What's Sex Got To Do With It?
Gender and Collaborative Learning in Digital Filmmaking Projects

Nancy Tatebe

A Thesis

in

The Department of Educational Technology

Presented in Partial Fulfillment of the Requirements for
the Degree of Master of Arts (Educational Technology) at
Concordia University
Montreal, Quebec, Canada

May 2011

Concordia University

School of Graduate Studies

This is to certify that the thesis prepared

By: Nancy Tatebe

Entitled: What's Sex Got To Do With It? Gender and Collaborative Learning in Digital Filmmaking Projects

and submitted in partial fulfillment of the requirements for the degree of

Master of Arts (Educational Technology)

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final examining committee:

Claude Martel	Chair
Sandra Weber	Examiner
Robert Bernard	Examiner
Vivek Venkatesh	Supervisor

Approved by Richard Schmid
Chair of Department or Graduate Program Director

Brian Lewis
Dean of Faculty

Abstract

What's Sex Got To Do With It?

Gender and Collaborative Learning in Digital Filmmaking Projects

Nancy Tatebe

This qualitative study explores the factors that influence how mixed-gender groups collaborate on digital filmmaking projects at the CEGEP level. Prior research indicates that girls are often disadvantaged when working in mixed-sex groups within technology-rich learning environments, where boys have the tendency to choose more publicly acknowledged roles and dominate the equipment. The present study attempts to shed light on the social negotiations among teammates and the factors that contribute to the choice of production roles taken by girls and boys in mixed-gender collaborative video work. The study employs an action research design and involves my own final-year film/video production class comprised of 21 students at a CEGEP in the greater Montreal area. Results suggest that students' gendered content preferences and classroom reactions to these preferences, the process of negotiating film content as a collective, the level of confidence with the production equipment, academic motivation, as well as gender and identity performances were among the factors that influenced girls and boys to make certain choices regarding the roles they would occupy on a film crew. The study explores these various factors at play, and attempts to create more equal learning opportunities for girls and boys in the classroom.

For Glenn, Emiko, and Maya
whose love and patience
support me through thick and thin

Table of Contents

List of Figures

List of Tables

Introduction

Filmmaking is a collaborative effort that brings together the expertise of many individuals with technical, creative, and organizational skills. However a cursory look at the credits on most commercial feature films from Quebec indicate that the majority of creative technical roles such as director or cinematographer are held by men while organizational roles such as producer and production manager are held by women (Burgess, 2010; Lauzen, 2008).

In my experience as a CEGEP film teacher, I've observed several digital filmmaking classes and noted that girls and boys seem to replicate this phenomenon in the classroom while producing smaller scale video productions. Because of the collaborative nature of film and video making in addition to the limited availability of school equipment, my students are obliged to work in groups to produce video projects. In mixed-gender groups, I notice that boys tend to choose authoritative roles on set that require comprehensive technical knowledge such as director and cinematographer—roles which have a strong influence on the creative outcome of the film and roles where the work is not easily 'alterable' after completion. On the other hand, female students in mixed-gender groups have the tendency to choose non-authoritative roles that highlight the non-technical or creative /organizational skills that come into play off the set and in isolation such as writer, producer, and editor. It may be argued that these roles favoured by girls have the potential to influence the creative outcome of the films, however these are also roles where the work remains more open to negotiation as well

as being more easily altered by other group members after completion. For example, editor is a creative technical role but the editor often works in conjunction with or under the supervision of the film's director, and because films are edited digitally, an editor's work can be easily changed. Additionally writers can also greatly influence a film but at this student level, full scripts with complete dialogue are rarely written and stories are often changed or improvised on set, again under the supervision of the director.

Observing my students fall into similar patterns and choices each year, I became interested in analyzing the factors that contribute to the choice of production roles taken by girls and boys in mixed-gender collaborative video productions at the CEGEP level. The notion of 'choice' may be misleading and students may in practice be influenced to take on roles according to a much narrower set of social negotiations both within and outside of the classroom. Although students at this age are still relatively young, gendered patterns of behaviour are nonetheless established throughout video and filmmaking classes, where access to certain kinds of on-set roles provides the experience and the development of skills that lead to entry into prestigious university film production programs or competitive trade schools. These in turn, can determine future career choices or opportunities in the professional film industry.

The present research is timely, not only because it attempts to address the needs of those students interested in pursuing higher education in film production, but also because collaborative media production within schools is no longer unique to the film and video classroom. Collaborative media is being used increasingly as an educational

tool to teach a wide variety of disciplines and transferable skills that fall outside of the visual arts.

Due to the dearth of studies on gender differences in the use of video production equipment, a study that examines the factors that inform girls' and boys' behaviour in relation to the collaborative use of technology will help to address this educational issue, not only to improve my own teaching practice, but to ensure more equitable opportunities for both girls and boys in the classroom.

Chapter 1: Surveying the Field

Central to any discussion about gender and contemporary film/ video making (Note: the two terms, 'film' and 'video' will be used synonymously throughout the study) are the unavoidable issues surrounding gender and computer technology. Much like all other media production, filmmaking has rapidly moved away from mechanical cameras and editing machines and progressed to digital technology that requires students to be familiar with computer concepts such as image compression, audio and video formats, as well as editing software. Proficiency with computer technology has become an indispensable and necessary skill in the filmmaking process. However the body of research with respect to gender and computer technology point to differences between girls' and boys' use of, and experiences with computers, and it is precisely these differences that could have an impact on girls' and boys' opportunities for learning in the media classroom.

Girls and computer technology

With respect to computer technology, prior research indicates that boys have traditionally been more interested in and confident with computers than girls (Campbell, 2000; Seiter, 2005; Shashaani, 1997; Volman & van Eck, 2001). Much research has been done to look at the possible factors behind this finding. For example in a study conducted by Jensen, De Castell, and Bryson (2003), social factors were identified as inhibiting girls from taking computer courses at their school. It is not that the girls were less interested in computers, but their choices were "mediated by whether or not they

(felt) comfortable, supported, or self-reliant on the computers enough to choose to take those courses. In other words, they acknowledged that for girls, it is not just a matter of 'choosing;' that choice for them was arbitrated by social factors like whether or not they perceived the 'climate' of the computer lab or classes as being dominated by boys and by the presence of friends" (p. 567). This climate and context is similar to that in the filmmaking classroom or on student film sets where girls must first demonstrate the 'interest' in digital movie cameras, editing, and sound equipment prior to gaining access to the technical roles on a crew. However much like the girls in Jensen's et al. study, such interest may also be mediated by other social factors.

This emphasis on interest is an important one because of the circular relationship between interest, access, experience, proficiency, and eventual confidence with computers (Bhargava, Kirova-Petrova & McNair, 1999; Jensen et al., 2003; Shashaani, 1997). Within this relationship, students who show an initial interest in computers actively seek out opportunities to access them, and thereby gain experience and proficiency in their use. This proficiency leads to increased confidence, which in turn engenders further interest, and in this way the cycle continues. However, if girls do not demonstrate the initial 'interest' to access computer technology at the outset due to social factors as underlined by Jensen et al., they will lose the opportunities to gain valuable experience, proficiency, and eventual confidence.

In addition to interest, access to technology is also problematic for girls in the mixed-gender classroom. Prior research indicates that boys often dominate the equipment leaving girls with the organizational or low-status non-technical work

(Buckingham, Grahame, & Sefton-Green, 1995; Stack, 2009; Volman et al., 2001). Within a school setting where all students need to share the limited number of computers and video cameras, girls' access, participation, and consequently their confidence levels can be seriously compromised. Moreover, when girls do succeed in accessing the equipment, boys have been found to challenge the girls' technical knowledge regardless of their own level of expertise (Jenson et al., 2003) by among other things, dominating "input devices, and ridicul(ing) female performance" (Campbell, 2000, p. 134). This kind of behaviour could be extremely detrimental in collaborative video work, where on-set responsibilities are public performances and technical skills, if performed poorly, are obvious to all members on set as well as in the finished product. It is possible that girls, lacking confidence in their computer abilities, will consciously or unconsciously avoid the more vulnerable roles of director or cinematographer—roles where the handling of digital equipment needs to happen in a public forum where technical mistakes are not only highly visible, but difficult to fix. However by deferring all technical roles to the boys, girls limit their access and proficiency with the equipment—two elements that are a pre-cursor to creative input and control on a student film at this academic level.

Ching, Kafai and Marshall (1998) also refer to the issue of access and state "If girls have little access to computer resources in these integrated classroom settings, they not only miss out on the opportunity to develop technological literacy, but they also risk missing out on learning other subject matters being mediated by computer use as well"

(p. 61). With the convergence of so many media and its integration in all areas of film and video making, this has never been more relevant.

Opposing viewpoints regarding girls and computer technology

The aforementioned point of view regarding girls and technology is not unanimous and is evolving. Other studies indicate that girls' and boys' attitudes towards computers are fairly similar and is attributed to the fact that this generation of children has grown up with computers and have had access and therefore experience with technology from a young age (Goldstein & Puntambekar, 2004; Hsu & Wang, 2003; Mazzarella, 2005; Schweingruber, Brandenburg, & Miller, 2001).

There is also a growing body of research that explores the fascinating ways that girls actively participate in computer technology both as consumers and producers (Mazarella, 2005; Polak, 2006; Ross, 2010; Stern, 2008; Weber & Mitchell, 2008). This work is promising and suggests that we are entering an era where girls and boys can participate equally in technology-rich classrooms. Schweingruber et al. (2001) refer to the narrowing gender gap with respect to computer interest and use, and raise the issue of girls' increased access to computers at home and how this has contributed significantly to evolving attitudes and confidence. They state, "Learning to use the computer is the first step toward active participation in technology's benefits. Students, both males and females, attributed their learning of computer skills largely to 'messing around on it'" (p. 136). Although this may be true for traditional computer use, this is

where the main difference between access to digital video technology and traditional computer use lies. Whereas personal computers and consumer level video cameras and software are easily available and accessible to young people, higher-end video production equipment and software are not. The 'messing around' that students do to gain experience and confidence with the video equipment continues to happen either during class time or on set during group productions and not on an individual basis, due to the limited amount of equipment available in a school. Girls still need to gain access to equipment during productions, and though it is plausible that the advances made with respect to girls' levels of confidence with computers in general could contribute to an increasing number of female students taking on technical roles in video production, substantial barriers to access and therefore experience and confidence still remain.

Girls and collaborative video work

The abovementioned research deals largely with computer use and collaborative group work, where girls are doubly disadvantaged, not only by their lack of access and confidence with the technology, but also because of the dynamics inherent in mixed-gender collaborative work. Although these particular difficulties faced by girls are frequently examined in the existing literature, very few studies look at the specific context of collaborative digital video making and the unique characteristics of its production process—a process that is inherently hierarchical.

Within the professional film industry, departments and power structures have been established precisely to increase efficiency and avoid having to come to a consensus among all creative collaborators. In order for students to emulate the professional industry, as they are expected to do in most advanced-level film production courses, and to complete their work on time, a reliance on this established power structure is extremely difficult to avoid (Buckingham et al., 1995). Within this context, social inequities are inevitable as only a handful of students get the opportunity to perform the roles that determine the creative direction of the project such as director or cinematographer. The remaining group members ultimately need to fill the other roles of organizing the group, performing, holding microphones—all roles which are crucial to the proper functioning of the filming process, but certainly not equal in terms of creative input or power within the group. Ironically, it appears that the actual process or model of professional filmmaking is at odds within the classroom in which it is being taught, where in theory, equal opportunities should be available to all students.

Given the fact that girls are often intimidated by boys within the classroom (Sadker & Zittleman, 2009) and that boys systematically take over the equipment and limit the girls' access there are considerable obstacles for girls to overcome in order to take their place within a film crew's social hierarchy. In such a context it is inevitable that problematic issues involving gender and power should arise.

Social aspects of gender and identity

In addition to looking at collaborative work and issues of interest, access, experience, and confidence with computers, one cannot ignore the social processes surrounding gender. Gender is a complex issue that is not simply biologically determined but inexorably intertwined with identity, which at the CEGEP level, many young people are still in the process of defining. Moreover, because identity is socially negotiated and performed (Baxter, 2006; Buckingham, 1993; Gauntlett, 2002; Giddens, 1991; Ross, 2010) a detailed look at the relationship between gender and identity could also shed light on the different factors that influence girls' and boys' choices with respect to collaborative work, technology, and filmmaking.

According to Anthony Giddens (1991) personal narratives and lifestyle choices are ways in which individuals construct their identities and associate themselves with a larger recognizable group. These choices can dictate everything from clothing style to restaurant choices, and as David Gauntlett (2002) explains within the context of Giddens' work, "Lifestyle choice, then, can give our personal narratives an identifiable shape, linking us to communities of people who are 'like us'—or people who, at least, have made similar choices…" they are "a visible expression of a certain narrative of self-identity…" Gauntlett goes on to reference Giddens by stating "An identity fitted into a lifestyle is not entirely free-floating. A lifestyle is a rather orderly container for identity, each type coming with certain expectations" (p. 103).

If this is the case, one can speculate that gender is socially constructed in similar ways, and that masculinity and femininity could also be seen as social performances that

are played in order to identify with the larger 'lifestyles', or the categories of 'male' or 'female'. This has tremendous impact within the technology rich classroom as the social constraints placed on girls and boys in terms of performing appropriate, gender-specific behaviour can affect their perceived relationships with technology and its use. For example, many researchers have explored male and female self-perception and the unspoken understanding that boys and men are inherently better with computers and technology than girls and women (Jenson et al., 2003; Seiter, 2005).

