (wikis), evaluating (reputation systems), searching (Google), analyzing (SETI), reporting (camera phones), programming (modding), socializing (chat rooms), and even learning (Web surfing). (p. 10)

Therefore, developing 21st-century skills is a function of individuals expressing their own voice using written and oral language, as well as many other electronic formats and media. This goal presents a unique challenge to the student population chosen for the ATTCSE project. In Louisiana, many people speak French combined with a Cajun dialect, and this nonstandard English is common among the at-risk student learners who participated in this project. Developing fluent communication skills required attention to basic reading and writing proficiency, as well as encouragement and support in expressing individual creativity and thought in multimedia formats.

Digital storytelling was selected as the activity that would promote the development of writing and language skills while allowing individual expression and creativity for two reasons. First, the use of computer technology to motivate engagement complements the learning style of this Net Generation of students—these digital natives who are instinctive visual communicators and inductive learners (Oblinger & Oblinger, 2005). Prensky (2005) further described this generation as “native speakers of technology, fluent in the digital language of computers, video games, and the Internet.” Even if they do not have immediate access to the tools, they are still immersed in that world, having seen the tools being used, having worked with the tools owned by their friends, schools, or parents, and having developed working/thinking strategies that naturally integrate the digital tools into their everyday lives.

Second, digital storytelling uses authentic real-world skills (videography, video construction, and video editing skills) in a situated learning experience (Bransford,

Sherwood, Hasselbring, Kinzer, & Williams, 1990) while stimulating practice in writing skills. The Model of Digital Storytelling framework (Figg, 2005; Figg et al., 2006) suggests that video creation skills can be taught in a sequence that supports the writing process (Flower & Hayes, 1981). The framework describes a series of digital story activity types that are sequenced to teach writing skills through the construction of various types of digital stories (See Figure 1).

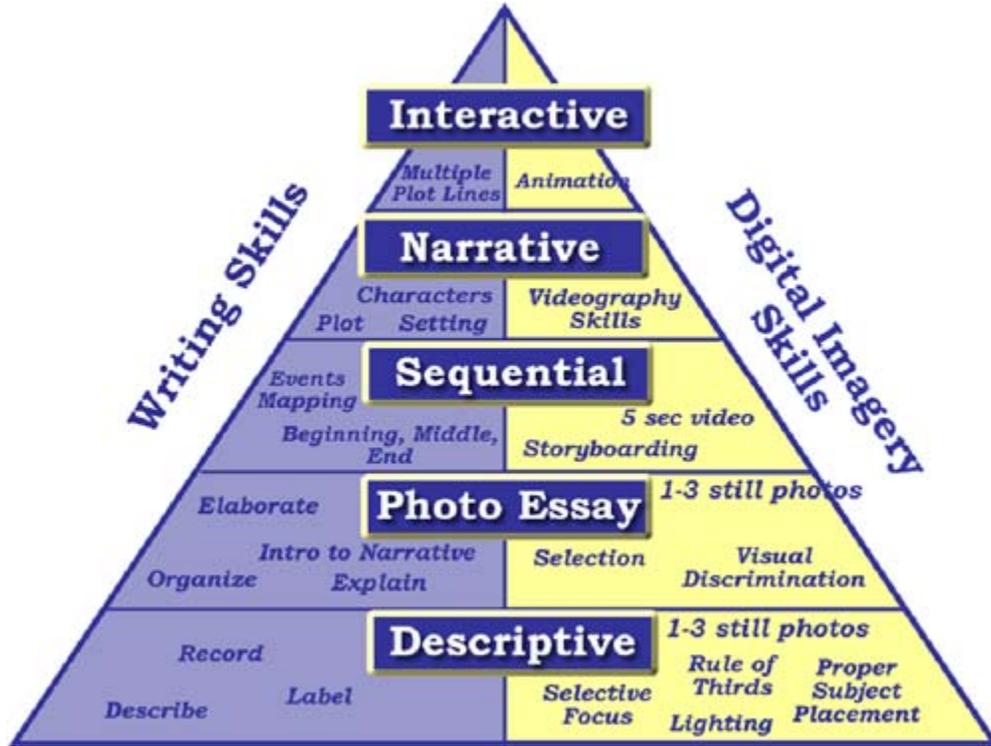


Figure 1. The Model of Digital Storytelling (Figg, 2005)

The framework organizes the presentation of writing skills to students by having them create a series of sequenced digital stories: (a) descriptive (first and simplest story), (b) photo essay, (c) sequential, (d) narrative, and (e) interactive (most difficult story to create). Each type of story teaches specific writing and digital imagery skills that build upon the skills introduced at the previous level. For example, descriptive stories are simple digital stories that develop basic writing skills (recording, describing, labeling) using one to three still photos. Specific digital imagery skills (taking a picture using the rule of thirds, proper subject placement, lighting, and selective focus) are also emphasized.

The types of stories the student could create using these skills include place stories, digital records, digital story starters, re-photography, and conceptual dictionaries (see a further description of these activity types at the “handy4class” website, http://www.handy4class.com/activity_types/dstory.html). Once the student is comfortable with these writing and digital imagery skills, the second level of skills/activity types (photo essay digital stories) are introduced, and so on (Figg, 2005).

Invitational Education to Build a Bridge Between School and Community

The relationship between school and community in the area of interest may be impacted by a preconceived notion that underserved populations or at-risk children cannot perform complicated tasks (Payne, 1996). In fact, a survey of teachers, administrators, and student learners where at-risk student populations were identified was recently conducted on the schools in this area, including those specifically serving the population of at-risk students directly involved in the ATTTTCSE project (Gonsoulin, 2006).

The research identified several root problems in the local area. First, most of the teachers who taught in these schools did not live in the same neighborhoods as the student learners. Second, the learning/teaching environments were not inviting. The survey further revealed that teachers in these schools shared the perception that fewer than 25% of their students would graduate from high school. Administrators attributed low achievement performances to lack of parental involvement and academic apathy on the part of parents and the students.

The survey further revealed that students did not feel loved or valued by the school's staff. Parents, on the other hand, indicated that they had negative views of education because they felt intimidated by the system. Many had been subjected to negative experiences when they were in school. Parents were only contacted by the school for reasons such as discipline issues, absentee violations, or missing homework. Findings from government reports on crime, teaching, and learning supported this finding by indicating that in the state of Louisiana over 95% of students retained were males from low socioeconomic backgrounds (DeVoe, Peter, Noonan, Snyder, & Baum, 2005).

The purpose of the summer enrichment program, financed by state grant money, was to provide at-risk students learners with an opportunity to participate in positive educational experiences that would build self-esteem and confidence while increasing student achievement. A critical requirement of this program was that VIPs agreed to volunteer their time and energy by attending Friday workshops intended to enhance their child's achievement. The program strived to provide "living and learning success" described by Riner (2003) that "is nurtured and supported by assisting the learner in understanding these perceptions and accepting invitations and opportunities to develop his or her abilities" (p. 43).

Although this program supported the learning needs of the students, the gap between school and community could be bridged by providing these same types of "intentionally inviting" educational experiences within a school setting. The inclusion of activities reflected the following five fundamental values:

- People are able, valuable, and responsible, and should be treated accordingly.
- Educating should be a collaborative process.
- This process is the product in the making.
- Every person possesses untapped potential.
- This potential can best be realized by places, policies, programs, and processes specifically designed to invite development and by people who are intentionally inviting with themselves and others personally and professionally. (Purkey & Novak, 1996, p. 3)

Therefore, a project rich in collaborative, process-oriented activities that uncovered untapped potential, conducted in a learning environment that promoted respect for

individual differences and abilities presented an invitational environment where bridges between schools and communities were built.

Research Purposes and Questions

The purpose of this study was to investigate the perceived impact on stakeholders participating in a collaborative and invitational educational experience. The program was designed to provide a practical, meaningful, technology-based field experience for teacher candidates, while providing student learners with language-rich, technologically enhanced learning situations and inviting VIPs into the educational process. Therefore, the following research questions guided Year 2 of the study:

- What impact does the process of learning how to create digital video stories have on teacher candidates who are facilitating a shared process between middle school student learners and their VIPs?
- What impact does the process of establishing student learners as subject matter experts and providing them with an opportunity to design and create positive learning climates have on student learners?
- What impact does the process of learning how to create digital video stories have on VIPs who are being taught by their middle school student learners?

Method

The study design employed the use of qualitative methods, specifically emergent coding during content analysis (Patton, 2002), to guide data collection and analysis, which is appropriate for this study seeking to examine the perceived impact of participation in the project on stakeholders (Lincoln & Guba, 1985). Frequency distributions of common responses were also derived from participant surveys and students' pre- and posttests to provide context for general attitudes and technical knowledge experiences of student learners and VIPs (Onwuegbuzie & Leech, 2004).

Participants and Setting

The setting of the study occurred in two facilities—the summer enrichment program campus and the university lab. A total of 14 African American student learners—6 female and 8 male—from primarily low to middle socioeconomic backgrounds, were recruited. In addition, 14 VIPs accompanied the children to the university workshop session and served as participants in the study, as did the language arts and technology in-service teachers from the summer enrichment program. These teachers received training from the researchers prior to the 6-week summer enrichment program regarding techniques, strategies, and activities that combine writing and technology. Student learners were taught these skills for 2 weeks before coming to the university workshop.

Participants from the university included 18 teacher candidates—5 male and 13 female—currently enrolled in the instructional technology course required for teacher certification, and the technology instructors from the university. The workshop session was held in the university computer lab.

Procedure

The study included a professional development session for the teachers at the summer enrichment program, 2 weeks of digital story creation activities for the student learners

and teacher candidates, and one workshop day at the university for collaborative work by the Teams of Three.

Step 1. Pretraining for teachers at the summer enrichment program. Using activity types from the Model of Digital Storytelling, a minicurriculum was developed that would expose the student learners to a series of sequentially ordered activities focusing on writing progress while developing digital video construction skills. Because none of the teachers had prior expertise in video construction and editing skills, the professional development training also included an introduction to the ATTCSE acronym to guide them in the steps to creating a digital story.

Step 2. Student learners develop digital storytelling skills. On the first day of the program, the language arts teacher administered a pretest that documented student learners' prior knowledge regarding the movie-making process (see [Appendix A, Pre/Post-Test for Student Learners](#)). Then, the student learners began to work through a specific set of digital storytelling experiences, or activity types, designed to teach the writing process while learning specific digital video creation skills. (For further explanation of these specific activity types, see [Appendix B, Digital Storytelling Types](#).)

The technology teachers collected the images, scanned photographs, video clips, written narratives the student learners created, student-selected music, and any other artifacts brought in or created by the student learners onto a CD to take with them to the university workshop.

Step 3. Workshop day at the university. The workshop was scheduled for 9 a.m. until 3 p.m. with a break for lunch. Only the student learners attended the morning session, which began with an icebreaker activity. Student learners and teacher candidates received a brief training introduction that modeled what to do with the VIPs in the afternoon session, including a review of the ATTCSE steps (see [Appendix C, pdf download](#)) to assist VIPs in video creation.

After breaking for lunch, the student learners' VIPs arrived. The student learners became the teachers of the VIPs, as teacher candidates became the facilitators and note takers. We constantly interviewed participants, recorded field notes of observations, and photographed and videotaped the workshop session. Exit surveys were completed by all student learners, teacher candidates, and VIP participants. Interviews were also conducted with a sample of the student learners, teacher candidates, and VIP participants.

Data Collection and Analysis

Qualitative Data Collection

To ensure triangulation of data, multiple data sources were collected from each of the stakeholder groups.