In the previously mentioned study conducted by Jenson et al. (2003) a computer lab was set up in a Canadian primary school and girls and female teachers were trained on the computers before any of the male students or staff. This was done in an effort to re-define gender-specific identities in relation to technology and to establish female experts or role models within the school community. These experts would then in turn, train the male students and staff. The researchers found that when teaching their male peers, "girls were often not listened to by the boys they were trying to teach, and, notwithstanding the girls' superior technical knowledge and skills, they became increasingly silent in mixed-sex instructional settings" (p. 566). The researchers go on to conclude that for some of the girls in their study, there was a presumption that the boys possessed a superior and innate understanding of computers—a feeling that motivated the girls to defer to the boys' presumed expertise.

It is possible that boys' presumed technical expertise is one of many identity performances played out within the classroom. Jensen et al. (2003) also suggest that women and girls "actively resist participation in masculinized technologies like

computers because it directly 'threatens their identities as feminine,' and because these are already categorized as activities that are appropriate for men" (p. 562). Furthermore, they go on to state that "Masculinity can therefore be seen to be constructed, at least partially, through assumptions related to technological skills and competence: Technological competence, so seen, has less to do with actual skills and more to do with construction of a gendered identity that is, women lack technological competence to the extent that they want to appropriately perform femininity; correlatively, men are technologically competent by virtue of their performance of masculinity" (p. 562).

These performances and the presumptions that accompany them support the belittling of female technical expertise and the silencing of girls in the technology-rich classroom. The notion of 'voice' or lack thereof has profound implications in collaborative work. The presumed authority, confidence, expertise, and knowledge that accompany voice can affect the decision-making process in mixed-gender groups. David Darts (2006) makes reference to group dynamics within the classroom and discusses how assertive personalities within certain groups in his class "obscur(ed) the input of the more timid students" (p. 9). Although he does not directly refer to gender, it nonetheless points to some problematic issues that may arise.

This is not to suggest that all girls and boys perform gender in this way. It has been suggested that femininity and masculinity are but one role or performance among many in which young people can engage (Gauntlett, 2002). However, performing gender in atypical ways is done at great risk. For example, David Buckingham (1993) in his article entitled, *Boys' Talk: Television and the Policing of Masculinity* makes reference to

the fear that some boys have of being teased or bullied should they deviate from acceptable masculine behaviour. In order to affirm their identities as male, he talks about homophobic behaviour in pre-adolescent and young adolescent boys who adopt certain modes of speech, bodily posturing, and preferences in violent media content specifically to appear to conform to a masculine code of conduct that distances them from anything that could be considered feminine (p. 97).

Similarly, Sara Mills (2006) in her study of performance anxiety of academics speaking at conferences, talks about the "masculine discourses" (p. 61) within such contexts, and how speaking out within the public sphere was traditionally perceived as a masculine practice. Furthermore she contends that this may be one of the reasons she found that women were more likely to suffer from performance anxiety within such contexts because of the need to negotiate the contradictions between this masculine practice and their sense of femininity (p. 63). She goes on to describe a female academic who, after successfully presenting a paper at a conference, flirts with older men to re-affirm her sense of femininity. Clearly, deviating from the norm of acceptable gender performances requires a mature strength of character that is even difficult to attain in adulthood, much less in adolescence. This abovementioned behaviour is similar to that performed in the CEGEP filmmaking classroom at an age where young people are still defining and constructing their identities and sense of self, of which gender plays an integral role.

The power and resonance of gender performances for young people cannot be overlooked within the context of collaborative video work. The pre-conceived notions

about appropriate gender-specific behaviour with respect to technology within the very public sphere of the classroom are difficult to change because they are so intricately intertwined with identity. In effect, girls may be consciously or unconsciously 'performing' femininity by not choosing technical roles or roles with substantial on-set authority and technical expertise.

Gender identity and content preferences

Gender performances may play another role in the media classroom. It has been suggested that girls and boys have different media content preferences where boys typically choose scenarios that highlight action, adventure, fighting, threat, and thrill whereas girls' themes revolve around harmony in personal relationships, romance, and friendship (Drotner, 1989; Götz, Lemish, Aidman, & Moon, 2005; Lemish, Liebes, & Seidmann, 2001). Much like computer use, this may have less to do with essentialism and more to do with the social negotiations surrounding gender. For example in the previously mentioned study by Buckingham (1993) the author makes reference to *Thundercats*, a violent cartoon with a predominantly male fan base. In his study he affirms that, "statements about what you like or dislike provide a powerful means of defining the 'self' and its relation to others. While this may not always be an explicit or self-conscious process—or even a matter of 'impression management'—the centrality of gender undoubtedly made it so here. In taking up a position on the cartoons, the

children were also consciously claiming a particular 'subject position', effectively defining themselves as 'masculine' or 'feminine'" (p. 93-94).

This in and of itself would not be so problematic in a collaborative filmmaking effort if it were not for the socially constructed value system against which film content is judged, and the fact that more often than not, stereotypically female preferences such as the romance, the 'chick flick', and the soap opera are the least valued (Moss, 1993). If female students are indeed interested in representing this kind of content in their films in order to reflect their own personal preferences or visions, they must assert themselves and negotiate their film's content and subject matter with other group members. Once again, given the tenuous position of girls within the collaborative and hierarchical film crew, this could be extremely difficult and there is a danger that silencing the girls and not valuing their stories, could potentially cause them to disengage from the process and choose only those roles with the least amount of creative investment.

An examination of all of these different issues will hopefully shed light on the factors that contribute to girls' and boys' choices of production roles in group video work and ensure the continued engagement of girls in the filmmaking process.

Chapter 2: Methodology

Setting & participants:

The present study took place at a CEGEP on the South Shore in the greater Montreal area that caters to students living in the middle-class suburbs around the college. The participants were an existing cohort of students taking my *Digital Filmmaking IV* class, a final-semester production course within the Film/Video/Communications profile of the Creative Arts department at the college. Of the 22 students in the class, 21 agreed to participate in the study (the one student who did not participate was absent during the class in which I introduced the study and in which the consent forms were signed, and the surveys completed.) 14 of the participants were female, and 7 were male—all between the ages of 18 and 20, and all largely middle class. The majority of participants were from Western European backgrounds with the exception of 2 students of Middle Eastern descent and 2 students of Asian descent.

The *Digital Filmmaking IV* class was selected for study for a variety of reasons. First and foremost, they were my own students with whom I had developed a relationship throughout the year and a half that I had taught them and in whose learning experiences I was personally invested. Moreover, my status as an 'insider' proved to be advantageous during the data collection process where many sensitive and personal topics were discussed.

A second reason for choosing this sample of participants was the fact that they had already taken three previous levels of filmmaking classes at the CEGEP where, in theory, each student would have had previous access to the equipment in order to gain

an overall understanding of all of the steps in the filmmaking process. Purposefully sampling this advanced level group from the more general population of film students at the CEGEP, was the most effective way to assess if girls and boys have truly had equal opportunities throughout their previous filmmaking classes and allowed me to draw on their broader experiences when exploring the factors that either aided or inhibited these opportunities.

My third and more significant reason for targeting this group is that the students in the *Digital Filmmaking IV* class work on larger-scale projects that emulate a professional production where each member of the group takes on a specific role such as producer, writer, director, cinematographer, editor, sound recordist, or actor. From my past experience observing the process of this video project, I noted that girls often chose the role of producer, which at this student level, is usually a secretarial and organizational position rather than a role with any true authority, as well as writer, and editor. Looking at this group throughout the different phases of this particular project was the most revealing at understanding the central phenomenon, rather than looking at a group of students at one of the lower levels of filmmaking where, in theory, the group members share the work equally and are not evaluated for any one creative position.

A fourth reason that this particular group was targeted is to minimize the ethical issues inherent in using one's own students in a study. The participants were in their final year of production courses and, unless they failed the course, would not need to be evaluated by me in any future filmmaking class.

Throughout the study all possible care was taken to ensure the participants' rights. After I introduced and described the study in my class, I handed out consent forms with codes that corresponded to surveys so that the answers provided on the surveys could not be linked to individual students. I left the room while students filled out the forms and only returned to the room after one of the students had collected all of the coded surveys for me to work with, and had placed the consent forms in a sealed envelope. This envelope was brought to the department coordinator who kept the envelope sealed until I had submitted my marks at the end of the academic year. In this way, it was impossible for me to identify any non-participants during the course of the semester or inadvertently intimidate my own students into participating.

Evidently it was not possible to ensure anonymity for all forms of data collected such as observations, student journals, and class assignments. However in order to protect the identities of the participants, all of these activities were integrated into the pedagogical design of the class and student journals and assignments were mandatory for all students regardless of their participation in the study.

Participants were also made aware that they could withdraw from the study at any time (see Appendix A). During my introduction to the study, I explained to them that should they wish to withdraw, they could speak to the department coordinator who held the envelope of consent forms and he would destroy their forms without me knowing until my grades were submitted at the end of the semester.

Overall design:

The study employed an action research design where I attempted to address the educational problem as experienced in my own classroom in order to improve my classroom practices and balance any possible inequities in my students' learning experiences.

The study also employed a grounded theory approach informed by the work of Harry, Sturges, & Klingner (2005), where each phase of the data collection process informed the next and progressed from a broad overview of the central phenomenon to a very narrow study of specific issues.

In order to ensure methodological rigor, I triangulated the data from a wide variety of sources which included a survey, a focus group, e-mail interviews, multiple 3-hour observations over a 15-week period, reflective field notes, and individual student journals. This data was also supported by text-based and video-based assignments that were handed in by each of the participants as part of the *Digital Filmmaking IV* class. Such assignments helped to place the participants' self-reported data as well as my own biases into context and demonstrated in very visual and concrete ways the participants' individual creative and technical filmmaking skills.

Because I was investigating an educational issue in my own classroom and was the sole observer (and mostly participant observer) during all classes, extra care needed to be taken to ensure interpretive rigor. Although the intimacy that I had developed with all of my students had helped to explore some of their feelings about the issues, I needed to ensure that there was a balance between my role as subjective teacher and

objective researcher. When looking at the data, it was difficult for me to analyze it outside of the context of the students' behaviour over the course of the year and a half that I had known and taught them. In order to offset these biases, an external audit was conducted to verify the codes that emerged from the data. The external audit was conducted by a professional in the film industry who is knowledgeable about the production process but who was not familiar with the individual participants.

Member checking as it is traditionally understood, was not conducted as the study deals with sensitive issues and there was concern that individual participants may not want to acknowledge actual behaviour but rather their desired behaviour. What was done instead was a focus group at week 12 where I shared some of my interpretations from the data that I had collected up to that point and asked the group as a whole to support or refute some of the interpretations—the idea behind it being that members of the class could keep each other in check. In order to ensure that each individual had a voice and was not intimidated into consensus, the discussion was used as a point of departure and each participant was subsequently interviewed privately by e-mail.

Description of data collection:

As previously mentioned, many forms of data were collected throughout a 15-week period in an effort to triangulate the data, keep personal biases in check, and offer the broadest view of the central phenomenon.

Figure 1 illustrates the structure and chronology of the various stages and types of data collected. The survey, focus group, and individual e-mail interviews were done chronologically where the results of one helped to progressively narrow the scope of questions asked in the next in an effort to identify the main themes of the study. Concurrent to this were the collection of student journals, assignments, class observations, and the writing of detailed field notes. This concurrent data was a constant point of reference that would also inform the direction of the study and determine the types of questions and issues that should be covered in the other data collection process as well as refine the collection process itself. The following paragraphs further clarify selected data collection techniques.

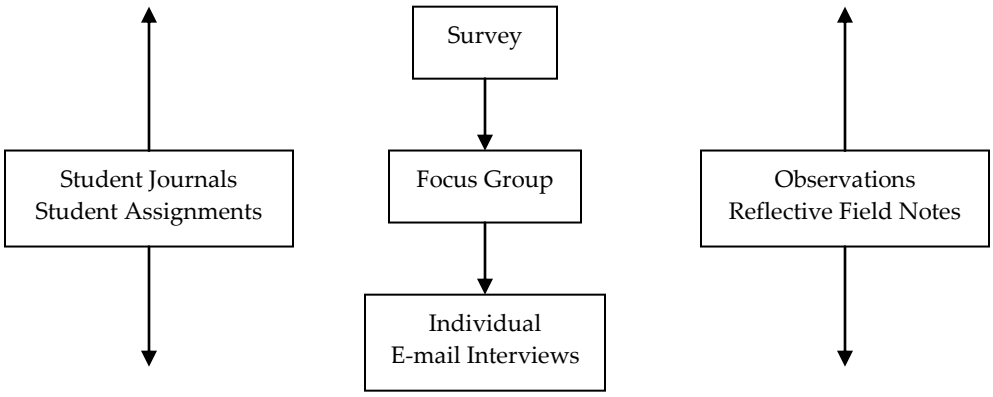

Fig. 1 Illustration of the structure and chronology of the data collection process

Survey:

The study began with a survey that was handed out to each of the participants and that included both open and closed-ended questions (see Appendix B). The main purpose of the survey was to gain a broad and general understanding of participants'

technology use, level of confidence, preferred production roles, as well as past experiences with collaborative video work. The results of the survey were combined with the data from the observations, reflective field notes, assignments and journals and helped to cue more pointed questions for the focus group and the e-mail interviews sent to students later in the process. Because the survey was completed during class time, I was keenly aware that participants might try to answer questions in ways that they felt I, as their teacher, wanted them to respond. As previously mentioned, in an effort to encourage the most candid responses under the circumstances, the surveys were handed out at the same time as the consent forms and given corresponding codes so that the identities of the participants would remain unknown until after my grades were submitted at the end of the semester.

Student journals:

Weekly e-mailed student journals provided highly individualized first person accounts of the participants' progress as well as the process of the video projects, and yielded the richest data. Because they were collected concurrently to all other types of data, I was able to respond to the individual e-mails throughout the study, cue the types of issues that could be further explored, or pose specific questions to clarify the content and focus the data even further. In a sense, these student journals became a private conversation or unstructured interview with each participant that spanned the entire semester. E-mail proved to be a much more efficient and intimate way to communicate

with participants who were already accustomed to sharing with each other in this electronic way.

Furthermore, I discovered that through this process, something interesting emerged. It appears that the medium itself self-selected which participants were 'interviewed' in the sense that only 9 of the 21 participants journaled regularly. This is noteworthy because it identified which students were most likely engaged in the class' activities and interested or invested in making collaborative video work efficient and fair. Also, because the journals were made mandatory as part of the class to ensure that non-participants could not be identified, and were assigned a value of 5%, it also identified which students were the most academically driven or keen to succeed in the class. Participation with the journals confirmed that these were not students who would fail to make their collaborative video projects work due to apathy or disinterest in the course, and identified those whose comments might provide the most useful data.

It should be noted that these participants' desire to excel academically could have played an unanticipated role in the types of responses obtained from the journals. My interpretations relied heavily on these student journals and e-mail interviews and it is possible that the content of these sources of data were written in ways that included information the participants thought I might want to hear. Although this is a weakness of the design, I nonetheless attempted to verify the information from the journals against all other forms of data collected.

The journals self-selected in another interesting way. Although the ratio of girls to boys in the class was unequal and that ratio was maintained in those students who

completed journals regularly, it nonetheless appears that the journaling process and the sharing of internal thoughts and feelings with a female instructor, were not something that the boys were accustomed or comfortable doing. Most of the boys in the class were not sending weekly journals on a regular basis and only those who were particularly driven by grades would occasionally submit a short entry that failed to go into much depth. This fact contributed to and supported some of the themes that emerged from the data itself and helped to shed light on the central phenomenon.

Class assignments:

In addition to the student journals, the content of other class assignments both written and digital was also examined. Some examples include written character sketches and scripts, filmed monologues of invented characters that were performed by the students themselves, the Individual Film project where the student was expected to assume the responsibility of all of the crew positions, and a larger-scale group film project that simulated as much as possible a professional film where each student had to choose and perform a specific production role.

Looking at the content of these assignments helped to place students' self-reported creative and technical abilities into context. More importantly, it proved extremely productive in comparing the outcomes of their projects when working individually versus working in collaborative groups. For example it was useful to look at the subject matter, characterization, and storylines of girls' and boys' projects when they worked alone and where, presumably, they would have chosen their ideas

according to their own preferences. This could then be compared to the subject matter, characterization, and storylines of films produced by mixed-gender groups where content and choice of crew positions would have had to be negotiated among all teammates.

Observations and field notes:

Two other major sources of data that also substantially influenced my interpretations throughout the study were the in-class observations and my extensive field notes written throughout the semester and concurrent to all other phases of data collection. These reflective field notes became my detailed first person account of the participants' comments and behaviour during class screenings of their videos or readings of their scripts. In these notes, I also considered the general content of their individual and group assignments as well as differences in reactions and levels of support for each of their efforts during class critiquing sessions.

In the original design of the study, I had planned to act as a non-participant observer during parts of the class when film production teams were having their group meetings. However once again, I became aware of my dual position as instructor and researcher and discovered that observing the groups at a close enough distance to hear their conversations altered what was discussed and artificially kept the members of the group on-task. Additionally, the participants would try to engage me with questions and comments, which would ultimately change my status from non-participant to participant observer. I also did not want to address the issue by using video to

document the meetings, because the participants were extremely knowledgeable in ways in which to manipulate visual media, and I believed that the presence of a video camera would also modify students' behaviour to the point where any results would be so atypical as to be useless. Moreover, the meetings themselves were much too short to enable the participants to become accustomed to the presence of the camera.

As a solution, I required that each group's producer keep detailed minutes of their own meetings to be handed in as part of their final film projects. This provided me with access to the content of the groups' discussions that not only happened in-class, but more importantly, out of class as well. In one particular instance, it also shed light on the creative process of a mixed-gender group that was equally split between girls and boys, and described in detail the negotiations involved in choosing the content of their video—something that was very useful in informing me about the central phenomenon.

Focus group and e-mail interviews:

At week 12, near the end of the semester, an unstructured focus group was arranged at the beginning of class time where I attempted to verify some of my interpretations of the students' survey responses, journals, as well as my own observations of their class discussions. Themes that had emerged from the data I had collected up to that point were discussed and the participants were asked how accurately they reflected their points of view. The students' responses formed a point of departure for the e-mail interviews.

The e-mail interviews were used to ensure that no one dominant voice could lead the focus group. During these asynchronous interviews, three questions were formulated as a follow-up to allow the quieter members of the class to voice their opinions or privately contradict what had been discussed in a group setting. In the original design of the study, individual taped interviews were planned with each of the 21 participants, but as I progressed through the study, looked at the other data collected and the ways in which it was collected, it became evident that this would not be feasible for a number of reasons.

Firstly, the limited scope of the study and the time frame would not allow me to complete the interviews and secondly, I was yet again keenly aware of my own position of power and felt that the one-on-one interviews would be intimidating for some and as a result provide misleading data. Thirdly, I suspected that a single 15-minute interview with 21 students would yield little useful or in-depth information. My experience with the student journals proved that many needed several journals before they were sufficiently comfortable with me to be candid. As a solution to this issue, I used the existing framework of the journals to e-mail 2 interview questions to the participants—questions that they could answer at their own convenience and level of comfort (see Appendix C). These questions fulfilled the goal of the one-on-one interviews in that participants could express their own individual perspectives as well as provide them with a certain level of discretion that comes with asynchronous communication.

The same self-selection happened once again where only those who were journaling regularly responded to the questions with the exception of 2 new participants who wanted to improve their overall grades.

Chapter 3: Analysis

The data was analyzed with both SPSS and HyperRESEARCH. Ordinal data from the survey was analyzed using SPSS to track general trends and enable me to look at the same information from a variety of perspectives. This was especially useful as the study progressed because it offered a point of reference and comparison to the inherent subjectivity of some of the other sources of data such as the observations and field notes. HyperRESEARCH was also used to organize the vast amount of textual data collected. All participants' journals were imported into the software as well as all responses to the e-mail interviews, my complete field notes, and open-ended responses to survey questions.

Open coding was used and 43 codes emerged (see Appendix D). These were further collapsed into six main themes that were highly supported by the data collected. The six themes were "Confidence levels with technology", "Preference and selection of production roles according to gender", "Projections of self in cinematic content", "Differences in content when working individually versus working collaboratively", "Public reactions to gendered content" and "Academic and personal motivation".

Chapter 4: Results

Confidence levels with technology

Self-reported confidence levels with technology were recorded in a variety of forms of data most notably in the survey, the journals, and the e-mail interviews. Figure 2 demonstrates survey results of participants' self-reported levels of confidence with the video equipment according to gender. Taking the differences in numbers between girls and boys in the class into consideration (14 girls versus 7 boys), it is nonetheless interesting to note the difference in the spread of scores. All boys in the sample unanimously stated that they were "Confident most of the time" when using video equipment, whereas the girls' results split almost equally between "Confident most of the time" and "Rarely confident", with the exception of 3 outliers.

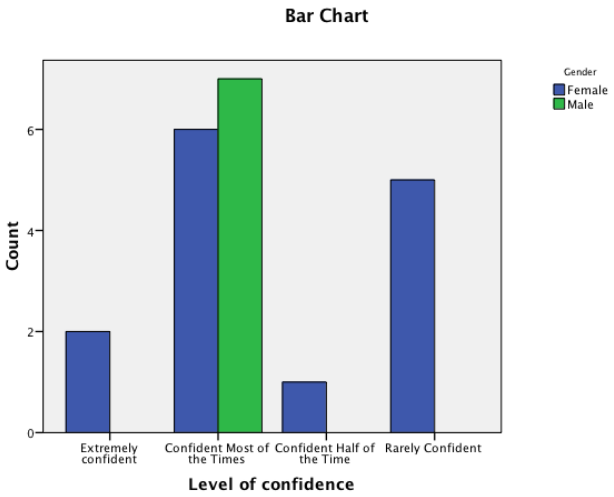

Fig. 2 Levels of self-reported confidence according to gender

Results from the journals, e-mail interviews, and focus group confirmed the findings from the survey where references to confidence with technology, or rather lack thereof, surfaced 16 times. In her response to the e-mail interview questions, Karine stated:

> When we learned stuff for sound, camera etc.. in the class, I always felt shy to ask question because lots of people seem to understand

> everything while I was most of the time lost! Then you get into groups and you don't want to do a bad job so you let the ones that are the most at ease have the dop (director of photography) sound editing etc.
>
> (Karine's e-mail interview, April 22, 2009)

Andrea also corroborated with her comment:

> At first I wasn't comfortable with handling the equipment, feeling more comfortable in front of the camera than behind. It also did take a while for me to adjust and to want to learn how to use it without feeling behind my peers. However, if I had stepped up to the plate earlier and had learned how to control the equipment, I would have been interested in taking on a different (production) role.
>
> (Andrea's e-mail interview, April 27, 2009)

To further support these finding, during the class focus group one female student admitted that she found the cameras "intimidating" and went on to say that she felt that the boys in the sample were more confident with the equipment than the girls (Researcher's field notes, April 15, 2009).

These girls' self-reported confidence levels with regard to technology contrasted those observed in the boys where some of the boys showed an over-abundance of confidence, at least publicly, with the video equipment and appeared interested in displaying their knowledge of shooting and editing technique during class time. For

example during pre-production presentations when student groups had to present their scripts, schedules, and technical plans for their team projects, 2 of the 7 boys were very vocal and insistent on focusing all discussions on technical issues rather than on those that centered around storytelling, characterization, and film structure, which were the course's main focus.

These 2 boys questioned each of the groups on the logistics of filming and then subsequently challenged each other in front of the class on the minutia of shooting and editing technique. When I put an end to such a technical discussion, Eddie, the more vocal of the two, responded by saying, "Well, this is a film class isn't it?" (Researcher's field notes, April 8, 2009) revealing that for him, technique and technical prowess was more valuable in filmmaking than script, story content, or characterization—all areas where girls in this sample displayed more proficiency in their completed assignments than boys, and where more girls than boys in the sample showed preferences in their surveys (7 of 14 girls versus 2 of 7 boys).

What is most interesting about Eddie's public posturing in class is that it did not appear to be a reflection of his actual skill set. Despite the fact that he pronounced the higher-end HD cameras to be "easy" during our class focus group (Researcher's field notes, April 15, 2009), judging from my observations of technical workshops during class time, as well as the results of his finished films, it is clear that he did not understand how to fully operate the cameras. Despite this, on one occasion he nonetheless asked me if he could borrow the camera for some filming. When I explained to him that he would first need a workshop with me before being allowed to

use it, he stated that he had already had a workshop the year before with another male teacher and had used the camera many times since. Later that same class, when I needed to introduce the cameras to the rest of the students, I broke the participants up into smaller groups to be led by those students who had already had prior experience with the cameras—I chose Eddie to be one such student. The following is an excerpt from my field notes:

> Eddie started to back peddle despite our conversation from a few minutes before. Once he realized that he'd have to lead a camera workshop in front of other students, he wasn't so sure anymore and his confidence appeared to wane. When I went back to his group, he hadn't yet started the workshop so I took charge and led it… When I left his group, I asked him to explain the other buttons on the outside of the camera body, but when I checked up on his group again, only Andrew was playing with the camera and Eddie and the others in the group were talking off-task.
>
> (Researcher's field notes, March 11, 2009)

Preference and selection of production roles according to gender

In the surveys that were handed out at the very beginning of the semester, participants were asked to state their preferred crew positions or production roles when making videos. As seen in Figure 3, the girls' scores are evenly distributed across the various production roles, with the highest frequency counts in "Acting", which is a highly visible role on the team but one that is non-technical. Editing and writing have

the next two highest frequency counts and are both roles that have the potential to change the creative direction of a project, but in each of these roles the work happens either under the supervision of the director, or is easily altered by other teammates. By contrast, the boys' 4 categories of choices were almost evenly split between all of the technical roles, as well as acting, which is non-technical but highly visible. From these results it seems clear that the girls were as interested as the boys in taking an active part in the creation of their group videos, but were willingly choosing those roles that required less handling of the equipment, or in the case of editor, choosing a role in which someone else on the team could correct the work. It is interesting to note that none of the boys chose the role of producer or writer as these are the two roles in student productions that are the least visible and as a result, receive the least amount of public praise from peers.

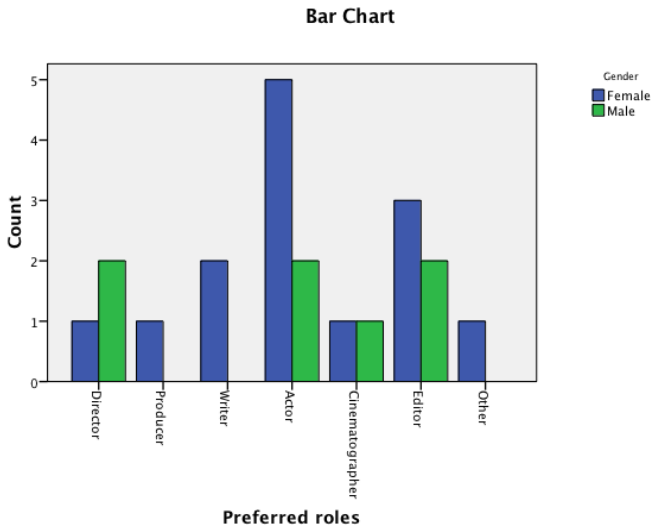

Fig. 3 Preferred production roles according to gender

Several weeks after having stated these preferred roles in the surveys, participants were then asked to choose a crew position that they would like to take on for their upcoming team projects. The possible crew positions from which to choose were the same as those listed in the survey. I subsequently asked participants to

organize themselves into groups of 4 to 6 people and explained that once in groups they could then negotiate and finalize the crew positions amongst themselves.