Interviews. Individual interviews from a random selection of VIPs, student learners, and teacher candidates (5 parents, 4 students, 2 teacher candidates, and instructors) were conducted and videotaped. In all interviews, discussions focused on broad, open-ended questions related to perceptions of possible impact on the individual participants and possible benefits of the experience to the student learners.

Exit surveys. Exit surveys were collected from all workshop participants: student learners, VIPs, and teacher candidates. For teacher candidates, the questions were related to the professional development aspects based on categories of professionalism identified by the National Council for Accreditation of Teacher Education (2001). For the student learners and VIPs, the questions focused on three topics (impact to individual technical learning, relationships between VIPs and their children, and possible impact to efficacy of student learners), which targeted affective and cognitive domains. (See appendices [D](#), [E](#), and [F](#) for survey instruments for student learners, VIPs, and teacher candidates.)

Reflective journals. Reflective journal responses were collected from the teacher candidates. Question prompts were provided to the teacher candidates (based on National Board of Professional Teaching Certification Standards, 2006). The questions focused on professional development opportunities, working with students, and the facilitation process. In addition, teacher candidates recorded observational field notes, including conversations of the Team of Three, plus a timeline of events that occurred during the university workshop experience. (See [Appendix G](#) for a sample of a teacher candidate reflective journal entry).

Researcher field notes. Each of the three researchers kept detailed field notes of the experience. One researcher made daily visits to the summer enrichment program classes and recorded daily reflections. (See [Appendix H](#) for a sample from a researcher reflective journal.)

Artifacts. Student products created during the 2-week summer enrichment program technology classes were collected along with the VIP movies from the university workshop. (See [Video 1: My Tribute to Aunt Tammye](#) and [Video 2: My Mom and Me](#)).

Qualitative Data Analysis

Interviews, reflective journals of teacher candidates, and researcher field notes were transcribed and analyzed independently by two researchers using thematic textual analysis (Erlandson, Harris, Skipper, & Allen, 1993; Miles & Huberman, 1994; Patton, 2002), in which text comments were unitized to their smallest, recognizable component (using nVivo7 software to assist the process). These comments were sorted into emergent categories by assigning codes to each set of unitized data. Themes emerged from further analysis of the categories that provided insights into the impact of the digital storytelling experience on the three groups of participants: student learners, their VIPs, and the teacher candidates.

A sample of the emergent coding process used for textual content analysis is provided in Table 1 to illustrate how unitized data from data sources, such as the reflective journals of teacher candidates, were coded then organized into key descriptor phrases. These phrases were then grouped into general categories for each participant group. The process was repeated for all textual data from all participant groups.

Although findings from this type of analysis are not generalizable, the themes and patterns identified as relevant to this type of experience may be transferable to similar situations (see Lincoln & Guba, 1985). Credibility of findings is ensured through the use of multiple data sources providing triangulation of data.

Table 1
Sample of Data Analysis: Category Generation of Themes

Impact on Participant Group	General Coding Categories	Key Descriptor Phrases	Example of Units of Data
Teacher Candidates	Facilitation experience	Strategies & Techniques implemented in teaching	I made use of some modeling and shadowing techniques in which I demonstrated an activity and then allowed the student to mimic me and ask questions. The student seemed to quickly learn new concepts using this method. (Chance's Reference Journal)
		Resources utilized in preparing for facilitation	We utilized resources that were provided to us such as the storyboard and the steps for developing a great video (worksheet) along with the CD of the child's interview and the Internet to obtain pictures. (Mary's Reference Journal)
	Teaching with technology	Challenges of teaching with technology	This project was also time consuming. What could I do so this would take as little classroom time as possible while still maintaining the value of the project? (Lucy's Reference Journal)
		Teacher candidate reflections about their own use of technology	This experience has shown me how learning can take place while the teacher serves as a facilitator. It is OK if the technology breaks down; it is ok if the facilitator does not have all the answers. It has also shown me that kids can be in control of their own work. I would like to implement something similar in my own classroom. (Trisha's Reference Journal)
	Importance of family	Interactions between student and VIP	Steve and his mother were working on the movie. They engaged in an in-depth give and take revolving the mechanics of the movie making process. Particular in this was the point when it came to insert title slides. She asked him to do this, and his response was, "No, you can do it." (Andrew's Reference Journal)
		Feelings of teacher candidate about watching student/VIP interaction	Being a recently separated parent, I have a great appreciation for families in which both parents are active participants in activities concerning their children. (Mary's Reference Journal)

Quantitative Data Collection and Analysis

Data sources collected for purposes of descriptive statistical analysis included a skill and terminology pretest and posttest for student learners, as well as exit surveys from teacher candidates, student learners, and VIPs.

Technical skill and knowledge pre- and posttest. Student learner scores on the pre- and posttests were grouped by overall score. Scores over 80% were designated as *meeting expectations*; scores of 60-80% were designated *approaching expectations*; and scores below 60% were classified as *not meeting expectations*. However, pretest scores of all students learners fell into the *not meeting expectations* category, and posttest scores all fell into the *meeting expectations* category.

Therefore, to determine proficiency in skills and knowledge, student learner responses for each question were analyzed for both pre- and posttests. Not all students completed all questions. Multiple choice questions answered correctly were coded as *meeting expectations*, and those answered incorrectly were coded as *not meeting expectations*. Open-ended questions were coded by two researchers working independently as *meeting expectations* if the answer provided was correct, *approaching expectations* if the answer had at least one part of the response correct, and *not meeting expectations* if the answer was completely incorrect. For example, no respondents could correctly state the definition of a title slide on the pretest, but one individual gave the definition of a slide. That response was categorized as *approaching expectations*, as the answer was partially correct (see Table 2 for final distributions).

To calculate final percentages, the number of responses for each category was divided by the total number of responses collected, as shown in Figure 2.

Exit surveys from teacher candidates, VIPs, and student learners. Narrative responses from exit surveys for teacher candidates (shown in [Appendix F](#)) were analyzed for patterns across respondents' answers. Content analysis was used to develop emergent codes (through the same process illustrated in Table 1), from which frequencies of common responses were calculated (see results from the analysis in [Appendix I](#), pdf download). Responses from the exit surveys of student learners were aggregated for purposes of identifying frequent patterns (see results in [Appendix J](#), pdf download). A similar process was used for the Exit Surveys of VIPs (see results in [Appendix K](#), pdf download).

Table 2
Analysis of Pre/Posttests by Individual Student Responses

Student Learner Responses on Tests	Meeting Expectations	Approaching Expectations	Not Meeting Expectations
ATTTCSE Pretest (114 possible responses)	21	7	86
ATTTCSE Posttest (104 possible responses)	85	3	16

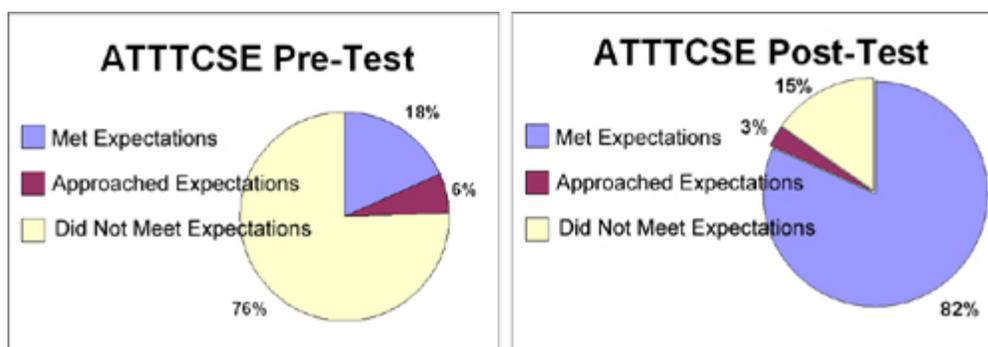


Figure 2. Percentage indicating proficiency on pre/posttests for skill and knowledge.

Findings

Emerging themes from the qualitative data analysis, as well as frequency data, indicated that perceived impacts could be identified for each of the groups of participants in the university workshop.

Question 1: Impact of Participation on Teacher Candidates

Findings of the first research question indicated teacher candidates' perceptions and the following impacts from participating in the workshop:

1. Facilitation led to new understanding of techniques and different instructional strategies. Teaching with technology took the teacher candidates out of their comfort zone. They were familiar with teacher-centered instruction, but facilitation was a new experience for all of them. Three teacher candidates mentioned that they were not teaching, but “merely facilitating,” and acknowledged that it could be difficult to “just sit there and let them figure out what was wrong. It was hard not to just tell them how to fix the problem (Janice, Journal).” In fact, 50% of the teacher candidates mentioned how uneasy they were with no control of the teaching situation (see [Appendix I, Exit Survey Results for Teacher Candidates](#), pdf download).

Emily commented, “The project involved using materials that I do not teach and am uncomfortable with, so I had a hard time feeling like I played a true teaching role.” Chance acknowledged that, although he could see the value of facilitation, he was still drawn to more traditional methods and “would still want to explain everything first” and would “want the child to witness me making a movie of my own in which I had to storyboard. . .and edit.”

However, the other 50% embraced facilitation (see [Appendix I, Exit Survey Results for Teacher Candidates](#), pdf download). Andrew stated, “When I found out that the child knew more than I did, I was very relieved and became relaxed because I did not feel like I had to have the same level of control.” Tricia added, “This experience has shown me how learning can take place while the teacher serves as a facilitator. It is OK if the technology breaks down; it is OK if the facilitator does not have all the answers.” Four of the teacher candidates commented that they felt the facilitated learning environment promoted a sense of ownership in the learning process for students.

Additionally, the teacher candidates identified several instructional strategies for facilitating the Team of Three. Some of these included

- Modeling and shadowing
- Asking open-ended questions
- Using guiding questions
- Allowing the teacher to learn from the student
- Serving as technical advisor when needed.

Having supplemental teaching materials to provide a structure so that the facilitation process proceeded smoothly was noted by 62% of the teacher candidates (see [Appendix I, pdf download](#)). In the case of this workshop, the digital storytelling model and the ATTCSE step sheets, the Internet and software application help features, and technology instructors were the resources that supported their instruction.

2. Importance of family involvement was identified. All of the teacher candidates reflected upon the positive and motivational influence of the VIP/student learner interactions. Mary commented that she valued the opportunity to build relationships and stated, “Being a recently separated parent, I have a great appreciation for families in which both parents are active participants in activities concerning their children.” Chance added,

Involving parents [and other family members] in this learning process motivated the students dramatically. I do not think this student would have focused as intently on this exercise in the afternoon as well as he did without the parent’s presence and active participation.

Some teacher candidates expressed concern “about being able to have the same level of parental [or other family members’] involvement” with other grade levels. (Emily, Journal).

3. Understandings regarding teaching with technology gained from field experience. Each of the teacher candidates indicated an increase in their understanding of teaching with technology because of participation in the workshop. Four of the teacher candidates generated questions regarding implementation issues they could see arising in their own classrooms. A third of the teacher candidates discussed the relationship between off-task behavior and technical issues/difficulties that happen when using computers in instruction, and 45% of the teacher candidates recognized that allowing students to take ownership of the learning was an important part of teaching (see [Appendix I, pdf download](#)).

Two teacher candidates expressed the idea that teaching with technology required a different type of preparation and pedagogy than other instructional settings. Chance summed it up, “One conclusion I have reached from this learning sequence is that a greater expertise in teaching is required to make use of coaching/facilitating instruction than is required in simple lecture situations.” Andrew explained that teaching with technology was not as intimidating as first thought:

Don’t be so scared and don’t make a mountain out of a molehill, but relax. My expertise with this was a limitation for me. I know this and it is part of the reason why I needed to be in this classroom today, and why it took me to a comfortable point.