Something interesting happened in the organization of the teams where participants conveniently formed the following groups without my intervention, thus making comparisons in collaborative behaviour according to gender more easily observable throughout the study.

1 All-girl group	1 All-boy group
1 Group all girls with 1 boy	1 Group all boys with 1 girl
1 Group with an equal number of girls and boys	

Table 1 Breakdown of groups for the team project

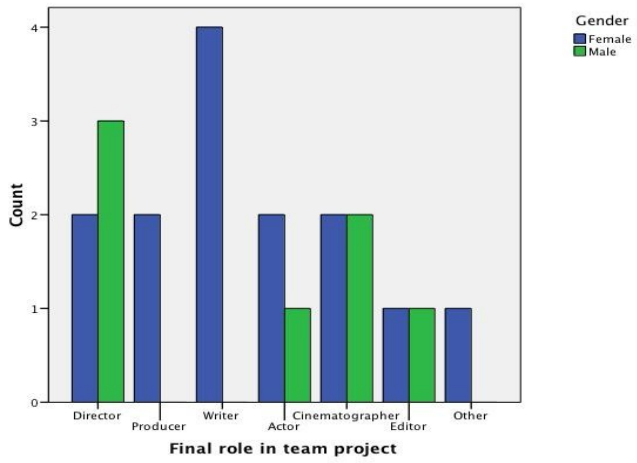

Fig. 4 Final production roles chosen for team project according to gender

Once these teams were finalized, production roles were negotiated within the group without my participation. Figure 4 illustrates the breakdown of final roles according to gender for the team project. The results show only participants' primary roles, though it should be mentioned that many students took on multiple roles within their group and in some instances, their groups were completed by students from the other section of the *Digital Filmmaking IV* class, taught by another instructor.

In terms of the technical roles of director, cinematographer, and editor, it is noteworthy that there were more male directors than females, and an equal number of male and female cinematographers and editors, despite the fact that there was double the number of girls in the class. This is significant in that the group breakdown was such that 2 of the 5 groups were either made up of all girls or the majority of girls thus ensuring a minimum of 5 technical positions to be filled by girls. The roles broke down such that there were 2 female directors, 2 female cinematographers, and one female editor. The only boy in the majority girl group chose to be editor. Conversely in the comparable group with the majority of boys and one girl, the only girl chose to be a supporting actress rather than taking on any of the technical roles.

The most telling results were in the mixed-gender group where the boys filled 2 of the 3 technical roles. One of the girls chose to be editor and the other 2 girls chose the role of producer and a supporting actress. It should be noted that the third boy in this mixed-gender group, although he did not choose one of the technical roles, played the lead actor in the film and was extremely involved in the creative and technical process. According to the producer's minutes from their group meetings, he came up with the concept for the film, chose the majority of the music to create its mood and when I observed the group working in the editing room, he was the one sitting at the computer holding the mouse, despite the fact that a girl was supposed to be editor. With the exception of this boy, no other boy in the sample chose a non-technical role and the girls ended up filling all of these with the highest frequency counts as writer.

There were 2 female students in the class who could not find a group to join. Both were shy students who often remained on the periphery of social interactions in class and whose work screened publicly in class was not technically strong. Interestingly enough, when I proposed that they work together as a smaller group of two, neither of them chose to do this. One decided to write an independent script rather than taking part in a team project—her role is listed as 'other' in Figure 3. The second student ended up choosing the non-technical role of producer and joined a group in the other section of the *Digital Filmmaking IV* course.

Projections of self in cinematic content

As part of the *Digital Filmmaking IV* class, participants were asked to complete two character sketch assignments in which they were required to first describe a real person they knew and envision this person as a screen character, and then create a fictional character of their own invention. From the results of the real character sketches it appears that the participants in the sample infused their sketches with issues and real-life relationships that not only mattered to them but that were highly personal and close to their hearts. For example, one female student described the strained relationship between her and her father, another illustrated a scene where his immigrant grandmother is humiliated by a policeman, while a third described a mother who struggles to deal with the attempted sexual abuse of her two daughters. From these, it is obvious that many of the students in this sample wrote about issues and relationships in

their real lives that not only preoccupied them but that they were able to envision in a 'filmic' way.

The results of the fictional character sketches also revealed interesting results where 9 of the 18 students who completed the assignment invented characters who appeared to be thinly veiled versions of themselves, or projections of who they wished to be. For example, one participant who is a slightly heavy boy born of immigrant parents, created a character who is a middle-aged immigrant man who was teased as a boy but grows up to be a successful womanizer. The one girl in the class who worked in the majority boy group for the team project, created a character who is a highly sexualized femme fatale who can control every man she meets. A third student who was a regular guy, easygoing and well-liked by classmates, describes a regular guy who does a superhuman act by saving a woman's life in the metro. As a final example, one of the students who had difficulty finding a group with whom to work on the team project wrote about an introverted woman with very few friends who prefers to play team video games rather than speak to people face to face.

Though it does not represent the majority, there were nonetheless half of the participants who created fictitious characters for this assignment that were infused with very personal traits and in whom they could envision aspects of themselves, either as they are or as they wished to be. These particular students appeared to create personas or cinematic versions of themselves to be represented on screen. The other half, though not creating alter egos, nonetheless appeared to infuse their own personalities into the treatments of their characters and sense of storytelling that differentiated them along

gender lines. For example, one female participant's fictional character was a teenaged boy who was being bullied at school and who, throughout the text, repeatedly takes out a box with a gun from under his bed. However rather than ending in violence, her story ends with him putting the gun away and then climbing into his mother's bed to support the troubled woman, who he feels the need to protect. Similarly, another girl in the class wrote about a female character who she describes as a "psycho" (Jennie's Character Sketch assignment, p. 3) but whose unstable personality does not play out in violence or aggression. Her character is disturbed but quietly and internally so. She speaks to no one but her mother on the phone and does not come into contact with any other person. These girls' story treatments appeared to eschew the violence and action that was more common in the boys' descriptions. For example, one boy writes about a character who he also describes as being "totally crazy" with "psychological problems" (Steve's character sketch assignment, p. 1 & 3) but instead places his male character in situations where he outsmarts authority figures, smashes glasses on the floor, and gets into fights in bars—and wins.

Through these assignments it appears as though some participants were colouring their screen characters with very personal traits or using the sketches to demonstrate to the class the kind of behaviour they either valued or admired in movie heroes. Because participants knew prior to writing the sketches that they could be read aloud, they could almost be interpreted as cinematic alter egos for themselves to project publicly to their peers.

Differences in film content when working individually versus working collaboratively

For the first half of the semester, there were a number of assignments for the class that participants completed alone such as the character sketches and the Individual Film project. Mid-way through the semester they began to work collaboratively in preparation for their team projects to be produced at the end of the year. Interesting differences in choice of content and storylines emerged when examining the content of participants' individual assignments versus working in a team where content needed to be negotiated between all group members. Within this sample of participants, it appears that the percentage of girls or boys in a group was a determining factor in the types of stories that were told and the cinematic treatments they received.

Table 2 outlines the themes of participants' films when working individually on their video projects. Though none of the participants verbally articulated or seemed conscious of their content preferences according to gender, results from their video assignments revealed a clear split in the way that girls and boys treated their video content. For the Individual Film assignment for the class, 9 of the 14 projects produced by girls dealt with intimate feelings involved in relationships between family, friends, or lovers. 5 of the 14 films were either narrative or experimental films about girls who are missing, afraid or running away from some unseen and unnamed threat, and one of the 14 dealt with a social issue, or more specifically consumerism, fashion, and the beauty myth. In all but 2 of the videos produced by girls, the lead characters were female.

Participant	Theme: 1 Relationships	Theme: 2 Girl Afraid, Missing or Victimized	Theme: 3 Boy Afraid, Missing or Victimized	Theme: 4 Action	Theme: 5 Violence or Aggression	Theme: 6 Comedy	Theme: 7 Social Issues	Theme: 8 Other
Female 1								
Female 2								
Female 3								
Female 4								
Female 5								
Female 6								
Female 7								
Female 8								
Female 9								
Female 10								
Female 11								
Female 12								
Female 13								
Female 14								
Male 1								
Male 2								
Male 3								
Male 4								
Male 5								
Male 6								
Male 7								

Table 2 Theme of Individual Film projects according to gender

In the boys' videos, although one of the 7 films dealt with romantic relationships, these relationships were never treated in ways that demonstrated intimate feelings or the desire to maintain harmony between characters. 2 of the 7 boys' films also dealt with themes that portray male protagonists being afraid, weak, or vulnerable, but what differs is the treatment of the theme. In the boys' narrative, rather than having an

unseen force torment the main character as was common in the girls' projects, the aggressors threatening or chasing the male characters were known to them and the story would culminate in a physical conflict such as a chase, fight, or murder. Of the films listed with 'other' themes, one of the boys' projects was a documentary about referees while the remaining one was a projects that the participant admitted to putting together at the last minute which involved shooting relatively random shots about how to mix alcoholic drinks.

The one very interesting exception in the boys' films was Eddie's treatment of relationships, or more specifically male weakness, that followed a more typically female treatment of character and storyline. He portrayed an aging immigrant couple that lead a modest existence but the man aspires to create a better life for them. In the end, he fails and his wife consoles him by telling him that she is happy and satisfied with their lifestyle. Though the film was technically quite weak, it demonstrated a very mature sense of writing and character development—ironically two things that Eddie publicly belittled during the production meetings in favour of technical form.

Looking at the subject matter and treatment of the participants' combined efforts while working on their team projects provided interesting results. As a point of comparison, Table 3 illustrates story content and themes when working collaboratively in single-sex and mixed gender groups.

Gender make-up of group	Film content when working collaboratively on the team project	Theme
All-girl group	A girl discovers that her best friend has disappeared and no one even remembers that she ever existed	Girl missing, relationships/ friendship
All-boy group	A montage of a series of absurd situations one of which includes an illustration of how to pick up women	Comedy
Majority girl group with one boy	A disparate group of students come together to steal the answers to an exam. They find friendship along the way	Friendship
Majority boy group with one girl	Action movie spoof where the hero's love interest is kidnapped and he must rescue her against all odds	Action, adventure, comedy
Equal number of girls and boys in the group	Lead male character is continually falling in love with different women but cannot build up the nerve to ever leave them. As a solution, he decides to kill them instead	Murder, relationships

Table 3 Story content and themes when working collaboratively

The data suggests that once participants needed to collaborate on story ideas, the gender make-up of the group for this sample often determined the treatment and direction that the story would take. The all-girl group or the group with a majority of girls in the team ended up producing a film about friendship told in ways that were consistent with the girls' previous story and visual treatments. Similarly, the all-boy group and the group with the majority of boys in the team created films that contained comedy, action, and murder that once again, were fairly consistent with male treatments as seen in their individual work. However there was one exception where the presence (and eventual absence) of one male team member determined the story content for the

whole group. This particular case involved Sonja, the one student who decided to work with a team in another section of the same course. She wrote in her journal how they were a team of 3 girls and one boy and that they were planning to produce a documentary about a rap singer in the "ghetto" (Sonja's journal entry, March 24, 2009) who was an acquaintance of the male member of the team. When the team discovered that the assignment required them to produce a fictional narrative film, Sonja wrote in her journal that despite this they would modify the idea a little bit but "will keep with the same range of idea" (Sonja's journal entry, April 2, 2009) and create a fictional story with the same mood and style. Interestingly enough, once the one male member decided to leave the group, the film eventually transformed into a "love story" (Sonja's journal, April 6, 2009) that once again, was consistent with female treatments of that theme.

The most telling results were those from the mixed-gender group that was equally split between the sexes with 3 girls and 3 boys. When choosing story content, I suggested that the group shoot the script that Janine, one of the group's female members, had written for her character sketch assignment. Within her group she was by far the most competent filmmaker both creatively and technically and was the student who had written the script about the young boy with the gun in the box under his bed, an assignment that had earned her a perfect grade. However, when Janine presented her idea to her group, her story was rejected. In her journal she writes, "Surprisingly, the character sketch did not catch up the team's attention. I think is it because Marcus wanted to do something different from drama" (Janine's journal entry, March 24, 2009).

What this team's film eventually became was one that dealt with relationships—a common theme in the girls' films, but one that ended in multiple murders. This was an interesting compromise between female and male treatments on the topic and although the story was very much based on one of the male team member's visions, the story nonetheless concentrated on the male protagonist's 'love' for his victims. It should be noted at this point that Janine was a highly respected member of the team and her force of character and obvious skill as a filmmaker had a strong influence on the team's functioning both organizationally and creatively. One male member even wrote in his evaluation of the project that they could have never completed the project without her (Andrew's project evaluation, April 29, 2009). However despite this, Janine had nonetheless taken on the more administrative role of producer and the authoritative technical roles of director and cinematographer were taken by 2 of the 3 male team members.

Public reactions to gendered content

Both the girls and boys were active participants in class where they often volunteered to read out their work, showed pride in their films, and offered feedback on the work of their peers. That said there were some marked differences in how the girls and boys did this. For example when reading out the character sketches, the girls readily volunteered to share their work despite the fact that much of the content that they read was very intimate and personal. Those boys who wrote more introspective

sketches or those who essentially seemed to write about the characters they wished to be, did not want to share theirs with the class. The only boy who volunteered to read his sketch aloud was a student who wrote one of the weakest and least personal sketches, but a sketch that would gain attention from the class. It used typical shock humour with references to dildos, masturbation, and picking up women. Evidently this content caught people's attention and garnered more feedback than any of the girls' sincere efforts to do the assignment properly.