Question 2: Impact of Participation in the Digital Storytelling Workshop on Middle School Student Learners

Findings of the second research question indicated the following impacts of the program on student learners:

1. Improvement of writing skills. Student learners in the summer enrichment program were identified as at-risk because of their academic performance at school and on state-mandated tests. Writing skills were identified by the summer enrichment program as a contributing factor to this low performance, and an initial writing sample from each student learner participant was collected. The act of starting to write was a great challenge at the project onset, but with the introduction of writing as a part of the Model of Digital Storytelling activities, attitudes changed. The exit survey noted that only 31% of student learners felt that writing a story for their movies was a difficult task; the other 69% indicated that it was one of the least difficult parts of the process (see [Appendix J](#), pdf download).

Pre/posttest results indicated growth in knowledge of digital video storytelling creation, which included technical skills, vocabulary development, and understanding of the writing process, from 18% to 82% proficiency (see Figure 2). Both of the instructors from the summer enrichment program noted this growth:

- “After the learning experience was over, the children realized the importance of the assignments. It was difficult for them to write. They didn’t like to write. Letting them design freely made this less difficult for the students.” (Donna, Interview)
- “The students learned that they could write freely what was in their hearts and in their minds.” (Nancy, Interview)

Using digital stories to provide practice and individualized writing instruction was effective because it provided a motivating atmosphere where student learners remained engaged in the creation process. Evidence from the interviews and reflective journals noted that the students exhibited weakness with writing skills. Andrew explained, “Even though Steve experienced problems with the writing/storyboarding, the use of the technology provided the child with enough confidence and motivation to complete the process and produce a quality end product.”

The student learners valued the experience for the freedom of the creative process:

- “The part I like the best is where you have to put all the pictures together and you have to choose. I learned how to make a movie—how it begins and how it ends up. Every second I really enjoyed.” (Jalen, Interview)
- “If it doesn’t come out right, you can do it over.” (David, Interview)

2. Motivational influence of family involvement. All participants commented on the excitement of the student learners working with their VIPs in creating a movie, for example,

- “I felt as though I was part of the process....I was thrilled to see the level of interaction between David and his mother.” (Mary, teacher candidate, Journal).

- “I thought it was great that the parent and student were here together. I think it was a great experience for them to have together. It is something they will never forget.” (Molly, teacher candidate)

Student learner comments included the following:

- “The most fun part was learning the computer and helping my mom” (Steve, Interview)
- “I picked my dad as my VIP because I don’t get to hang out with him as much as my Mom!” (Jason, Interview).
- “I like making movies because it shows biographies of yourself and your VIP.” (David, Interview)

3. Increased awareness of future educational opportunities. Exposure to the university campus was a powerful experience for the student learners. At-risk student learners seldom see themselves as university students or as pursuing higher education (Gonsoulin, 2005). Of the student learners, 57% indicated that participation in the project resulted in a greater personal interest in school (see [Appendix J](#), pdf download). Steve’s mother stated that she “was very interested in having Steve on the university campus” (Interview).

Several teacher candidates reported that the student learners were interested in life at the university, with comments such as, “He was very curious about college and asked me a lot questions about what year we were in, who was our teacher, and if we had ever used these computers before” (Hannah, Journal). One of the instructors suggested that they research local universities and colleges to satisfy their inquiry. The student learners decided to create movies for each other that provided information on these colleges and universities (see [Video 3, Texas College Movie](#)).

Maybe we planted a seed for future careers in the movie industry that they can one day explore—maybe one day they will want to be a reporter, a broadcaster, an editor, a director or an actor. In the future, she knows that they can do it and that they not only need to show parents they can do it, but the world (Donna, Interview).

Question 3: Impact of Participation in the Digital Storytelling Workshop on VIPs

One of the teacher candidates remarked on the sense of community felt by participants in the workshop, “The best part was the unity and community and the love shown—everyone was really devoted to what was going on” (Andrew, Interview). Exit surveys and interviews with the VIPs noted the following impacts because of this participation in creating digital video stories with their children.

1. Development of positive attitudes toward scholastic performance of their children. Forty-seven percent of the parents reported that participation in the workshop allowed them to see their children performing at a high level of expertise (see [Appendix K](#), pdf download). Answers to the VIP exit survey question regarding what was learned from their experience included comments such as the following:

- “I learned that he far surpasses the limits I anticipated which teaches me a lesson—to stop clipping his wings.”
- “My daughter is very creative and loves technology.”
- “Mariah is good with computers, not afraid of being challenged.”

Steve's mother stated, "I learned about myself today, and I am a teacher! This was a wonderful opportunity for the students. I observed that he is a very fast learner!" (Interview). Mr. Green, a principal with twin boys in the summer enrichment program, further explained,

We need to become aware of the knowledge base of our children. They can teach others. Being involved with technology is something that we are accustomed to and the generation of today can just walk into a room full of computers and be acclimated in just a few minutes is amazing. I could see the excitement in his eyes in the fact that I can teach Daddy—something that up until now was always Daddy doing the teaching. The fact that you have to become an expert in something before you can redeliver it to someone else that means that you have to be learning it. . . when you actually teach it, that's the top of the food chain right there. That is something we all need to be trying to do. (Interview)

In addition, the VIPs valued the workshop experience because it provided them with an opportunity to communicate with their children about learning. Kerry's grandfather explained, "This experience brought us closer. I had never worked with him to find out what he knew about computers. I learned that he had skills, and his communication with me has improved" (Interview).

2. Attitudes toward education. VIPs reported in exit surveys that the overall experience was positive for them and their children. All but two of the children had talked with their VIPs previously about the project; 100% of the respondents felt that the project would help their children in school; and 100% of the respondents believed the project would serve to promote positive relationships between school and community (see [Appendix K](#), pdf download). One VIP was excited by the opportunity to work with teachers promoting a positive learning environment with high expectations, and one researcher recorded this comment:

The grandfather approached me with deep gratitude in his voice. Their relationship had been strained due to parental divorces. The child had failed a couple of times. He thanked me from the bottom of his heart for the opportunity to be at the university working with his grandson. (Researcher, Journal)

3. Attitudes toward technology. Approximately half of the VIPs had some computer background; however, none had ever worked with movie-making software or with MAC computers. Only one of the VIPs found that working with the technology was more difficult than expected, with 43% responding that it was easier than expected. The surveys also revealed that 79% of the VIPs were excited to learn the new technology, and 57% indicated they were proud to have the opportunity (see [Appendix K](#), pdf download). Interviews indicated that the learning experience was nonthreatening because their child was teaching them by creating movies related to their family. The experience was valued, because all of the VIPs felt that this knowledge would help their children in other subjects in school.

Discussion

The purposes of the project were to design a program that provided technologically enhanced field experiences for teacher candidates, an opportunity for student learners to serve as subject matter experts in technology-rich learning environments, and an invitational climate for VIPs to participate in the digital world of their children through video technology experiences.

All participants in the ATTTTCSE program established authentic relationships, which allowed everyone to engage successfully in a meaningful learning experience; however, the program stakeholders agreed that this event was unique and would always be remembered and valued because the children—the student learners—were allowed to control the learning environment and design a learning experience for their VIPs (with assistance from the teacher candidates). Langer (1998) alluded to the value of this type of mindful learning when he described memory as “the most meaningful measure of attention” (p. 41).

The findings from this study also indicate that academic achievement of these student learners was enhanced when they created a variety of digital stories as part of the preparation for teaching their VIPs. Not only did posttest scores indicate increased knowledge and understanding of writing and technical skills, but engagement in writing and attitudes toward writing was observed.

In this study, student learners began the 2-week workshop at the summer enrichment program with the task of writing one sentence to describe their favorite place. The room was quiet. Some of the children began thumping their desks with their pencils, unable to write, or jotting down an adjective or two. However, when these same children were asked to take a digital picture of their favorite place, bring it to class, and use the picture to describe their favorite place, the responses were much more in depth and several sentences long.

Two weeks later, the student learners had storyboarded five different movies, including the one they created with their VIPs, and were writing scripts with dialogs, researching topics for their stories, and discussing the process with their peers and teachers as needed to present their thoughts with their audience in digital format. One of the researchers commented, “They are writing on a daily basis and don’t even know it!” Using stories plus technology as tools to drive the writing process to a higher level motivated the student learners to achieve their goal of constructing their movies with enthusiasm (as also found by Ballast, Stephens, & Radcliffe, 2008; Behmer, Schmidt, & Schmidt, 2006; Gere, Kozolvich, & Kelin, 2002; Mello, 2001; Simkins, Cole, Tavalin, & Means, 2002).

Three techniques were specifically identified as useful in promoting high quality writing skill instruction through digital storytelling experiences and would be useful to English educators. First, student learners created a *variety* of digital stories that were sequenced in order of difficulty, so that the writing skills for the first digital story provided practice in basic skill for writing (and digital movie-making); each subsequent story required the learner to build upon the skills learned in the previous task. Using a framework such as The Model of Digital Storytelling (Figg, 2005) provided a scaffolded approach that introduced writing skills and concepts, providing student learners with opportunities to practice these skills within an engaging task.

Having student learners draw upon oral or biographical family history meant that each student brought expert knowledge to each new story task. Interviewing and teaching the VIP impacted the perceived value of project, which was found to promote self-esteem, and motivated the student learners to engage in the task (Purkey & Novak, 1996). Using visuals, such as storyboards or graphic images, stimulated student learners’ imaginations, aided in retention of valuable information, and provided student learners with strategies for expressing prior knowledge in a written format (Novak & Gowin, 1984; Paivio, 1986; Trowbridge & Wandersee, 1998). In addition, using an acronym, such as ATTTTCSE, assisted student learners in making sense of the procedural knowledge required to create a movie (Figg & Burson, 2009).

Weaving invitational education values into educational opportunities for these children became a critical component of community building and development of their school-esteem and self-esteem (Payne, 1996), which was perceived as a benefit to participants in this project. Findings in this study suggested that *school esteem* was enhanced when the educational task acknowledged and was respectful of the prior knowledge possessed by all participants, and *self-esteem* was enhanced through the encouragement of family participation. For example, these at-risk student learners stayed on task the entire workshop day because their VIPs were on campus with them, and the student learners' level of attention was highest when their VIPs arrived to work with them in the lab. The VIPs reported that they were amazed when they saw what their children were able to accomplish on the computer in such a short time, which was a new experience for them with schools and educational settings.

These VIPs had revealed in a prior survey that they had only negative perceptions of educational settings and believed that teachers had low expectations of their children because they were only contacted by schools for negative reasons (Gonsoulin, 2005). Additionally, the VIPs valued the experience because of the opportunity to enhance and deepen their relationships with their children. All commented that this was their first experience to work on and complete a project of this magnitude with their child.

The VIPs further admitted that they would not have been able to complete the movie without the help from their child. Completed movies were collected from all of the Teams of Three, which is evidence that the student learners were able to support the learning needs of their VIPs with the facilitation of the teacher candidates. The support of the teacher candidates and the opportunity to work in a university environment were also noted by the student learners (and their VIPs) as making them feel important, while providing a glimpse into a future they had not previously considered. The experience was so positive that several students and VIPs made comments suggesting that the experience had planted a seed for involvement in higher education or different career choice in a technology field.

The findings further illustrate the impact upon the teacher candidates in the development of the teacher knowledge needed to teach with technology, or TPACK. The act of facilitation was new to most of the teacher candidates, who agreed that facilitation required much more expertise than only lecturing or providing guided instruction. Teacher candidates were able to describe what was required of a teacher for high quality facilitation, including planning for collaborative work and prior knowledge of technology, as well as writing skills and experience with inquiry and problem-based learning.

The teacher candidates noted that they also benefited from seeing how such a learning environment could be structured so that student learners are allowed control over their learning (technological content knowledge), the use of acronyms to guide procedural knowledge development (technological pedagogical knowledge), and the level of technical skills required to teach with technology (technological knowledge)—all of which increased their own teacher knowledge about teaching with technology (Figg & Burson, 2009). Teacher candidates concluded that teaching is so much more than they originally thought, and facilitation would never have been introduced to them if not for this experience (see also Carey, 1993; Cifuentes et al., 1996; Sulla, 1999).

Conclusions

One of the teacher candidates commented that, although she would never forget the experience and was grateful for the opportunity, the sustainability of such a project in a classroom was a concern. She asked, "This project was also time-consuming. What could

I do so this would take as little classroom time as possible while still maintaining the value of the project?" She was already thinking about adapting her experience for application to her future classroom. English educators seeking to bring components of invitational education and technologically enhanced learning experiences into their classrooms will find that the use of digital storytelling not only satisfies curricular expectations for writing skills, but provides educators with an opportunity to engage at-risk students in learning environments that strengthen self-esteem and school-esteem of student learners and invite families into the education of their children.

Schools and communities can genuinely coexist when the components of invitational education (Purkey & Novak, 1996) are intricately woven into the culture of both environments. Although the ATTTTCSE metaphor was designed to assist participants in the movie-making process, the consistent emphasis on "Amazing Technologists Think Teach and Create Stories of Excellence" set the tone for building a community of caring individuals who wanted to make a difference in the lives of these children. Giving student learners opportunities that bridge the gap between schools and communities takes education to the next level—from learning outcomes to lifelong learning!

References

- Ballast, K., Stephens, L., & Radcliffe, R. (2008). The effects of digital storytelling on sixth grade students' writing and their attitudes about writing. In K. McFerrin et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2008* (pp. 875-879). Chesapeake, VA: Association for the Advancement of Computers in Education.
- Behmer, S., Schmidt, D., & Schmidt, J. (2006). Everyone has a story to tell: Examining digital storytelling in the classroom. In C. Crawford et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2006* (pp. 655-662). Chesapeake, VA: Association for the Advancement of Computers in Education.
- BellSouth Foundation. (2003). *The growing technology gap between schools and students: Findings from the BellSouth Foundation Power to Teach Program (edu.pwr3)*. Retrieved from <http://www.shorelineschools.org/departments/tech/pdf/BellSouthreport03.pdf>
- Bransford, J. D., Sherwood, R. D., Hasselbring, T. S., Kinzer, C. K., & Williams, S. M. (1990). Anchored instruction: Why we need it and how technology can help. In D. Nix & R. Spiro (Eds.), *Cognition, education, and multimedia: Exploring ideas in high technology* (pp. 115-141). Hillsdale, NJ: Lawrence Erlbaum.
- Carey, D. M. (1993). Teacher roles and technology integration: Moving from teacher as director to teacher as facilitator. *Computers in the Schools*, 9(2-3), 105-118.
- Cifuentes, L., Davis, T., & Clark, S. (1996). *From sages to guides: A professional development study*. ERIC Database. (ED397036)
- DeVoe, J.F., Peter, K., Noonan, M., Snyder, T.D., & Baum, K. (2005). *Indicators of school crime and safety: 2005* (NCES 2006-001/NCJ 210697). Washington, DC: U.S. Government Printing Office.
- Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods*. Thousand Oaks, CA: Sage Publications.

- Figg, C. (2005) *Activity types that make digital storytellers out of digital techies: A hierarchical model for developing writing and digital storytelling skills*. Unpublished manuscript.
- Figg, C., & Burson, J. (2009). *Unpacking technological pedagogical and content knowledge (TPACK): Designs for teaching and learning with technology*. Welland, ON: Soleil Publishing.
- Figg, C., Ward, R., & Guillory, D. (2006) Using social studies content themes and digital storytelling to make video come alive. In C. Crawford et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2006* (pp. 663-668). Chesapeake, VA: Association for the Advancement of Computers in Education.
- Flower, L. S., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32(4), 365-387.
- Gere, J., Kozolvich, B., & Kelin II, D. (2002). *By word of mouth: A storytelling guide for the classroom*. Honolulu, HI: Pacific Resources for Education and Learning.
- Gonsoulin, W. (2005). [Inviting School Survey (ISS-R) of Students, Parents, Teachers, Counselors, and Administrators in Iberia Parish]. Unpublished raw data.
- Harris, J., Mishra, P., & Koehler, M. J., (2007, April). *Teachers' technological pedagogical content knowledge: Curriculum-based technology integration reframed*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Jaipal, K., & Figg, C. (in press). Unpacking the "Total PACKage": Emergent TPACK characteristics from a study of preservice teachers teaching with technology. *Journal of Technology and Teacher Education*, 18(1).
- Jaipal, K., Figg, C., Atack, M., & Orvitz, F. (2008). Existing community practices and designed interventions: Understanding the tensions in supporting pre-service teachers to integrate ICT during practice teaching. In K. McFerrin et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2008* (pp. 5235-5237). Chesapeake, VA: Association for the Advancement of Computers in Education.
- Langer, E.J. (1998). *The power of mindful learning*. Reading, MA: Perseus Books.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: SAGE Publications.
- Mello, R. (2001). The power of storytelling: How oral narrative influences children's relationships in classrooms. *International Journal of Education and the Arts*, 2(1), 1-14.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A new framework for teacher knowledge. *Teachers College Record*, 108(6), 1017-1054.

- National Board of Professional Teaching Standards. (2006). *The standards*. Retrieved from http://www.nbpts.org/the_standards
- National Council for Accreditation of Teacher Education. (2001). *Professional standards for the accreditation of schools, colleges, and departments of education*. Washington, DC: Author.
- Novak, J. D., & Gowin, J. D. (1984). *Learning how to learn*. New York, NY: Cambridge University Press.
- Oblinger, D., & Oblinger, J. (2005). Is it age or IT: First steps toward understanding the Net Generation. *Educating the Net Generation*. Retrieved from <http://www.educause.edu/IsItAgeorIT:FirstStepsTowardUnderstandingtheNetGeneration/6058>
- Onwuegbuzie, A. J., & Leech, N. L. (2004). Enhancing the interpretation of “significant” findings: The role of mixed methods research. *The Qualitative Report*, 9(4), 770-792.
- Paivio, A. (1986). *Mental representations*. New York, NY: Oxford University Press.
- Partnership for 21st Century Skills. *Learning for the 21st century: A report and mile guide for 21st century skills*. Retrieved from http://www.21stcenturyskills.org/images/stories/otherdocs/p21up_Report.pdf
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage Publications.
- Payne, R. K. (1996). *A framework for understanding poverty* (3rd ed.). Highlands, TX: aha! Process, Inc.
- Prensky, M. (2005). Listen to the natives. *Educational Leadership*, 63(4), 8-13.
- Purkey, W. W. (n.d.) *An introduction to Invitational Theory*. Retrieved from the International Alliance for Invitational Education website: http://www.invitationaleducation.net/ie/ie_intro2.htm
- Purkey, W. W., & Novak, J. (1996). *Inviting school success: A self-concept approach to teaching and learning*. (3rd ed.). Belmont, CA: Wadsworth.
- Riner, P.S. (2003). The intimated correlation of invitational education and effective classroom management. *Journal of Invitational Theory and Practice*, 9, 41-55.
- Shulman, L. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14.
- Simkins, M., Cole, K., Tavalin, F., & Means, B. (2002). *Increasing student learning through multimedia projects*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Steen, L. A. (1991). Reaching for science literacy. *Change*, 23(4), 10-19.

Sulla, N. (1999, February). Technology: To use or infuse. *The Technology Source*. Retrieved from <http://technologysource.org/article/technology/>

Thompson, A.D., & Mishra, P. (2008) Breaking news: TPACK becomes TPACK! *Journal of Computing in Teacher Education, 24(2)*, 38, 64.

Tompkins, G. (2005). *Language arts: Patterns of practice*. Upper Saddle River, NJ: Prentice Hall.

Trowbridge, J. E., & Wandersee, J. H. (1998). Theory-driven graphic organizers. In J. J. Mintzes, J. H. Wandersee, & J.D. Novak (Eds.), *Teaching science for understanding: Vol. 3: A human constructivist view* (pp. 95-131). San Diego, CA: Academic Press.

Ward McCartney, R., Figg, C., & Gonsoulin, W. (2009). Differentiating instruction with digital storytelling while making connections to critical literacy. *Teaching and Learning, 5(1)*, 31-44.

Author Note:

Candace Figg
Brock University
email: cfigg@brocku.ca

Robin McCartney
University of Louisiana at Lafayette
email: robinmccartney@cox.net

**Appendix A
Pre/Posttest for Student Learners**

**Amazing Technologists Think, Teach, and Create Stories of Excellence
(ATTTTCSE)**

Tell us about. . .

Circle the best answer to the questions below:

1. What is a narrative?
 - A. The slide that holds the title
 - B. The script for the video that is recorded
 - C. The digital images imported into iMovie or MovieMaker

2. What is an activity type?
 - A. A special dance move
 - B. A specific type of story that can be written during a learning activity
 - C. The script for the video that is recorded

3. What is a title slide?
 - A. The slide that holds the title
 - B. The slide that holds the credits
 - C. A special effect that blends one slide into another

4. What is a "silent screen" slide?
 - A. The slide that holds the credit
 - B. A slide that tells the story because the movie has no voiceover or recorded narration
 - C. A first step in the video creation process

5. What is a "point of view" story?
 - A. A story that is written so that more than one person's point of view is presented
 - B. A picture that shows only one view of a building
 - C. A special effect that can be added to the movie

6. What is a VIP?
 - A. Significant person
 - B. Very Ill Puppy
 - C. Famous person

7. What is text?
 - A. Any words in digital form (written on the computer in a word processor, title slide, or PowerPoint presentation)
 - B. The cords that run between the computer and the camera
 - C. A special transition

8. What is a graphic?
 - A. Any digital still image

- B. Transitions
- C. Famous person

9. What is a storyboard?

- A. A large board made of posters
- B. A series of pictures drawn to show the action scenes in a movie with words to be recorded for the narration for each scene
- C. A bulletin board that can be used to collect pictures

10. What is the rule of thirds?

- A. The best way to divide a candy bar
- B. A rule that helps a picture taker line up the subject of the picture for the best picture
- C. The rule used to determine who gets to use the computers in the labs

Please answer the questions below as completely as you can.

1. Write an interview question. This may be an actual question you asked in a previous interview, or you may choose to write a new question that you wish you had asked in one of your interviews.

2. What are the 7 steps to making a movie? List as many as you can remember.

3. Did using pictures help you to create stories? YES NO
Why or why not?

Appendix B Digital Storytelling Types

The following types of stories were used in the ATTTTCSE workshop to teach the writing process as well as specific digital video creation skills:

- **Place Stories:** Student learners were asked to write about their favorite place at the summer enrichment program campus (Attachment-writing sample). Then, to learn the rule of thirds for taking quality digital pictures, the student learners took pictures of these places. Using the pictures, the student learners re-wrote their descriptions. Picto-Bingo cards were created with the pictures, and the Bingo game played using the description clues created by the student learners.
- **Photo Albums/Slice of Life:** Photo albums require the writer to compose captions for each picture in the album slideshow. Slice of Life stories use images related to one specific time or event. Using pictures brought from home, student learners learned to scan pictures and use a storyboard to organize/sequence thoughts about a story and write captions for each image used.
- **VIP Biographical Stories:** VIP stories collect the viewpoint and stories of “very important people.” the movie. Because much of the story would come from the voice of the VIP, student learners were introduced to techniques and strategies for interviewing. The student learners wrote interview questions and practiced interviewing each other to develop videotaping skills. Then, the VIP interviews were conducted and videotaped. Student learners also collected still images related to family and the VIP for construction of the VIP movie. (Put interview link here for interview movies.)