Reporting on the above results without any explanation is a little misleading and makes some of the boys in the sample appear obnoxious—which was not the case. From looking at the content of their assignments, it is clear that they, like the girls, were also interested in creating stories with emotional depth but were more guarded in sharing these publicly. The character sketch readings were voluntary and no one was obliged to read their work, unlike the film screenings where all films produced for the class were viewed and critiqued by the students. As a result, for the character sketch readings, only those boys' sketches that were 'safe' comedy or work that was far removed from who they projected themselves to be were willingly read aloud. Anthony, the boy who wrote the above-mentioned sketch produced mostly juvenile content for most of his class assignments but observations in class paint a picture of a more complex personality. Here is an excerpt from my field notes:

> Anthony comes across as confident but I think he's shy (when he talks to me he can't always look me in the eye and looks at me then looks at the floor or away). This surprises me because it seems to

> contradict his public persona as well as the screen personas that he creates.
>
> (Researcher's field notes, March 4, 2009)

The type of comedy that Anthony produced for all of his assignments was safe in that he did not have to reveal himself too intimately to anyone. Significantly, he was also one of the boys who did not hand in journals regularly despite showing evidence of being highly driven by grades. Though I believe he had much more emotional depth than he cared to share publicly, it was clear that journaling about his feelings or producing intimate or personal films were not things that he felt comfortable doing and it is plausible that his story content was chosen because it could earn attention from the class without having to leave him vulnerable to personal criticism. In other words, the content of his work could be separated from the filmmaker creating it.

Whereas some of the boys dealt with more impersonal comedy, the girls in this sample had more of a tendency to wear their hearts on their sleeves (13 of 14 Individual Film projects produced by girls were about relationships or themes of girls being afraid versus 4 of 7 films produced by boys about relationships or boys being afraid). This posed some interesting problems when it came to reactions to the girls' character sketches when read aloud or to their films when screened in class. Because the content that they either wrote about or created films around were very personal and clearly represented themselves, it left them vulnerable and open to public criticism. In essence, the very personal nature of their films made it difficult to differentiate between criticism of the film, and criticism of the filmmaker. This sense of vulnerability was not without

cause because the boys in the class, though supportive of their classmates' efforts, were harsh, derogatory, and vocal when critiquing films with typically female treatments of themes when the filmmaker was not someone from the class. The following is an excerpt from my field notes that reference the screening of a film called *Into My Heart*—a film with a typically female treatment of story and character:

> When I introduced the film as a 'heavy film', Andrew said "Oh no, get out the razor blades" referencing the typically female imagery in introspective, self-referential, 'heavy' films at this age i.e. razor blades, knives, cemeteries, submerging heads in baths, broken roses, etc. As opposed to the typically male introspective imagery of drugs, fights, car chases, violence, horror and gore. Although the film showed typically female imagery, ironically enough, it was written and directed by a male though the credit only came at the end. During the screening, when the first shot of two knives on the counter appeared there was (mostly male) laughter (though it's hard to tell if the females were laughing/ smiling, it was dark and the male voices were the loudest)…. Despite having been supportive in person to classmates' readings of the character sketches, certain (loud) male voices clearly had a POV regarding female issues, imagery, etc. when the filmmaker was not present and felt free to criticize the work publicly by snickering or jeering. (Researcher's field notes, February 4, 2009)

This disruptive and disrespectful behaviour could account for the unspoken understanding within this sample of participants that female stories and visual

treatments were less valid or more open to ridicule and criticism. Moreover, it placed incredible stress on the girls in the class who endeavored to tell stories that were meaningful and important to them. In a private conversation with Janine prior to the screening of her Individual Film assignment, she expressed her anxiety at presenting her project in class in light of the group's reaction to *Into My Heart*. Again, an excerpt from my field notes:

> Something extremely interesting came up in a conversation with Janine and Laurel after class. Janine wanted to show me her project because she said she was thinking about changing things and re-editing before the class screening. She said she was nervous because she didn't want anyone to think that her film "was too emo." I told her to forget what anyone thought and though she agreed, she brought up the screening of *Into My Heart* and talked about how she had really liked it, but how the class had reacted. (Researcher's field notes, March 11, 2009)

This stress felt by girls was supported by the participants' journals, where direct references to peer validation emerged 51 times and was among the highest frequency counts. The following is an excerpt from Karine's journal:

> Hi Nancy !
> when I had finished editing my movie it was such a weight off my shoulder.. I couldn't wait showing it to class ! The day of the screening I was incridibly (sic) stressed out.. I even cried 2 times before coming to class because I was too stressed :P ! I really

> wanted the people to enjoy it and I wanted the screening to go smoothly. During the screening, everything went well except for the sound that was out of sink.. (sic) I was really sad and disappointed that it happened. On the computer the sound and the images are in sink (sic) and it looks so good.. I felt like I was ruining the screening of my movie... I was happy that I got good comments.. but every time someone was saying a good comment.. all I could think of was that the sound was out of sink.. (sic) I don't know how to fix it..I am really happy that the people liked it and that some want a copy of it.. :)
>
> (Karine's journal entry, March 22, 2009)

Karine's anxiety is supported by another entry by Andrea, a girl who made a very personal film about relationships:

> As far as my individual project goes I have always been excited and enthusiastic. But the sooner the due date approaches, I'm feeling stressed and anxiety (sic) and scared! I think that I started off so solid and it's slowly starting to simmer down all my positive thoughts. I still think my movie can be just as I imagined and a lot of the guest speakers in class helped me keep with ideas... It's not too late for me to feel defeated and weak, I know that my film has some very strong acting, pieces and the storyline has always raised peoples attention. I think I'm just putting a lot of pressure onto myself because I feel as if I need to prove something to the class. Because I'm not as strong as other filmmakers technically, I want to be able to prove myself. I'm creatively strong and I like script

> writing so that can definitely be seen in my movie. It's not over yet and though I have a few minor set backs, I still have faith. My positive attitude will carry me the rest of the way! Or...some of it at least... :)
>
> (Andrea's journal entry, March 10, 2009)

These excerpts show the girls' very real anxieties when it came to public screening of their work, and point to the incredible bravery and resilience of these girls in continuing to represent their stories on screen. They were clearly using video as a means of expressing what was personal and relevant to them despite the possibility of negative reactions.

During the class screenings, there were 4 Individual Film projects that initiated the most discussions and received the highest praise from classmates. The first was the male student's film about relationships that was technically strong and borrowed a music video aesthetic, another male's film about a killer monkey who was murdering boys, a female participant's film with a girl afraid theme that was the best shot and best edited film from the class, and finally a boy's film that was weak in terms of storyline and technique but ambitious in terms of chosen theme about a chaotic and distopic society that ended in a fight and murder sequence.

As evidenced here, the films that generated the most amount of excitement were those that fell under one of two categories—technically strong films that demonstrated skill in either shooting or editing, and films that had themes with action such as chases, fights, or murders—genres typically produced by boys.

Results from the team film screenings were not that different in terms of the kinds of films that were the most publicly praised by the class. Although the students were very supportive of each other's efforts, only one film received a standing ovation from the majority of the boys in the class and it was the film by the group with a majority of boys and one girl, who produced an action movie spoof where the hero's love interest is kidnapped and he must rescue her against all odds. It concludes with a chase and climactic fight sequence.

These reactions to film content could be due to the fact that the boys in this sample were much more vocal during post-screening critiques. Additionally the boys' interests seemed to concentrate more heavily on the technical aspects of filmmaking and the action movie genre, and this could have cued all subsequent comments that students made and set the tone and level of perceived appreciation by the class.

Academic and personal motivation

Within this sample of participants there were some highly motivated and ambitious students. According to the data obtained from the field notes, e-mail interviews and journals, it appears that the girls' motivation may not only be due to personal pride, but that their desire to excel academically could have had an influence on their behaviour. For example, in her survey Janine wrote about how she had previously liked the role of cinematographer when working in teams because she did

not fully trust those with whom she had worked. By taking on this role, she could ensure that the job got done properly (Janine's survey, February 18, 2009).

There was also an overabundance of data to support how hard the girls worked to make films that could earn a good grade. In the following excerpt, Valerie describes the detailed pre-production process for her Individual Film project:

> So far i've contacted the person to play the guitar for the song that I will be singing. Next week, i will try to arrange the recording so that it will be ready on time. On this long break, i'm planning to do my character sketch, my narrative arc, my one sentence description and my storyboard as well as shoot some of it. Hopefully, I will get everything done on time. I will be sending you emails to update you on if what I am doing is ok, and if my story idea is logical. I want to use the best possible way of recording which is using the sound room and recording it directly on the computer. Do I have to make an appointment for that? Please let me know.
>
> Valerie ox
>
> (Valerie's journal entry, March 4, 2009)

Unfortunately many students like Valerie had their creative ambitions curtailed by their lack of technical skills and though they had larger plans in mind at the outset, their ideas would become simplified throughout the course of planning and shooting. Because of an awareness of her own limited technical skills, one female student in particular even restricted herself in her Individual Film assignment by conceptualizing a project where two different actors could speak directly to the camera in a single shot so

that she would not have to handle the equipment. In this way she could produce a 'safe', competent and complete film with what she estimated were her limited skills. This may be related to academic motivation where a less complex though competent film might, in a student's eyes, earn her a better grade than a failed technical experiment.

The boys in this sample reacted slightly differently than the girls. Though many of them also had grand aspirations for their films and would be similarly challenged by their lack of skills, they would nonetheless appear (at least publicly) to be less aware of their technical limitations, and as a result, ventured to make very complex and ambitious projects. Despite the fact that they were not always successful, they often earned high praise from the class for being innovative or experimental. Marcus' project about a distopic society was one such film that was among the 4 most highly regarded Individual Film projects although it was technically and structurally problematic.

Additionally, the boys were overall less academically organized in their work than the girls who, for the most part, planned their productions in advance. Of the 5 pre-production presentations done in class where teams needed to present their scripts, shooting schedules, and lighting plans that they had prepared prior to principle photography of their team projects, only 3 of the 5 groups were completely prepared. It is interesting to note that these 3 groups were the all-girl group, the group that had a majority of girls with one boy, and the team that was equally split by gender and led by a female producer. The two teams that had either all boys, or a majority of boys were completely unprepared—some even showing up empty handed for their presentations.

Chapter 5: Discussion

The majority of girls in this sample were ambitious in their desire to succeed in the *Digital Filmmaking IV* class. They endeavoured to make films that they deemed to be both technically sound as well as personally meaningful, and through their obvious enthusiasm in class, willingness to share their work and meet deadlines, it is clear that they were not a group of girls who would shy away from creative and technical roles in a film due to disinterest or apathy. The question then remains, when working in collaborative mixed-gender groups, why would some girls choose those roles where their work could be so easily altered by other members or where they did not have to lead the team in authoritative technical roles? Given the data collected, it is plausible that this perceived 'disinterest' in taking on those roles such as director and cinematographer when working in mixed-gender groups has more to do with the climate of the media classroom and the intrinsic process of film production, film screening, and film reception.

An analysis and interpretation of the themes that emerged from the data suggest that several factors interact within the filmmaking process at this academic level. Students' gendered content preferences and public reactions to these preferences, group dynamics in negotiating film content, lack of confidence with the production equipment, gender and identity performances, academic motivation, and social negotiation in filmmaking all contribute in different ways to the classroom climate and inform the choices made by both girls and boys.

Reactions to gendered content preferences

The data revealed that both male and female participants created written character sketches that were either drawn from their real life experiences or that highlighted characters who appeared to be cinematic alter-egos or thinly veiled versions of themselves. This phenomenon is very much in keeping with prior research on identity exploration and projections of self in virtual environments or digital media—selves that do not necessarily reflect the singularity of who a person is, but a series of constructed identities of who they wish to be (Maczewski, 2002; Stern, 2007, 2008, Turkle, 1995; Weber & Mitchell, 2008). Allowing young people to play with identity in the media classroom is neither problematic nor undesirable. Quite the contrary, it provides them with an outlet to express their aspirations or points of view that they may not be able to express in real life. However unlike online spaces, these created identities in filmmaking classes are neither anonymous nor asynchronous and though there are some benefits to this, there are also some interesting issues that arise.

For the character sketch assignment, some of the boys wrote sketches that equalled the emotional depth of the girls' assignments but they chose this kind of content only for written work that they were not obliged to share publicly with peers. However, when producing work on video, where the very nature of the medium pre-supposes public viewing, the content they chose to explore shifted. Comedy, action, and topics that were less intimate became more common. In a study conducted by Kristen Drotner (1989) that observed the social negotiations between the sexes in collaborating on video productions, she observed that the boys "clearly distanced themselves from

empathy and emotional involvement, and they did so by concentrating upon violent and comic situations" (p. 211). In a sense, comedy and action could have been considered a 'safe' creative outlet for the boys in this sample where the genre would not require them to reveal their own intimate feelings or their private and personal worlds. Furthermore, it is possible that the more pensive treatments that were commonly found in the girls' films and that included public declarations of feelings could have made the boys uncomfortable because it had the potential to expose their feelings and leave them open to criticism and possible ridicule. The previously cited excerpt from my field notes describing the screening of *Into My Heart*, illustrates an example of a boy's cinematic vision of female angst, and given the fact that this film was so vehemently ridiculed in class by the boys, it could have had an impact on choices of content that both boys and girls in this sample made for their own films throughout the semester.

Unlike the boys, the girls continued to pursue intimate and personal content for their films but this was not without consequence. Not only did their choices leave them open to criticism, but affirming these content preferences when working collaboratively on larger projects had the potential to make the whole team vulnerable. Should girls feel that their stories and visual treatments are less valid, they may be less likely to assert themselves within a group setting and not choose those technical roles that define the creative direction of a project, especially if that direction has the potential to end in public criticism or, as Campbell (2000) has stated, the "ridicul(ing of) female performance" (p. 134). As the data suggests, when there was either an equal number of girls and boys in a group, or if there were a minority of girls, these girls did not assert

their content preferences and the treatments and direction that these mixed-gender collaborations took were more similar to the boys' cinematic visions.

This is not to say that the boys purposely undermined the girls' confidence or that they were not anxious themselves to show their own work, but it is possible that their choices were informed by the public nature of film screening and the reception of gendered content preferences within this particular media classroom.

Given the level of anxiety in screening and critiquing work in class, it seems logical to eliminate this source of stress in order to alleviate some of the issues that surround it. However, quite apart from the pedagogical advantages of class critiques where students learn how to improve their filmmaking and storytelling through their own and their peers' experiences, these critiques also provides them with the deepest source of satisfaction and empowerment, especially if the screening allows their work to be validated or appreciated by peers. For example, one female participant submitted a journal entry where she wavers in her confidence and says, "So I have been editing but I think I need a second opinion because I think it's lacking and I want to know if other people can understand it well" (Valerie's journal entry, March 23, 2009). 7 days later, subsequent to the reactions she received during the in-class screening of her Individual Film assignment, her estimation of her own work shifted:

> I thought that the screening of my personal project went very well, better than I would have thought. I am so happy that people actually understood and liked the concept of my movie and what i (sic) wanted to accomplish when I was making it. All the locations, filming and editing actually paid off. I am very proud of what I

> have done… I'm glad everyone liked my singing as well! I can't
>
> believe it!
>
> Thanks! Until Next Time!
>
> (Valerie's journal entry, March 30, 2009)

The irony is that some students were using the medium as a means of communicating very personal issues despite the fact that the very nature of this medium is highly public and works were created under the express understanding that they would be viewed by classmates. This is not unlike the young media producers described in the work of Michele Polak (2007), Brandi Bell (2007) and Susannah Stern (2008). The young people they describe create highly personal work including virtual diaries that can be shared with a vast online audience where the feedback and "social validation" (Stern, 2008, p. 108) that these girls receive are a fundamental aspect of their creation. For the young people of the present study, the process of production and reception of the final product by an audience was inherent in the process of filmmaking itself, and eliminating this audience would have also removed an essential part of what made filmmaking satisfying for them.

A possible solution to this would be to provide students with an online space where they could asynchronously screen rough versions of their work in order to receive the much-needed feedback from peers, but the filmmakers themselves would not have to be physically present while receiving the criticism. This would allow them to polish the work prior to official in-class presentations, thus increasing the chances of an empowering face-to-face screening. Though this may not be the ultimate solution, it

may address some of the problematic issues that inhibit girls from taking charge on a production team, and contribute to a more amenable classroom climate.

Negotiated film content

Gendered content preferences in and of themselves are not necessarily problematic in the filmmaking process and as previously mentioned can offer positive opportunities for personal exploration and self-expression. Where things become difficult for girls is in the negotiation of film content and subject matter when collaborating with peers. Due to limited equipment, students must work in teams and negotiate or agree upon a topic that is acceptable to all in the group. However there is the risk that groups might choose topics that are not necessarily the best ideas, but those that are spoken with the loudest voice (Buckingham et al., 1995, p. 147). Given the fact that boys have been found to dominate in the classroom (Baxter, 2003; Sadker, 2009) this puts girls and their preferred content preferences at a disadvantage.

Furthermore, it is possible that genres and film subject matter, once 'negotiated' by the group members can determine the types of roles that each of the participants choose. Within this sample of students, the ultimate choice of comedic or action genres in the mixed-gender teams did not serve the girls well. The boys in this sample were not only more comfortable with the chosen genres but made use of their previous experience and knowledge and unwittingly took over the creative aspects of the project.

By contrast, the girls did not have the same body of experience producing such genres and as a result could not draw on past efforts to contribute equally.

In his research on youth video production, Buckingham (2003) explores the process of negotiation between mixed-gender group members while preparing to produce a music video. He illustrates how "some boys tend(ed) to mobilize their specialist expertise as a means of intimidating or excluding girls, who (were) likely to have a rather more 'emotional' or 'aesthetic' approach to music" (p. 130). Although the mixed-gender groups participating in the present study were not making videos based on popular musical forms with a predominantly male fan base, they were nonetheless emulating popular cinematic genres like action films or stories of murder that are marketed to young males and whose visual conventions the boys in this sample were very familiar. In the case of the mixed-gender group with an equal number of girls and boys, Janine the female producer, had a very active role in the structuring of the story but the process was ultimately driven by the male lead actor and the team's male writer/director, and the final film was about multiple murders. Perhaps Janine and her other female group members might have taken on more substantial roles from a technical and creative point of view had the content been envisioned differently or told from a female perspective. That said it is interesting to note that Janine's influence in the group could have altered the murder genre and although the story was told from a male character's point of view, the emphasis in the film was nonetheless on the romantic relationships between the killer and his victims rather than the violence of the murders themselves.

The data collected supports the idea of a shifting of film content according to the ratio of girls and boys in a group. The increased number of girls in a group improved the chances of the team taking on a female themed film such as relationship stories, girl missing or afraid themes while the increased participation of boys would draw the team's film content towards action and comedy. However it appears that maintaining an equal number of girls and boys in a group was not sufficient to guarantee that girls' stories were chosen as content for team films. Prior research on collaborative work in the sciences supports this observation, where Eileen Scanlon (2000) suggests that a "critical mass" (p. 474) of girls is necessary in mixed-gender groups in order to ensure that their voices are heard.

The mere fact that content preferences would change during mixed-sex collaborations indicates gendered social processes at work that need to be further understood if equitable opportunities are to be achieved. Playing with the composition of girls and boys in a team could perhaps address some of the issues at play to inhibit the silencing of girls' stories and create a more supportive climate.

Girls' confidence with technology

It is interesting to look at the dynamics within the group that had a majority of male members and one female. This particular group had many of the more outspoken males from the class and it seemed curious that the one girl who worked in the group was Lisa, a girl with a very strong personality who commanded respect amongst the

other male members despite her self-reported lack of technical skills. However it may be precisely this lack of confidence with the video equipment that was one of the reasons she was accepted into this group in the first place for she could contribute without threatening the boys' control of the project. Lisa chose the role of actress, which allowed for the boys to maintain all of the technical positions behind the scenes.

Conversely when looking at the comparable group in the class that had a majority of girls and one boy, some interesting differences emerged. Sam, the only boy in this group was not only a good friend of the girls, but unlike Lisa, was technically very skilled on both the camera and editing software. Although the girls with whom he worked were strong students, only one of the 4 girls claimed to be confident with the equipment in her survey. Sam's self-reported confidence levels were very high and it is possible that this team came together because he was able to complement the girls' own perceived lack of skills. One of the girls who ended up taking the role of writer within this group responded with the following in her e-mail interview:

> In terms of comfort level (or proficiency) with the equipment and choosing roles for production, somehow i (sic) do think that being a girl affects how good you are. Somehow guys are more skilled in this area due to their profound interest in how things work. Usually girls tend to get annoyed or are simply less interested than guys are.
>
> (Julia's e-mail interview, April 27, 2009)

According to the research, those students who are confident in their technical abilities are much more likely to willingly choose to use technology, subsequently gain more experience with it, and ultimately further increase their confidence. Should just over half of the girls in this sample posses this confidence to begin with, it seems plausible that it would have affected their willingness to take on technical roles within a collaborative environment where the work on the camera and sound equipment would affect the final outcome and ultimately the grade of everyone in the group. This has enormous implications because access to production equipment leads to experience which in turn is directly related to confidence levels. Key production roles at this academic level all require comprehensive knowledge of the equipment and if girls are not choosing these roles due to their low levels of confidence, their ability to have an impact on the creative direction of the film is extremely limited. In the e-mail interviews, another female participant commented:

> I believe that familiarity with the equipment most definitely determines the power relationships within the groups. With my experience, the one who's tech-savvy in my group is always trusted with the equipment and definitely has the upper hand on how the film turns out to be… I have come to notice that the guys I've had to work with just so happen to be more technically educated than the girls. It seems that the guys in the film classes this year all seemed to be more experienced with film equipment and studies. It may be just coincidence, but it seems to me that the guys usually seem more comfortable with taking charge.
>
> (Ellen's e-mail interview, March 5, 2009)

Within this particular sample of students, the boys' over-abundance of confidence with the video technology (whether substantiated or not) led to a strong vocal presence in class despite their lower numbers within the group, and could have accounted for shaping and cueing class discussion and opinion. This is consistent with the literature that has shown boys' assertive and confident behaviour in the technology classroom where they "consistently exhibited more competence and confidence using computers, dominated the class discussion, volunteered for lengthy demonstrations before the class to display their knowledge to others, and created a highly competitive atmosphere" (Seiter, 2005, p. 42).

For example, despite the fact that 5 of the 7 boys in the sample did not have the technical competence to match their confidence levels, this did not seem to change the types of production roles they chose to take on. Although the boys did not purposely or consciously take over, their over-abundance of confidence, or at least the public perception of their confidence, combined with the girls' lack of confidence with the video equipment and tenuous knowledge of the negotiated genres, meant that the girls in the sample would defer to the boys' assumed expertise. As a result in the mixed-gender groups, the girls were largely shut out of the major roles that would determine the final outcome of the films.

The following is another e-mail response from one of the female participants of the study who discusses her experience with group dynamics in the delegation and negotiation of production roles within a student film crew.

> We usually choose the roles in fonction (sic) of what everybody can do, we do the same thing when choosing the actors or the director. Also, someone who is more comfortable with the equipment will be more inclined to experiment something, because they don't need as much time to learn how to use the equipment. It is also faster when everybody knows his (sic) stuff.
>
> (Belinda's e-mail interview, April 28, 2009)

This is not to say that the girls in the sample did not get any opportunity to work with the video equipment at all. The breakdown of the groups was such that 2 groups were either all female or all female with the exception of one boy, and as such, the class was guaranteed to have a minimum of at least 5 technical roles filled by girls for the team projects. The results show that only the minimum of 5 was maintained whereas the boys filled 6 of the technical roles and given the fact that there were only 7 boys in the sample (as opposed to the 14 girls), this number is quite significant.

It is possible that the girls were not choosing these technical roles because of their own perceived lack of skills as well as their deference to the boys' confident displays of technical expertise. Moreover, it could also be due to the performative nature of the technical positions themselves.

Filmmaking can be a highly public medium not only in its screening and reception, but in its production as well. On-set performance is very much like public performance where the centre of attention revolves around the director and cinematographer and their dialogue and decisions about actor performance and image.

All action on and around a set stops when the director and cinematographer's filming begins. Their creative and technical choices often need to be made quickly and if mistakes are not caught on set, they are more often than not irreversible, or at best very difficult to correct. The decisions that directors and cinematographers make on set are clearly evident in the finished product and mistakes in overexposure, focus, and mise-en-scene are highly noticeable. By extension, those students who fill the roles of director and cinematographer are afforded praise when the job is done well, but are vulnerable to criticism if work is done poorly. Given the very public nature of film critiquing in the *Digital Filmmaking IV* class and a particular concentration on technique within this sample, the girls with little confidence using the equipment may have been reluctant to place themselves in a position of risk where their work would be held up to public scrutiny. Interestingly enough, the role of editor was the one technical role that the most number of girls stated they preferred in the survey. This role offers a lot of creative control over the final film, however the work is done in isolation, is very open to negotiation and any mistakes that are made, if caught by other team members, are relatively easy to correct.

Gender and identity performances

In analyzing the data, it is evident that these participants' use of technology was socially shaped and that these social relations were gendered relations into which gender identity could have played a role.

Gauntlett (2002) talks about identity in social and gendered terms and suggests that people categorize themselves and others in order to establish membership within group identities. Although he does not refer specifically to youth video production, within the context of his discussion, it is possible to extrapolate and look at the similarities that can nonetheless be drawn. Student filmmakers often try to emulate the work of directors or genres that they admire and in this way identify themselves with a group identity or style. Relationship and romance films versus the action or comedy film provide girls and boys with the ability to claim membership to certain gendered identities, and in this way, align themselves as either male or female within the context of public classroom screenings.

In some instances, gendered behaviour during the present study became extremely performative. Eddie is an interesting case where his desire to 'perform' during class time may have had an impact on the kind of content that he chose to produce as well as the production role of director that he chose to take on. The assignments that he completed individually clearly showed a very mature voice despite his very immature classroom persona. What is interesting is how the serious content of his work changed when it needed to be negotiated in an all-boy group. The collaborative project that he directed became a montage sequence featuring juvenile humour that failed to go the distance either technically or creatively. Interestingly enough, Eddie displayed a curious amount of pride in this project and believed that this latter film was superior to the former. It appeared that he was attempting to align his content preferences with those of the other more vocal boys in class so as not to deviate

from the acceptable gender performances of his peers and cater to his male friends' public approval of such humour. This performance of masculinity may have been one of the reasons Eddie was so adamant to demonstrate his technical skills during class, skills that were obviously valued by his male peers. Despite the fact that he made so many attempts to publicly assert his technical proficiency, his strength in filmmaking was clearly in those areas where most of the girls excelled—that is in scriptwriting and characterization.

This suggests that for some participants the choices they made were informed by their desire to appear a certain way and be accepted by their peers. In the case of Eddie, this included the pressure to identify with the masculine practices of the boys in class by demonstrating technical prowess and knowledge of comedic genres in order to affirm his own sense of masculinity within the group.

This might not be relevant should these gender performances play out in isolation, but the very vocal posturing of these boys' performances with relation to film content and equipment usage negated and silenced the girls by belittling their efforts and dominating the equipment. This ultimately affected the girls' choices to take on the authoritative and technical roles in their crews.