Appendix C
ATTTCSE Cheatsheet

Amazing Technologists Think, Teach, and Create Stories of Excellence
(ATTTCSE)

Student Name: _____ VIP's Name: _____

Steps for Developing a GREAT Video!

1) Discuss KEY Question:

What type of story would you be most interested in creating today?

*Description of a collection of 5 or more (Descriptive)

--family members?

--objects in nature?

--places we/you have visited?

--landmarks of the world or history?

--other ideas?

*Description of a place important to you? (Place Story)

*Description of an event that you witnessed or participated in? (Slice of Life)

*Create a Very Important Person story--using interview recorded earlier? (VIP story)

*Create a story that tells your point of view regarding a topic and my point of view? (Point of View)

2) What did you decide?

Type of story: _____

Story Topic: _____

3) Create storyboard (Use attached sheets to sketch out image & script for that image)

4) Use AATCSE to build video

5) Does your story have the following?

Appropriate title slide? Yes No

Appropriate credit slide(s)? Yes No

Clear Narration? Yes No

Background music that fades down at the beginning and swells up at the end? Yes No

Only one transition or cut-only transitions used? Yes No

Story with appropriate sequence? Yes No

Script narration matches image/video clip? Yes No

Effects used appropriately? Yes No

Video exported as QuickTime movie? Yes No

Appendix D Exit Survey for Student Learners

Amazing Technologists Think Teach and Create Stories of Excellence *Student Survey* *June 23, 2006*

Please check all of the following words and phrases that

1. Describe how you felt about the pre-service teacher who assisted you at the University:

Interesting Helpful Knowledgeable Easy to work with
 Friendly Unfriendly Not very helpful

2. Describe how you felt about making your iMovie:

Had fun and enjoyed it Challenged Excited
 Bored Frustrated Proud of yourself

3. Who helped you the most?

Teachers Pre-service Teacher Parents

4. Which of the following benefits do you feel you gained from participating in this project?

Greater self-confidence Increased ability to communicate and work with others
 Greater willingness to consider and accept new ideas Greater interest in school
 Increased ability to generate new and creative ideas

5. What activities of the movie-making process were your favorite/least favorite? Please rate the following movie-making activities on a scale of 1 to 5, circling from 1 for the least favorite to 5 for the most favorite:

	Most Favorite	-----			Least Favorite
	1	2	3	4	5
Videotaping	1	2	3	4	5
Interviewing	1	2	3	4	5
Creating movies on the computer	1	2	3	4	5
Writing your story	1	2	3	4	5
Working at UL at Lafayette	1	2	3	4	5
Teaching your VIP	1	2	3	4	5

6. What activities of the movie-making process were easiest/most difficult for you? Please rate the following movie-making activities on a scale of 1 to 5, circling from 1 for the difficult to 5 for easy:

	Easy	-----			Difficult
	1	2	3	4	5
Videotaping	1	2	3	4	5
Interviewing	1	2	3	4	5
Creating movies on the computer	1	2	3	4	5
Writing your story	1	2	3	4	5
Working at UL at Lafayette	1	2	3	4	5
Teaching your VIP	1	2	3	4	5

7. Please rate the following aspects of the project and movie-making process on a scale of 1 to 5, circling from 1 for the lowest score to 5 for the highest score:

	Lowest	-----			Highest
	1	2	3	4	5
The degree to which you think this will influence your career choice	1	2	3	4	5
The degree to which you think this project will help you in school	1	2	3	4	5
How you would rate the job you did teaching your VIP	1	2	3	4	5
Your ability to make another movie on your own	1	2	3	4	5

8. Which movie program did you like best—iMovie OR PC Movie Maker? Why?

Do you think you did a good job teaching your VIP? Why or why not?

Appendix E Exit Survey for VIPs

Amazing Technologists Think Teach and Create Stories of Excellence
Parent Survey
June 23, 2006

Please check all of the following words and phrases that

1. Describe what you think about the iMovie project involving your child, the Believer's Church, and the University of Louisiana at Lafayette:

Exciting Helpful Challenging Enriching
 A wonderful opportunity Not very challenging Did not engage my child

2. Describe the attitude your child had toward this project:

Positive Negative Excited Enthusiastic Unhappy

3. Describe how you felt as the "VIP" in your child's movie:

Special Happy Excited Uncomfortable Insecure

4. Describe how you felt as you worked with the technology:

<input type="checkbox"/> I found it to be easier than expected	<input type="checkbox"/> Excited to learn the technology
<input type="checkbox"/> I found it to be more difficult than expected	<input type="checkbox"/> Frustrated with this new experience

Insecure with something I don't understand Proud to have this opportunity

5. Describe what you learned from your child today:

6. Describe what you think your strengths/weaknesses were as you worked with your child today:

7. Tell the type of comments your child shared with you about the iMovie process:

best experience ever can't wait to go back
 having fun didn't know that learning could be so much fun
 learning so much didn't really make any comments
 did not want to participate Boring

Other comments you could share with us? _____

The following questions are yes/no responses; however, additional comments would be greatly appreciated.

8. Did your child talk to you about the project before today?
 Yes No comments _____

9. Do you feel this project helped your child educationally?
 Yes No comments _____

10. Do you feel this experience may influence your child's career choice one day?
 Yes No comments _____

11. Do you think your child will use this knowledge in other subjects in school?
 Yes No comments _____

12. Do you support this type of project?
 Yes No comments _____

13. Do you think projects like this one will help your community to bond?
 Yes No comments _____

14. Has your child ever experienced the opportunity to be creative and design a project?
 Yes No comments _____

Please rate the following aspects of the project and movie-making process on a scale of 1 to 5, circling from 1 for the lowest score to 5 for the highest score:

	Lowest ←	→ Highest			
The degree to which you think this will influence your child's career choice	1	2	3	4	5
The degree to which you think this project will help your child in school	1	2	3	4	5
How you would rate the job your child did teaching you	1	2	3	4	5
Your ability to make another movie on your own	1	2	3	4	5

**Appendix F
Exit Survey for Teacher Candidates**

**Amazing Technologists Think Teach and Create Stories of Excellence
June 23, 2006**

Please attach your reflective journal of conversations, questions, inquiry, etc. that you recorded during the workshop today.

Please attach the timeline of events that took place in this workshop. Provide as much detail regarding what was going on with your student/parent interaction as possible.

Then, please provide the following feedback.

1. Describe your experience with the student learner.
2. Was the child knowledgeable about the technology being used today?
3. Please describe the personal level of technology knowledge the parent demonstrated.
4. Please describe any special comments and/or conversation topics that the child and parent shared.
5. Was the student learner engaged? How do you know?
6. What were the slow or difficult points/moments in the process?
7. Was the student a good story writer/teller/designer? Why or why not?
8. What type of instruction was central to your facilitation?
9. What resources did you use to help you to facilitate the learning experience for this child?
10. How did you stimulate your child's thinking during the workshop?
11. What accommodations did you make with your child during this workshop?
12. Are you satisfied with your interactions with this child during this workshop?
13. How would you work with this child this differently if you had a chance to do this again?
14. Did you enjoy working with the parent and the student learner together? Why or why not?
15. What questions or issues does this learning sequence raise about your teaching for your classroom in the future? (Future implications)

Appendix G

Teacher Candidate Reflective Journal Entry

I would describe my experience with the students learners as a positive one. I had no trouble getting the student to focus on the task at hand. The student was bright and knowledgeable regarding the desktop computer. The students seemed genuinely to want to accomplish this project.

The child seemed very knowledgeable about the technology being used in this workshop. For example, I only had to rarely ask permission to try something with the mouse. The students was largely finished with his movie creation well before lunch. The child appeared to have attempted a project similar to this one in the past.

The student appeared to be engaged throughout most of the creation of the iMovie—both the one created in the morning and the one created in the afternoon. The student asked many questions and was enthusiastic regarding taking control of the mouse. The student attempted and completed several stages of the iMovie creation in the morning. In the afternoon, the parent and teacher interacted frequently in the creation of the movie.

The type of instruction that was central to my facilitation was hands-on learning, play and exploration which is thought to be more suitable or “developmentally appropriate” for primary school students. It is hoped that this approach will encourage success in learning and avoid the stigma of failure for children. This approach is at variance with traditional instruction methods. These methods typically involve lectures and require excessive amounts of memorization. The method I used in instruction is based on the following concepts:

- 1) Young children learn at different rates and through different styles.
- 2) Young children learn as they develop a sense of self-confidence in a positive learning environment.
- 3) Young children learn best with “hands-on” experiences where they are encouraged to question, explore and discover.
- 4) Young children learn best in a social environment where they can converse with others to expand their language and their thinking.

I made use of some modeling/shadowing techniques in which I demonstrated an activity and then allowed the student to mimic me and ask questions. The student seemed to quickly learn new concepts using this method. The bulk of the morning exercise (roughly 90%) was completed allowing the student to “play” and “experiment.” I facilitated only when asked questions and/or I perceived the child to be making a mistake (or becoming “stuck” at a certain point and unable to proceed.) At one point, the child asked a classmate sitting next to us to demonstrate something he had created in his movie. John appeared quite comfortable in asking his peers for advice or help.

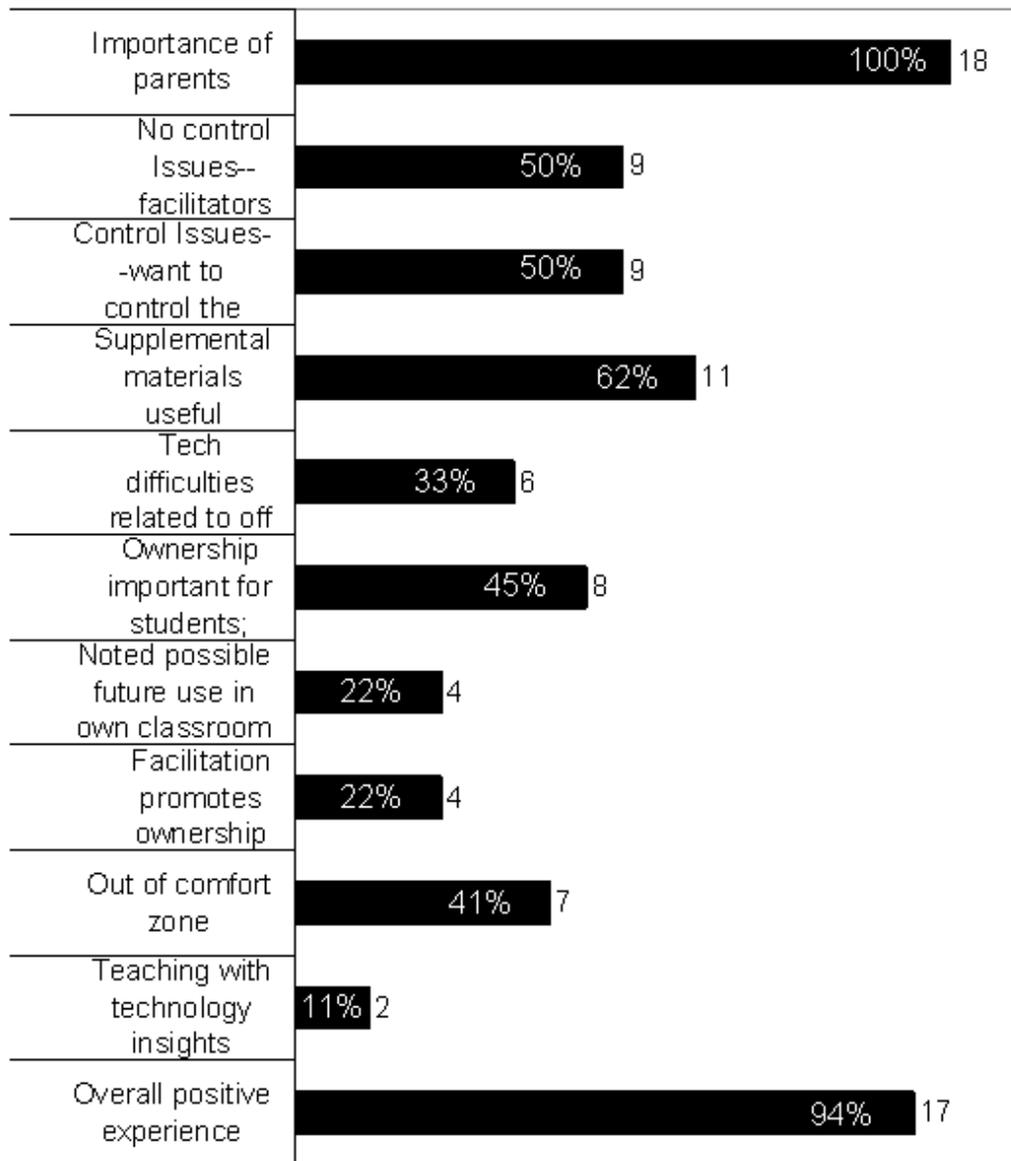
Appendix H
Sample from Researcher Reflective Journal

ATTTTCSE – June 23, 2006

Today I had the most heartfelt experience during the university workshop with the student learners, their VIPs, and teacher candidates. The room was full of noise from computers and conversations from the participants. The parents and children were working diligently on their movies. One of the children was working with his grandfather. In fact, I noticed that the child was working on his own movie by himself on an extra computer, at the same time, giving his grandfather instructions on how to make the movie on another computer. He was bored because the grandfather was taking a long time with steps to movie making. Later, the grandfather approached me with deep gratitude in his voice. Their relationship had been strained due to parental divorces. The child had failed a couple of times. He thanked me from the bottom of his heart for the opportunity to be at the university working with his grandson. His eyes were tearful as he explained to me that Kevin had failed the past year in school. This shocked me because he was constructing his own movie creation on the planets and the Solar System. Kevin was inserting pictures from the Internet and reading about the different planets. This was hardly behavior from a child that had failed in school. He stated that the family was troubled with problems from divorce and that he rarely had a chance to spend any quality time with his grandchild. He proceeded to ask me to write a letter to the boy's parents letting them know what a wonderful job Kevin was doing on the computer. He said maybe the mother would let Kevin spend more time with him if she knew they were involved in educational experiences. At that moment the entire research study had new meaning. I was given a gift and realized the intangible rewards that only teaching brings to those who try to make a difference. I assured him that I would write a letter on the university's letterhead addressed to the boy's mother. He said he wanted to put it in a frame. This was a very powerful moment for me.

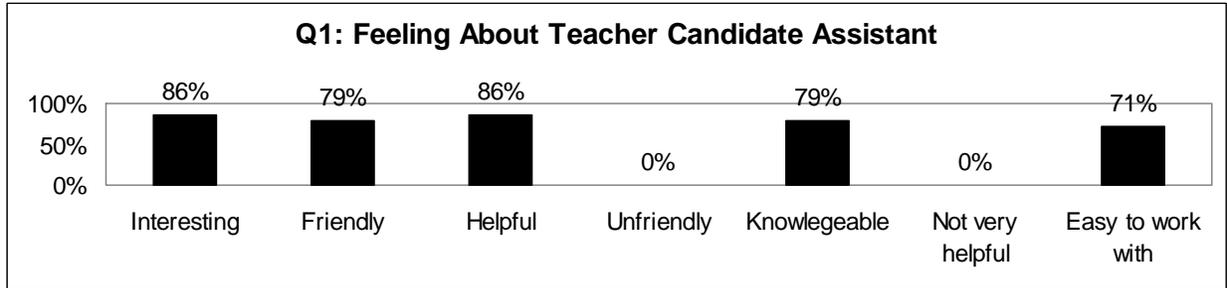
Appendix I
Exit Survey Results for Teacher Candidates
 (See Appendix F for Instrument)

**Common Responses from Teacher Candidate
Exit Survey**

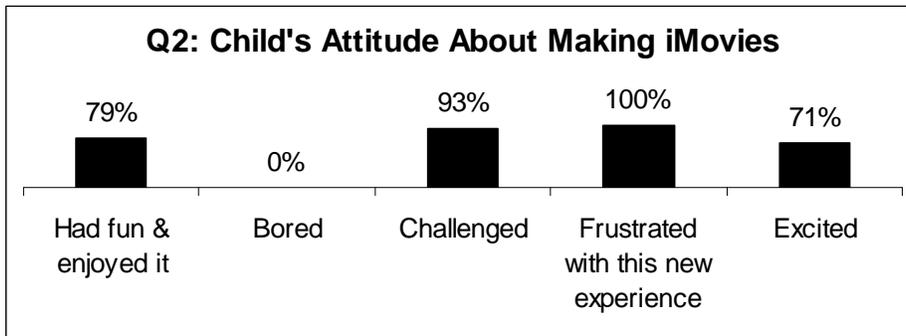


Appendix J Exit Survey Results for Student Learners

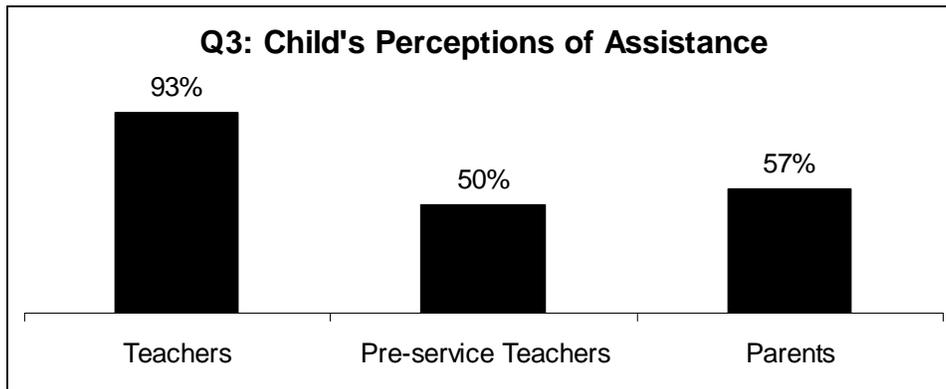
Q1: Describe how you felt about the pre-service teacher who assisted you at the University:



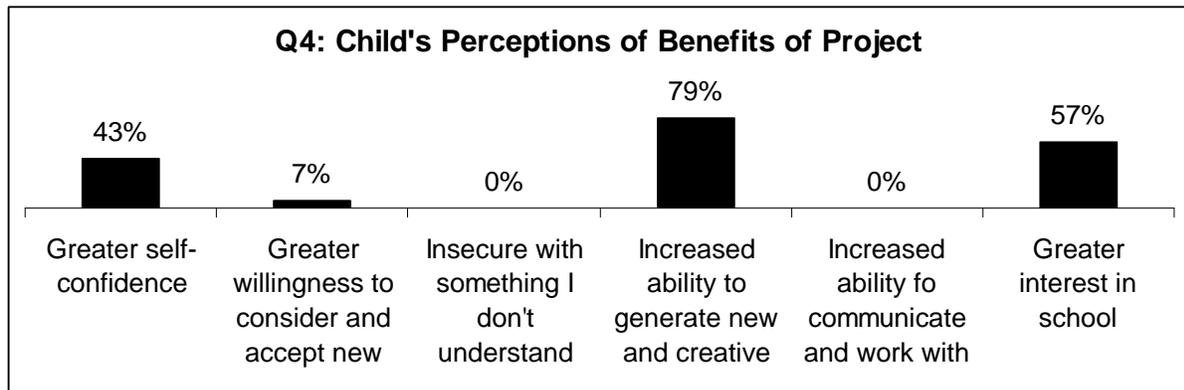
Q2: Describe how you felt about making your iMovie:



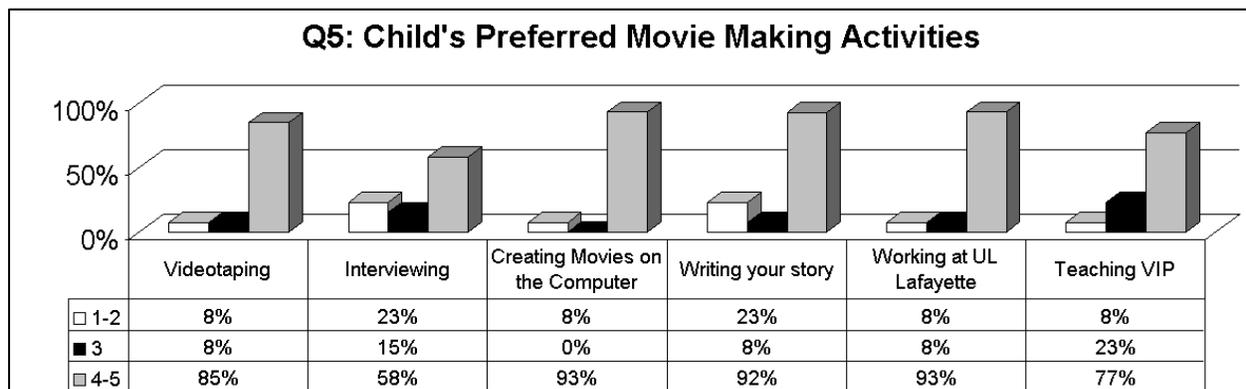
Q3: Who helped you the most? (Respondents selected more than one choice.)



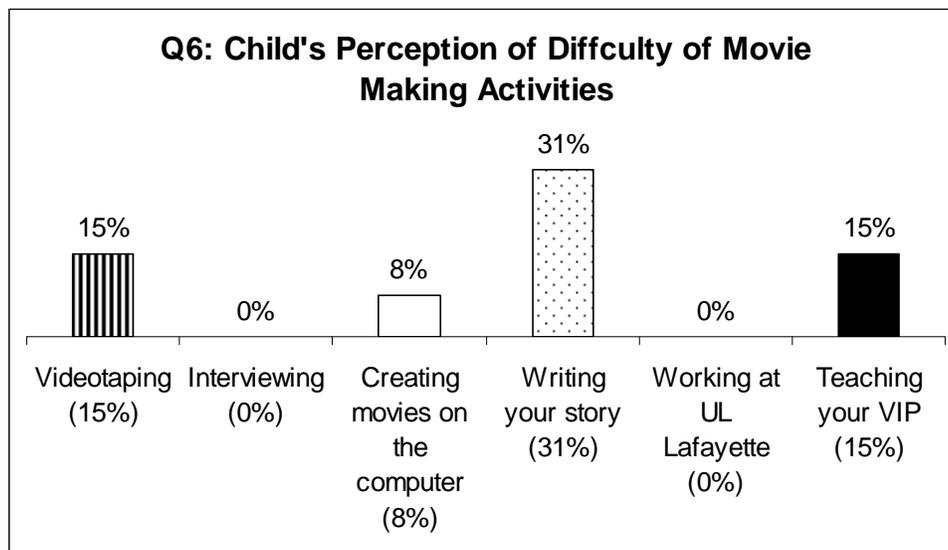
Q4: Which of the following benefits do you feel you gained from participating in this project?