Academic motivation

"Students balanc(e) the need for harmony within the group against the need to complete the work and gain good marks. Here, the male students' greater expertise in

aspects of production resulted in a clear division of labour: while the boys made the 'creative' decisions, the girls were mainly responsible for the organizational 'housework'" (Buckingham, 2003, p. 130). These observations in the work of Buckingham could possibly be another explanation as to why the girls in the sample did not choose the technical roles but instead took on those roles that would ensure that the work got done on time and according to my specifications. It should be noted that deadlines for projects were generally not flexible in the course and penalties were imposed on late work. Those girls participating in the study were academically stronger than the boys (average of the final grades for *Digital Filmmaking IV* for the girls was 84% versus the boys' 79%) and their desire to gain good grades combined with their lack of confidence operating the equipment could have had an impact on their choices of production roles. Rather than taking on the technical roles, they may have willingly chosen those roles that organized the group, kept the boys in check, and controlled when the work got done.

Because the girls did not find themselves in positions of power during the negotiating of film content or had difficulty controlling the topics that groups ultimately decided to film, it is possible that the crew positions that they did choose to take on were those that offered them an enormous amount of control of the filming process itself. For example, in the mixed-gender group that was equally split between the sexes, 2 of the 3 girls chose the roles of producer and editor. In the *Digital Filmmaking IV* class the role of producer is generally a secretarial one however a strong producer can assert herself and determine the overall production schedule by deciding when the team shoots and how

long they have to complete the work. Initially I found it puzzling that Janine, who was the most technically and creatively strong filmmaker of her group, chose this role. In retrospect it seems possible that she (and perhaps other female students) chose this role specifically because it offered her control over the functioning of the crew as a whole. Her sense of organization as well as her technical and creative skill had earned her respect within her group and she took charge of the team's entire production process. Though she was an exception in this regard and other girls within this sample who had chosen the role of producer did not perform this role as Janine had, it is nonetheless possible that girls choose this administrative job because of the potential to control their group's workflow. They may be selecting the role of editor for similar reasons such that the editor is the last team member in the production process whose work ultimately determines if the film is completed by the deadline.

Furthermore, because the performance of each team member would affect a large part of the group grade, it is possible that the girls would defer to others who they felt were technically stronger in order to earn the highest marks. In the e-mail interviews, Karine who is academically very strong, who never missed a deadline, and who completed all assignments according to my instructions, talked about not wanting to "do a bad job so you let the ones that are the most at ease have the dop (director of photography) sound editing etc…" She goes on to say, "Take for example, Sam, when you are in a group with him, it is intended at the right beginning (sic) that he'll be the editor because he is good at it and I know that my editing skills are 1/100 of what his skills are" (Karine' e-mail interview, April 22, 2009).

The fear of failure in the eyes of other group members in addition to the academic failure appeared to be a motivating factor for the girls in this sample to have taken on the production roles that they did. Re-distributing groups or imposing roles may be one small solution to this issue.

Another issue that may be related to academic motivation is the fact that the girls exhibited the behaviour of 'good students' and the mere fact that I would be evaluating their projects or that the projects themselves were framed within institutional constraints could have affected their choices. For example the explanations I would offer the class about each assignment or the films that I would screen as exemplary work could have served to cue the participants as to my own expectations for the assignments. In view of the fact that the girls were more highly motivated academically, this could have determined not only the content that they chose to explore for their Individual Films, but also the roles that they decided to perform for their collective efforts.

The boys on the other hand demonstrated less academic motivation by handing in late work or not completing some assignments at all. This lack of academic motivation could have also been manifested in their choices of content. Some boys could have chosen the specific genre of juvenile comedy, either consciously or unconsciously, as an act of resistance to my adult (and female) authority or the institutional constraints of the classroom. Juvenile male humour was never publicly validated by me or by the rest of the teaching staff, and it is possible that this choice of content was selected as a subtle act of rebellion. That said, it is also possible that I am letting my own adult (and female) judgements bias my analysis, and it may be that this

juvenile humour was an expression of the boys' true interests. Much like the girls, perhaps they were making films that were meaningful to them and though their creative expressions did not always explore their inner worlds in obvious ways, the boys' brand of humour allowed them to express their concerns in the way that they could be comfortable or capable of exposing while nonetheless appearing to be rebelling against academic and institutional control.

Social negotiation in filmmaking and the filmmaking classroom

The social functioning of a film crew and film production classroom was also found to be relevant to the choices made by participants throughout the study. Interpretations of the themes that emerged from the data suggest that girls' and boys' choices may have been motivated by a need to define their identities and find their place not only within the hierarchy of the film crew but also the social hierarchy of the classroom.

Like any other kind of public speaking, presenting a film is more than just communicating content or technique. It is a way to demonstrate technical competence, expertise, and knowledge on a particular subject. Although official evaluation for finished films was done by me, peer appraisal and affirmation was not only crucial for filmmakers' egos and sense of self, but ranked them unofficially within the social hierarchy of the class. The success of a film was determined by its appraisal by peers, and the films and therefore filmmakers, who were technically strong and who most

accurately emulated Hollywood aesthetic, were held in the highest regard while those who were either technically weak or used different visual conventions were more open to criticism and aggressive post-screening questioning.

This is consistent with other forms of public speaking and performance. Mills (2006) examines performance anxiety in academics presenting papers at conferences, and confirms the way in which her participants also assessed the success or failure of their presentations according to its reception and approval by peers and colleagues (p. 65).

Other research, such as the work of Judith Baxter (2003) explores discursive practices in the classroom and the power relationships associated with public voice. She affirms that a "discourse of approval" (p. 92) operates within the classroom where those who are afforded public speech more regularly are those students who are most popular or respected among peers. This notion, when applied to the *Digital Filmmaking IV* classroom is potentially problematic because although there were certainly some popular girls within the sample, those students who were most respected were often those who were perceived to have strong filmmaking skills. Given the fact that the boys often dominated the equipment and publicly displayed their technical knowledge, those students perceived to have those strong filmmaking skills (with the exception of Janine) were largely boys.

This social negotiation and ranking of skill appears to have come in to play when choosing production roles where those considered more highly accomplished got access

to the roles of their choice within the film crew's hierarchy—as evidenced by Karine's previously cited comment about letting Sam edit.

Furthermore, if the dynamics in the classroom continued outside of the classroom as well, one can extrapolate that "discourses of approval" (Baxter, 2003) also came into play when mixed-gender groups prepared their productions. The concept of voice is crucial in the filmmaking process, where those who are accorded speech have the potential to control not only the decision-making process but the film's overall vision as well. This is especially relevant due to the heavy emphasis on auteurist approaches to filmmaking in Creative Arts and Fine Arts programs that re-enforce the notion of a director's singular and individualistic cinematic voice (Sabal, 2009), or more specifically the use of film as a means of *personal* expression. However personal expression is at odds with the group experience and if a singular cinematic voice is to emerge, it is likely to be the voice of the more dominant team members. Within such a structure, an equitable learning experience for all is impossible to achieve. For girls to be able to access the leading roles in a production with regularity, they must feel at ease expressing their voices and stories and confident in translating those voices and stories into filmic images.

Buckingham et al. (1995) propose an alternative approach to video production by suggesting that creativity should not be about individualistic self-expression, but a "form of *social dialogue*" (p. 13) and though this would seem to be a more inclusive way to teach filmmaking, it would be difficult to achieve in practice within the existing pedagogical structure of most institutions. Film programs encourage students to hone

their skills in specific crafts so that they could theoretically work in the industry, but teachers also uphold the hierarchical structure because it is an efficient way to produce work with the limited amount of equipment available and the time constraints of school schedules.

For large-scale change to happen, academic institutions would first need to examine their pedagogical structures in order to explore ways to re-design film programs and the instruction of media in their classrooms.

Conclusion

In March 2010, the department of Canadian Heritage and Telefilm Canada released the Burgess report, a needs assessment concentrating on women's participation in the film industry in Canada. The report highlights the different ways in which women participate, most notably that women were found to be particularly present in crews of low budget films and documentaries as well as training programs where their attendance was equal to or greater than those of men or boys. However despite their experience or equal numbers in the classroom, these numbers were not represented in the professional, commercial (as opposed to cultural) feature film industry where access to leading creative and technical roles on large-scale and larger budget films that require "the attachment of other market elements (producers, distributors, broadcasters)" is still extremely limited (Burgess, 2010, p.3).

Although my own students are still at the early stages of their film education, there are nonetheless similarities between the structures of their film crews for school assignments and those of the professional world. The results of the Burgess report provide a chilling flash-forward for my own students and serves to highlight the social and hierarchical negotiations in filmmaking that start in the classroom and continue far beyond graduation.

Girls' and women's reluctance to take on authoritative on-set roles should not be misinterpreted as their own innate lack of self-confidence or disinterest. It is important to underline that it is the culture and context surrounding the filmmaking process—a

culture and context that are upheld in academic institutions—that need to be addressed. Instructors must be aware that issues such as preferred filmic treatments according to gender, the classroom reactions to such treatments, and the need to negotiate film content as a collective, all have the potential to affect not only student choices but possible professional choices as well. For example, gendered content preferences and the negation of female stories are not unique to the classroom as evidenced by the derogatory term 'chick flick' and the low value that critics place on such films. Should the stories that are meaningful to girls be less respected within a mixed-gender group working on a film assignment, it is inevitable that issues regarding voice and power should arise and impact the kind of choices that the girls willingly make.

Gender and identity performances by students is another factor that can affect the roles that girls and boys choose. The results of the present study support the idea that the boys in this sample were under tremendous pressure to perform for their peers and affirm their sense of masculinity within the group where technical prowess and the knowledge of action, comedy, and violent genres were publicly supported and loudly appreciated by the other boys in the class.

Additional factors such as academic motivation (or lack thereof) as well as the circular relationship of interest, access, experience, proficiency, and confidence with technology need to be re-visited for girls to have equal opportunities within the media classroom and contribute to the creation of a supportive climate that would allow girls to prosper.

Although this study highlights the many problematic issues that surround mixed-gender film production, it should be noted that students' best work often emerges from creative collaborations. However one must remember that collaboration is a learned skill not an "innate one" (Hodge, 2009, p. 19) and classrooms and film assignments must be designed so that the difficulties that are inherent in the process, such as the hierarchical organization of production crews and the resulting power relationships, are carefully monitored and structured in order to maintain a sense of respect among team members.

There is a dearth of studies that look at the very unique collaborations occurring during the production of digital filmmaking projects at the CEGEP level. Within this context, gendered patterns of behaviour begin early and contribute to shaping the kinds of participation in which girls and boys engage and continue to engage throughout their filmmaking careers. Although the present study attempts to look at these factors in order to inform my own teaching practice, further research needs to be done to explore alternate ways to structure filmmaking classes and the collaborative work completed therein. Moreover a comprehensive understanding of the social negotiations between male and female students in this specific kind of collaborative work needs to be further explored. Such research will hopefully result in equitable classroom experiences, in addition to ensuring that female perspectives and voices in filmmaking are heard both at the academic level and consequently in a future professional industry.

References

Abbott, D. (2009, June 12). Girls just wanna have funds. *Hollywood Reporter*, 13-14.

Baxter, J. (2006). Introduction. In J. Baxter (Ed.), *Speaking out: The female voice in public contexts* (pp. xiii-xviii). New York: Palgrave MacMillan.

Baxter, J. (2003). *Positioning gender in discourse*. New York: Palgrave MacMillan.

Bell, B. (2007). Private writing in public spaces: Girls' blogs and shifting boundaries. In S. Weber & S. Dixon (Eds.), *Growing up online: Young people and digital technologies* (95-111). New York: Palgrave MacMillan.

Benenson, J.F., & Heath, A. (2006). Boys withdraw more in one-on-one interactions, whereas girls withdraw more in groups. *Developmental Psychology*, *42*(2), 272-282.

Bhargava, A., Kirova-Petrova, A., & McNair, S. (1999). Computers, gender bias, and young children. Information Technology in Childhood Education Annual, 1999(1), 263-274. AACE.

Buckingham, D. (2004). The media literacy of children and young people. *Oxfam*. Retrieved April 1, 2008, from http://www.ofcom.org.uk/advice/media_literacy/medlitpub/medlitpubrss/ml_children.pdf

Buckingham, D. (2003). *Media education: Literacy, learning, and contemporary culture*. Cambridge: Polity Press.

Buckingham, D., Grahame, J., & Sefton-Green, J. (1995). *Making media: Practical production in media education*. London: The English and Media Centre.

Buckingham, D. (1993). Boys' talk: Television and the policing of masculinity. In D. Buckingham (Ed.), *Reading audiences: Young people and the media* (pp. 89-115). Manchester: Manchester University Press.

Burgess, M. (2010). *Needs assessment for gender-based impact analysis of the Canadian feature Film policy*. Department of Canadian Heritage and Telefilm Canada. Retrieved October 2, 2010, from http://www.womeninfilm.ca/_Library/Advocacy/2010-Needs-Assessment-Gender-Based-Impact-Analysis.pdf

Campbell, K. (2000). Gender and educational technologies: Relational frameworks for learning design. *Journal of Educational Multimedia and Hypermedia, 9*(2), 131-149.

Ching, C.C., Kafai, Y.B. & Marshall, S.K. (1998). Give girls some space: Considering gender in collaborative software programming activities. In T. Ottmann & I. Tomek (Eds.), Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 1998 (pp. 56-62). Chesapeake, VA: AACE.

Cieply, M. (2009, August 23). See any similarities in these directors? *The New York Times on the Web*. Retrieved April 6, 2011, from http://www.nytimes.com/2009/08/23/business/23steal.html?adxnnl=1&ref=michaelcieply&adxnnlx=1302095591-LBQcNP2uVpeMSXjqMLlERQ

Cockburn, C. (1994). The circuit of technology: Gender identity and power. In R. Silverstone & E. Hirsch (Eds.), *Consuming technologies: Media and information in domestic spaces* (pp. 33-42). London: Routledge. Retrieved March 19, 2010, from http://www.questia.com/PM.qst?a=o&d=104378732

Creswell, J.W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. New Jersey: Pearson.