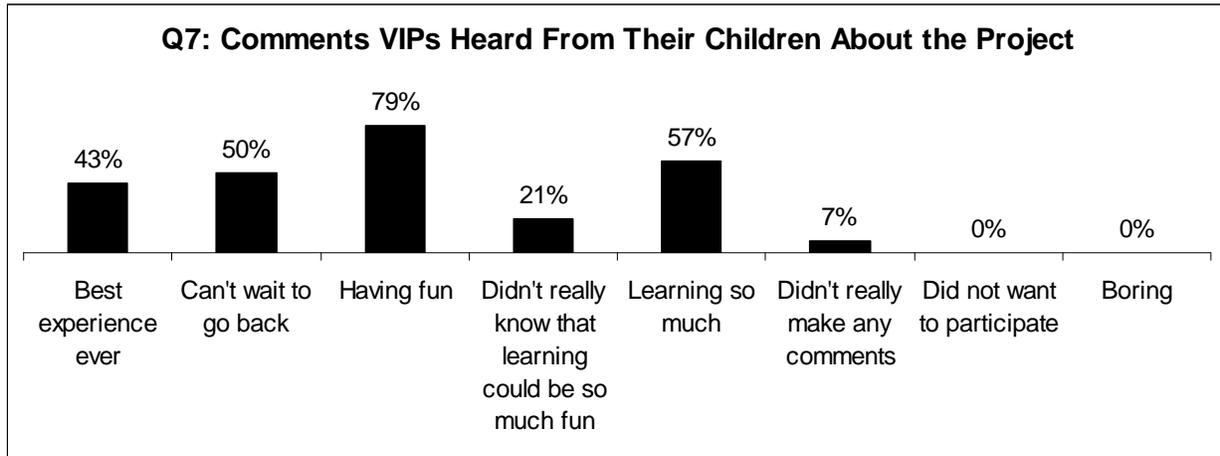
Q5: Rank your favorite/least favorite activities of the movie-making process on a scale of 1 to 5, with 1 for the least favorite to 5 for the most favorite:



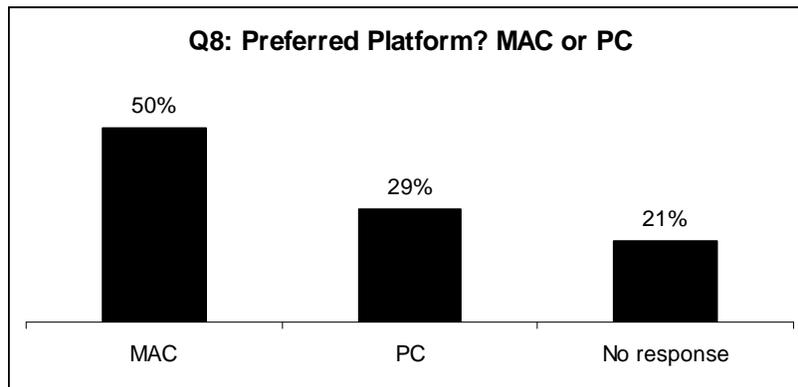
Q6: Rank the ease or difficulty of activities in the movie-making process on a scale of 1 to 5, with 1 for the most difficult to 5 for the easiest:



Q7: Rate the following aspects of the project and movie-making process on a scale of 1 to 5, with 1 for the lowest score and 5 the highest score



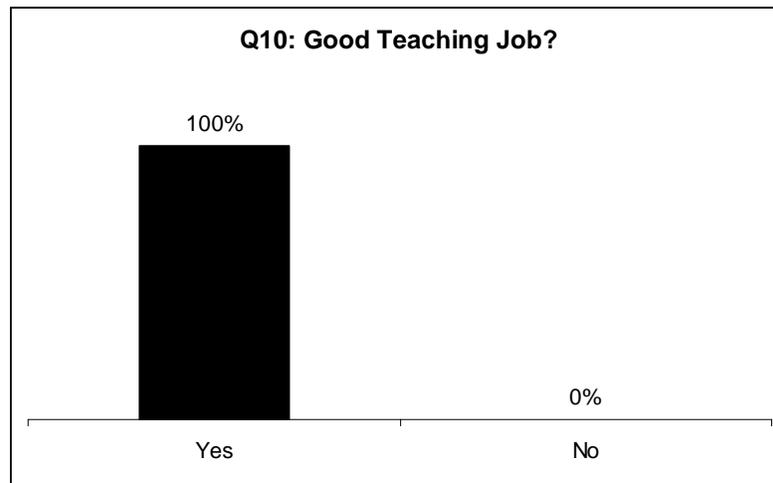
Q8: Which movie program did you like best --iMovie or PC Movie Maker?



Q9: Why?

- Because PC Movie Maker was better to understand then iMovie
- Because we get to do more things on it
- Because it has more effects
- It influenced me to think harder
- Because it had more advantages.
- Because it was interesting getting the pictures
- It had more options to choose from
- Because it's more fun
- I like them the same because I thought they had the same things
- Because you can do more things with it
- Because I know it

Q10: Do you think you did a good job teaching your VIP?

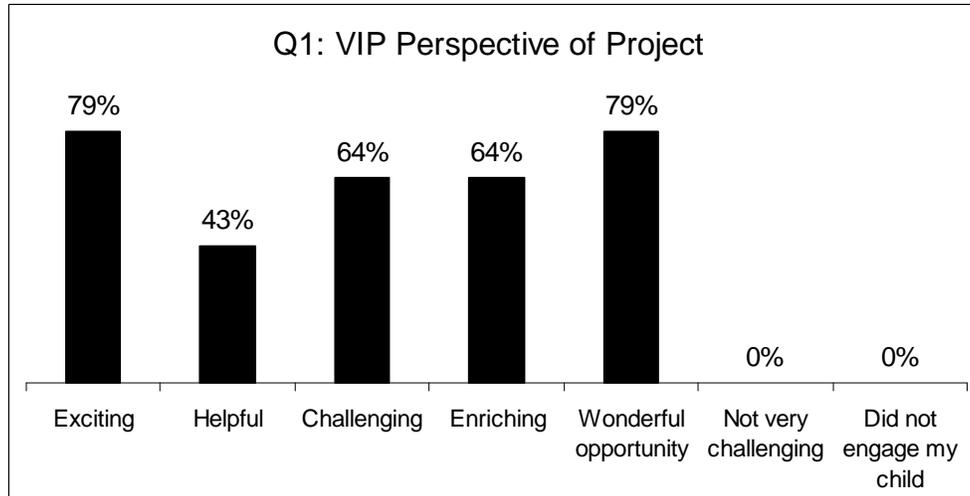


Q11: Why?

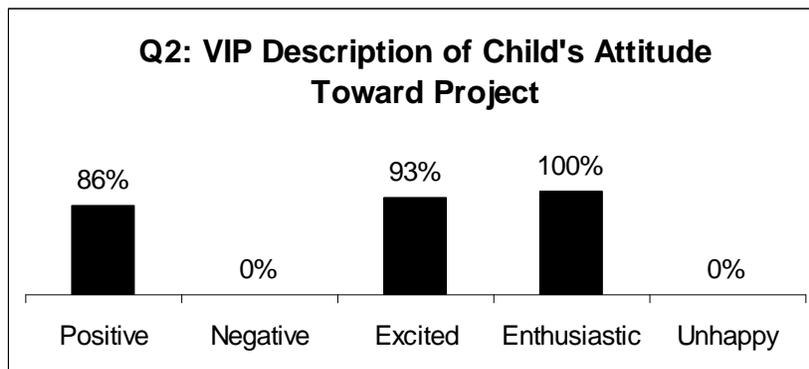
- Because she understood it and she learned a lot of stuff
- Because she knows a lot of things know (now)
- He learned a lot
- O yes, I think I did do a great time! I think so bk [because] she learned a lot from this experience
- Because now she can make a movie by herself (I think) LOL
- I did an OK kind of job because I didn't actually know everything I was going to teach
- I helped him with everything. I explaiend everything that I could even though I had to ask Ms. Jennifer for help!
- Because she learned a lot
- Because they understood better
- But I had a little difficulties.
- Because she payed attention
- Because it's easily

Appendix K Exit Survey Results for VIPs

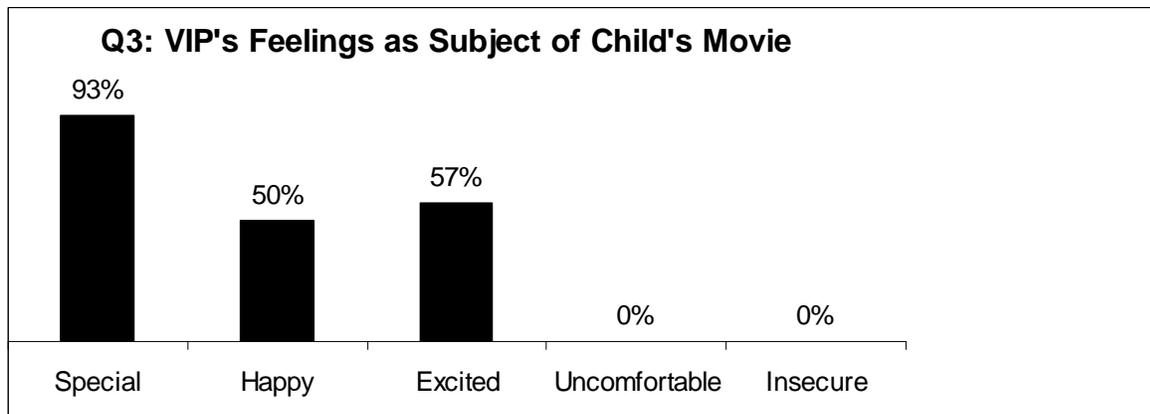
Q1: What do you think about the project?



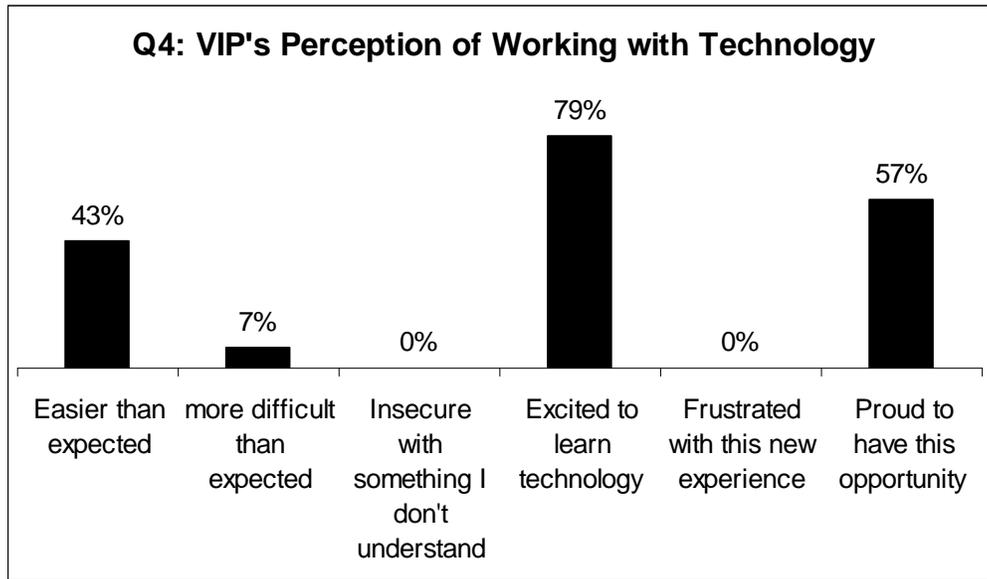
Q2: Describe the attitude your children had toward this project:



Q3. Describe how you felt as the "VIP" in your child's movie:



Q4: Describe how you felt as you worked with the technology:



Q5: Describe what you learned from your child today:

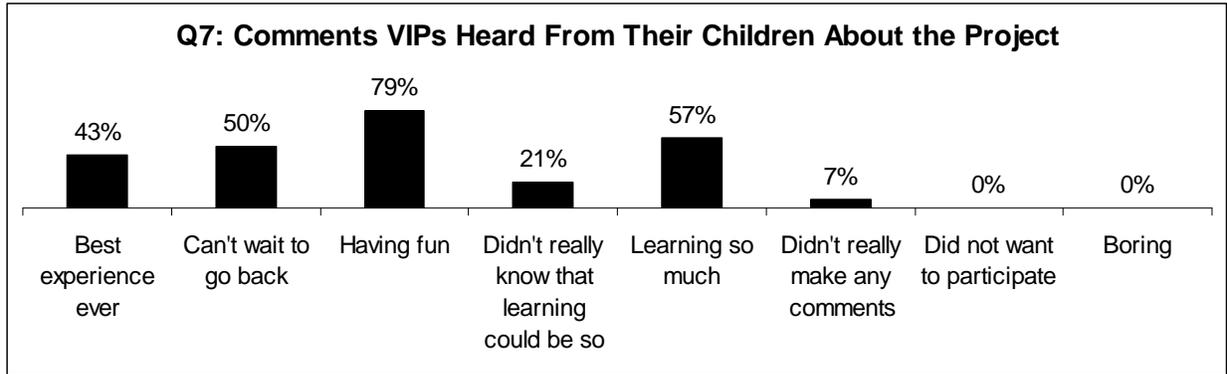
- My child taught me how to import music and pictures in the iMovie. He also showed me how to use the transitions in each frame.
- I learned the step-by-step procedures for creating the iMovie. I also learned how to add music to the iMovie.
- She is very creative & enjoys technology
- Kevin was very excited, very positive and willing to show his Grandfather the technology skills he has learned.
- I learned how to transition from one picture to another while adding both music & commentary to the film. This was a very enriching project.
- How to create an iMovie that reflects our family beautifully
- More advanced with technology (IMPR) than I thought
- I learned that he far surpasses the limits I anticipated which teaches me a lesson to stop clipping his wings.
- My granddaughter, Holly, learned very quickly. She has a very positive attitude. And I love her dearly.
- She is good with computers. Marsha is not afraid of challenges. She is very proud of me as her mother.
- I enjoyed seeing my son proficient at what he is doing. Just to see him happy.
- I learned about how iMovie technology works
- Learn so much about making a movie it was a good experience
- I learned how motivated he was about showing me what he had learned previously.

Q6: Describe what you think your strengths/weaknesses were as you worked with your child today:

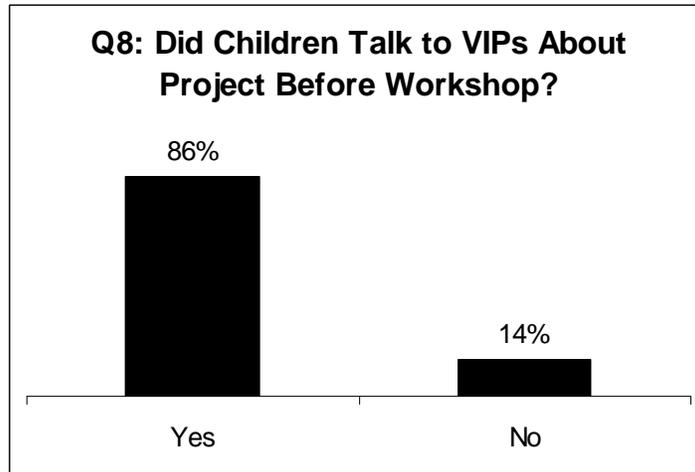
- My strengths are my familiarity with technology and my patience with new programs. My weaknesses was my domination of the computer, which resulted from excitement!
- Listening to him
- Strengths: we are both very creative; Weakness: we are both too excited
- Strengths: working together, understand his strength in technology with me; Weaknesses: not more time working together Grandfather & Grandson
- We both wanted to work on the computer at the same time.
- Strengths--creativity and technology literate & willingness to learn
- Strengths--promote creativity
- My strengths would be enjoying working with him and watching how he demonstrated and taught. The weakness would be that I interjected "mother-role" too often.
- Stressful
- My sight! (Smile)

- My strengths were being computer literate. One of my weaknesses was to be taught by my child. (Parents are supposed to know everything.)
- once you learn the computer it is quite simple
- did not know how to work a computer. But glad she is able to help me with the computer.
- My strengths were being able to learn from my child and my weaknesses were letting go of being in control.

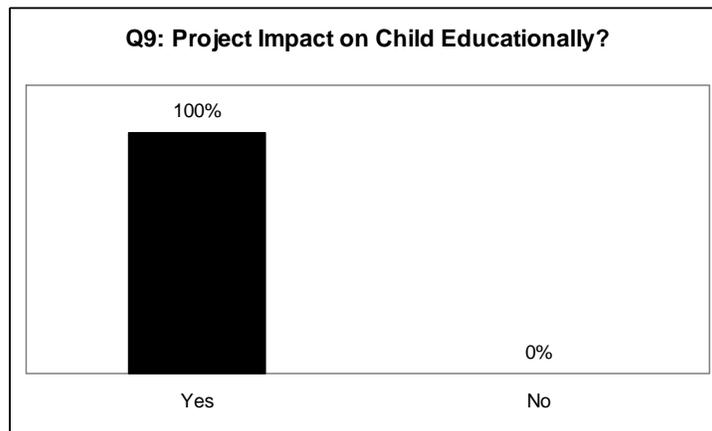
Q7: Tell the type of comments your child shared with you about the iMovie process:



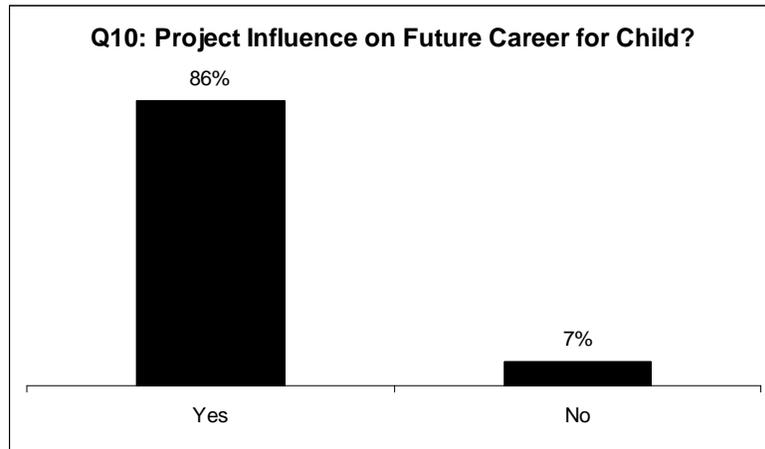
Q8: Did your child talk to you about the project before today?



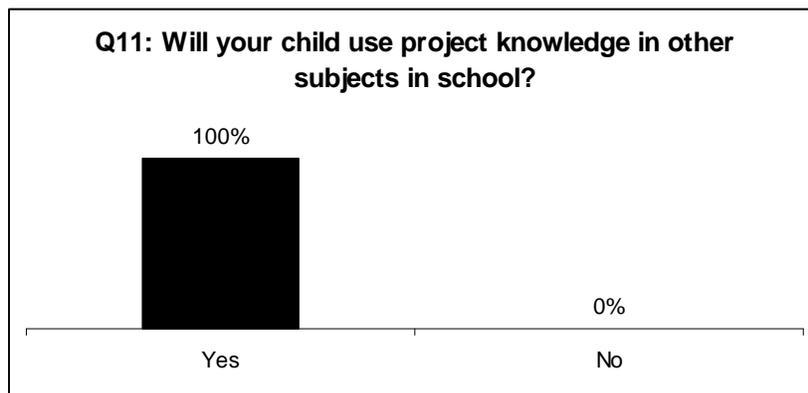
Q9) Do you feel this project helped your child educationally?



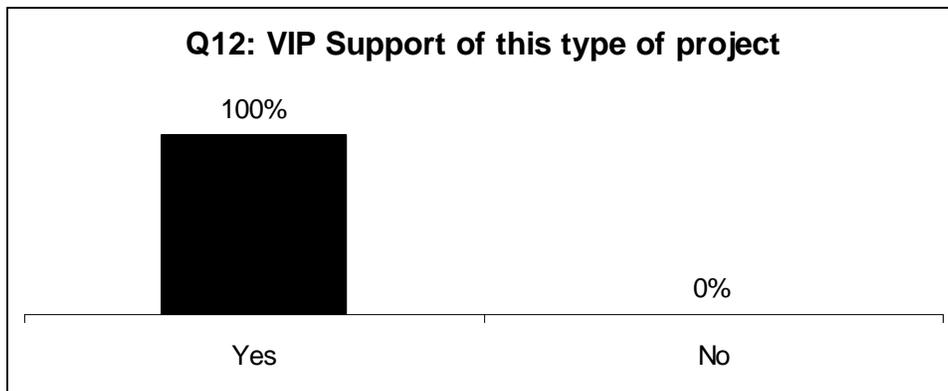
Q10: Do you feel this experience may influence your child's career choice one day?



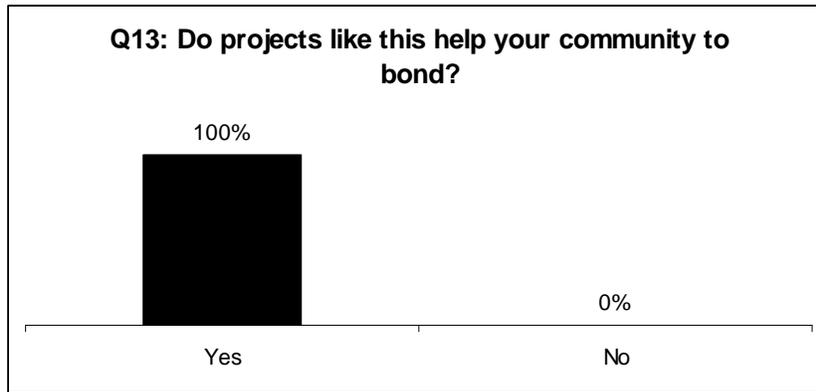
Q11: Do you think your child will use this knowledge in other subjects in school?



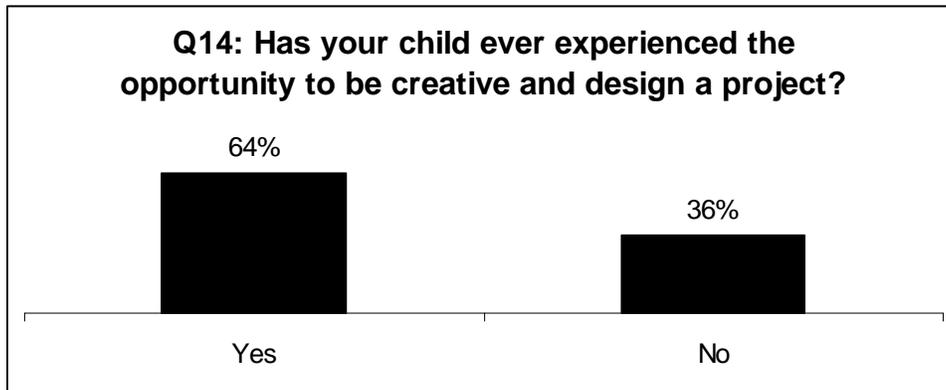
Q12: Do you support this type of project?



Q13: Do you think projects like this one will help your community to bond?



Q14: Has your child ever experienced the opportunity to be creative and design a project?



Q15: Rank the aspects of the project and movie-making process on a scale of 1 to 5, with 1 being the Lowest Score to 5 being the highest score.