Darts, D. (2006, September). Art education for a change: Contemporary issues and the visual arts. *Art Education, 59*(5), 6-12.

Drotner, K. (1989). Girl meets boy: Aesthetic production, reception, and gender identity. *Cultural Studies, 3*(2), 208-225.

Gauntlett, D. (2002). *Media, gender and identity: An introduction*. London: Routledge.

Giddens, A. (1991). *Modernity and self-identity*. Stanford: Stanford University Press.

Goldstein, J., & Puntambekar, S. (2004, December). The brink of change: Gender in technology-rich collaborative learning environments. *Journal of Science Education and Technology*, 13(4), 505-522.

Götz, M., Lemish, D., Aidman, A., & Moon, H. (2005). *Media and the make-believe worlds of children: When Harry Potter meets Pokeman in Disneyland*. New Jersey: Laurence Erlbaum Associates.

Hardin, T. (2009, Spring). Notes on collaboration: Assessing student behaviors. *Journal of Film and Video, 61*(1), 31-50.

Harry, B., Sturges, K.M., & Klingner, J.K. (2005, March). Mapping the process: An exemplar of process and challenge in grounded theory analysis. *Educational Researcher, 34*(2), 3-13.

Hayes, E.R. (2001, Spring). A new look at women's learning. *New Directions for Adult and Continuing Education, 89*, 35-42.

Hodge, C. (2009, Spring). Film collaboration and creative conflict. *Journal of Film and Video, 61*(1), 18-30.

Hsu, T. & Wang, H.F. (2003). Gender effects on collaborative learning behavior in CSCL. In A. Rossett (Ed.), *Proceedings of world conference on e-learning in corporate, government, healthcare, and higher education 2003* (pp. 1919-1926). Chesapeake, VA: AACE.

Jenson, J., De Castell, S., Bryson, M. (2003). "Girl talk": Gender, equity, and identity discourses in a school-based computer culture. *Women's Studies International Forum,* 26(6), 561-573.

Kuhlen, R., & Michels, D. (2006). Collaborative e-learning –an opportunity to identify and to overcome gender barriers. In T. Reeves & S. Yamashita (Eds.), *Proceedings of world conference on e-learning in corporate, government, healthcare, and higher education 2006* (pp. 2593-2601). Chesapeake, VA: AACE.

Lauzen, M.M. (2008). *Boxed in: Women on screen and behind the scenes in the 2007-2008 prime-time season*. Center for the Study of Women in Television and Film. Retrieved October 5, 2008 from http://womenintvfilm.sdsu.edu/research.html

Lemish, D., Liebes, T., Seidmann, V. (2001). Gendered media meanings and uses. In S. Livingstone & M. Bovill (Eds.), *Children and their changing media environment* (pp. 263-282). New Jersey: Lawrence Erlbaum Associates.

Maczewski, M. (2002, April). Exploring identities through the Internet: Youth experiences online. *Child & Youth Care Forum, 31*(2), 111-129.

Marsh, J. (2006). Emergent media literacy: Digital animation in early childhood. *Language and Education, 20*(6), 493-506.

Mazzarella, S.R. (2005). It's a girl wide web. In S.R. Mazzarella (Ed.), *Girl wide web: Girls, the Internet, and the negotiation of identity* (pp. 1-12). New York: Peter Lang.

McGrath, D. (2004). Closing the gender gap: Girls, technological fluency, and PBL. *Learning and Leading with Technology*, 31(6), 28-31.

Mills, S. (2006). Gender and performance anxiety at academic conferences. In J. Baxter (Ed.), *Speaking out: The female voice in public contexts* (pp. 61-80). New York: Palgrave MacMillan.

Moss, G. (1993). Girls tell the teen romance: Four reading histories. In D. Buckingham (Ed.), *Reading audiences: Young people and the media* (pp. 116-134). Manchester: Manchester University Press.

Pipher, M. (1994). *Reviving Ophelia: Saving the selves of adolescent girls*. New York: Ballantine.

Pithouse, K., Mitchell, C., Weber, S. (2009, March). Self-study in teaching and teacher development: A call to action. *Educational Action Research, 17*(1), 43-62.

Polak, M. (2006). It's a gURL thing: Community versus commodity in girl-focussed netspace. In D. Buckingham & R. Willett (Eds.), *Digital generations: Children, young people, and new media* (pp. 177-191). New Jersey: Lawrence Erlbaum Associates.

Polak, M. (2007). "I think we must be normal… there are too many of us for this to be abnormal!!!": Girls creating identity and forming community in pro-ana/ mia websites. In S. Weber & S. Dixon (Eds.), *Growing up online: Young people and digital technologies* (81-94). New York: Palgrave MacMillan.

Prinsen, F., Volman, M.L.L., Terwel, J. (2007). The influence of learner characteristics on degree and type of participation in a CSCL environment. *British Journal of Educational Technology*, 38(6), 1037-1055.

Realisatrices Equitables (2010). Retrieved October 3, 2010, from http://realisatrices-equitables.com/index.php?option=com_content&view=section&layout=blog&id=8&Itemid=74

Ross, K. (2010). *Gendered media: Women, men, and identity politics*. Lanham: Rowman & Littlefield.

Sabal, R. (2009, Spring). The individual in collaborative media production. *Journal of Film and Video, 61*(1), 6-17.

Sadker, D., Sadker, M., & Zittleman, K. (2009). *Still failing at fairness: How gender bias cheats girls and boys in school and what we can do about it*. New York: Scribner.

Scanlon, E. (2000). How gender influences learners working collaboratively with science simulations. *Learning and Instruction, 10*, 463-481.

Schweingruber, H., Brandenburg, C.L., & Miller, L.M. (2001). Middle school students' technology practices and preferences: Re-examining gender differences. *Journal of Educational Multimedia and Hypermedia,* 10(2), 125-140.

Seiter, E. (2005). *The Internet playground: Children's access, entertainment and mis-education*. New York: Peter Lang Publishing.

Shashaani, L. (1997). Gender differences in computer attitudes and use among college students. *Journal of Educational Computing Research, 16*(1), 37-51.

Sinner, A. (2003, November). Women learners in the classroom: Exploring the experience of voice, listening, and silence. *Journal of International Women's Studies. 5*(1), 114-121.

Stack, M. (2009, Spring). Video production and youth-educator collaboration: Openings and dilemmas. *McGill Journal of Education. 44*(2), 299-318.

Stern, S. (2008). Producing sites, exploring identities: Youth online authorship. In D. Buckingham (Ed.), *Youth, identity, and digital media* (pp. 95-117). Cambridge, MA: MIT Press.

Stern, S. (2007). Adolescent girls' expression on web home pages: Spirited, somber, and self-conscious sites. In S. Weber & S. Dixon (Eds.), *Growing up online: Young people and digital technologies* (pp. 159-179). New York: Palgrave MacMillan.

Turkle, S. (1995). *Life on the screen*. New York: Simon & Schuster.

Volman, M., van Eck, E. (2001, Winter). Gender equity and information technology in education: The second decade. *Review of Educational Research, 71*(1), 613-634.

Walkerdine, V. (1989). Femininity as performance. *Oxford Review of Education, 15*(3), 267-279.

Walsh, S.F. (2005). Gender, power, and social interaction. In S.R. Mazarella (Ed.), *Girl wide web: Girls, the Internet, and the negotiation of identity* (pp. 69-83). New York: Peter Lang

Weber, S. & Mitchell, C. (2008). Imaging, keyboarding, and posting identities: Young people and new media technologies. In D. Buckingham (Ed.), *Youth, Identity, and Digital Medi*a (pp. 25-47). Cambridge, MA: MIT Press.

Weiss, R. P. (2001, January). Gender-biased learning. *Training & Development*, 42-48.

Appendix A

CONSENT TO PARTICIPATE IN A STUDY ON COLLABORATIVE LEARNING IN DIGITAL FILMMKAKING PROJECTS

I hereby agree to participate in a study on collaborative learning in digital filmmaking projects being conducted by Nancy Tatebe (450) 672-7360 ext. 269 (ntatebe@champlaincollege.qc.ca) under the supervision of Dr. Vivek Venkatesh of the Educational Technology Department of Concordia University located at 1455 de Maisonneuve W. Montreal, Quebec H3G 1M8.

A. PURPOSE

I understand that the purpose of this study is to explore the factors that influence how groups collaborate on digital filmmaking projects at the CEGEP level, in order to improve teaching practices within the discipline and ensure an equitable classroom experience for all students.

B. PROCEDURES

I acknowledge that participating in the study entails being observed during group activities occurring during class time, and completing a short written questionnaire. I also understand that information obtained through pedagogical activities that are part of the Digital Filmmaking IV class such as journals, scripts, films, and individual interviews can be used in the study. All information obtained will remain confidential and names, or other identifying information will be removed or altered in all data, documents, and tools that are published or otherwise disclosed to any third parties.

C. RIGHTS

I understand that I may withdraw from the study at any time without any negative consequence to me, and that any information given during the course of the study will be excluded from the study upon my withdrawal.

I CERTIFY THAT I HAVE READ AND FULLY UNDERSTAND THIS AGREEMENT PRIOR TO SIGNING IT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY. LES PARTIES AUX PRÉSENTES ONT EXIGÉ QUE LE PRÉSENT CONTRAT SOIT RÉDIGÉ EN LANGUE ANGLAISE.

NAME (please print) _____

SIGNATURE _____ DATE _____

Should you have any questions regarding your right as a participant in this study, please contact Adela Reid, Research Ethics and Compliance Officer at Concordia University at (514) 848-2424 ext. 7481 or by e-mail at areid@alcor.concordia.ca.

Appendix B

QUESTIONNAIRE

Section I

1. Age:_____
2. Gender: ____Male ____Female
3. I own a video camera and use it frequently ____Yes ____No
4. I own editing software and use it frequently ____Yes ____No

5. According to your personal preferences when making films, rank each of the following production roles from 1-10 with 1 being your favourite role and 10 being the role that you prefer the least.

____Director
____Producer (i.e. booking locations, actors, organizing the schedule, preparing deliverables)
____Writer
____Actor
____Production assistant (i.e. helping the crew with each of their roles)
____Cinematographer
____Sound recordist
____Boom operator
____Editor
____Other (specify)_____

6. Place a check mark beside one of the following options to rate your level of confidence in using video equipment (i.e. cameras, lights, editing software, sound kits).

____Extremely confident
____Confident most of the times
____Confident half of the time
____Rarely confident
____Not confident at all

7. Place a check mark beside one of the teaching methods that you feel is the most helpful to you in learning how to use the video equipment (i.e. cameras, editing software, and sound equipment) in your filmmaking classes.

____Watching the teacher use the equipment in class
____Watching a group member or classmate use the equipment on set
____Having the teacher teach you as you handle the equipment
____Having a group member or classmate teach you as you handle the equipment
____Playing with the equipment on your own

____Other (specify)_____

8. In your Creative Arts classes at Champlain, state the approximate number of times that you have worked in a group to produce a movie.

____1-2 times
____3-4 times
____5-6 times
____7 or more times

9. To what extent do you feel that group work has helped you to learn how to make better movies?

____Extremely helpful
____Helpful most of the times
____Helpful half of the time
____Rarely helpful
____Not helpful at all

10. From your own experience making student films, which roles have you felt were the most important in terms of the creative direction that the film had taken? Rate each of the roles on a scale from 1-10 with 1 being the most important and 10 being the least important.

____Director
____Producer (i.e. booking locations, actors, organizing the schedule, preparing deliverables)
____Writer
____Actor
____Production assistant (i.e. helping the crew with each of their roles)
____Cinematographer
____Sound recordist
____Boom operator
____Editor
____Other (specify)_____

Section II

On a scale of 1-6 with 1 being "Strongly Disagree" and 6 being "Strongly Agree" circle the appropriate numbers next to the following statements.

		Strongly Disagree					Strongly Agree
11.	I am interested in pursuing a career in film	1	2	3	4	5	6
12.	When working in groups, I find that I am usually more technically skilled with the video equipment than my team mates	1	2	3	4	5	6
13.	I am my most creative under pressure and prefer to make quick decisions on-set	1	2	3	4	5	6
14.	I am my most creative when I have time off of the set to think about the choices I need to make for my films	1	2	3	4	5	6
15.	Generally speaking, I don't like confrontation	1	2	3	4	5	6
16.	I have been most comfortable working on-set as either director, cinematographer, or sound recordist	1	2	3	4	5	6
17.	I like coming up with creative concepts but then letting someone else figure out the technical details on how it should be realized	1	2	3	4	5	6
18.	Generally speaking, I like working with computers	1	2	3	4	5	6
19.	In my past experience making films, I have worked with team mates who, either intentionally or unintentionally, have tended to "take over"	1	2	3	4	5	6
20.	Most times I am confident leading the group and taking on the responsibility for the creative direction of a film	1	2	3	4	5	6
21.	When working in groups, I prefer to let team mates perform the technical roles	1	2	3	4	5	6

Section III—Short Answer Questions

22. In the film productions that you have completed so far, what have been the roles that you have most frequently taken on and what were some of the factors that led you to choose those roles?

Appendix C

E-MAIL INTERVIEW QUESTIONS

Question #1:

If everyone was equally capable and skilled with the equipment (i.e. cameras, lights, sound kits, editing software) would it change the power relationships within a group? (If you are someone who is not comfortable with the equipment, would it have changed the types of roles that you decided to take on?)

Question #2:

In terms of comfort level (or proficiency) with the equipment and choosing roles for production, does being a girl or guy change anything?

Appendix D

LIST OF CODES & BREAKDOWN INTO THEMES