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Beyond the Gutenberg Parenthesis: Exploring New Paradigms in Media and Learning

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Abstract

There are those who agree with Tom Pettitt that we are entering into a period where text based literacy is no longer the only measure of intelligence, nor is it the only form of valuable communications and knowledge acquisition for today's media-centric children. As Prensky states, today's youth speak 'digital' as their primary language. While his comments may be tempered by the fact that they are based on personal observation and correspondence with others, Prensky does make a point. In order to reach these children and stimulate their interest in reading and writing, it may be better to being by teaching to their strengths and if digital is the basis of those skills, then starting with digital media has considerable merit.

This paper presents the some of the foundations behind Jenkins' premise that remixing and appropriation of previously created works is a valid first step in the learning process. The authors suggest that mixing media with story invention creates a learning environment of considerable power. The paper also discusses a series of related studies in which these hypotheses were investigated and a few words about the ramifications these results may have on future studies in this area.

Keywords: digital media, remix, story, media literacy education

Introduction

Background

We agree with Tom Pettit that the relatively short time that print has reigned as the focus of literacy efforts will be seen as a mere parenthesis in relationship to the long history of human development. "Gutenberg Parenthesis" is a term coined by Pettitt, who is an Associate Professor of English at the University of Southern Denmark. Pettit (2007) suggests that in the centuries prior to the invention of the printing press, humans commonly utilized devices such as sampling, remixing, borrowing and appropriating as a means to communicate and learn. Pettit's hypothesis mirrors that of Walter Ong (1982) and his followers who suggested that we have recently entered into an era of 'secondary orality'—similar in scope to the time before Gutenberg when it was common practice to 'appropriate' thoughts and ideas incorporating them into their own works of self expression. In his book, *The Rise of the Image the Fall of the Word*, Mitchell Stevens (1996) similarly proposes that text may be losing its importance as the preferred communication method and is being replaced by newer, mediated forms. According to scholars who are following and documenting the learning practices of today's participatory culture, media-centric youths are again demonstrating the same 'pre-Gutenberg' propensities for "appropriation", "distributed cognition", "collective intelligence", and "networking" as staples of the methods they often utilize, especially in informal learning situations (Jenkins 2005, 2006).

These cultural changes are not only having an effect on instructional practices but are also creating unique contextual implications for media literacy as they relate to ownership and rights to intellectual property. Teachers are faced with trying to balance these anomalies with traditional ethical considerations associated with copyright compliance and plagiarism with the evolving digital media revolution that allows their students to easily copy, paste, and remix someone else's work into their own artifacts; ideas that are now being openly fostered by popular television personalities (i.e., Colbert's Green Screen Challenge).

We believe that a new 'digital divide' is emerging; an intellectual war is being waged between today's millennial generation and the adults in charge of our educational system. The latter believes that knowledge is an asset, something one 'owns' and perpetuates. In our interactions with them, the former appears to look at

knowledge as a temporal commodity that is the product of sampling, appropriating, and then remixing (Jenkins 2005, 2006). In other words, knowledge is really an expendable item that can be retrieved (i.e., Googled?), used, and dispensed with at will. To them, a sense of 'ownership' relates directly as to on whose computer that informational artifact resides. In our opinion, this view of communicating and learning contributes to a credibility gap between media-centric students and their teachers who are steeped in their traditional views on teaching and learning. This gap further contributes to negative attributions and motivational issues that manifest themselves in reluctance on the part of many students to fully participate and engage in the classroom.

It is our position that this view of knowledge acquisition and intellectual property rights are emblematic of the kinds of disparities in worldviews between many teachers and their students. They certainly confound things for teachers who strive to increase literacy levels in their classrooms. Accepting this wider definition of what it means to be considered 'literate' can be problematic due to this confusing and anomalistic landscape that challenges teachers to either give in and 'let it slide', or simply avoid the introduction of media projects and activities into their classrooms.

Digital Media for Reluctant Learners

We suggest that doing the latter could be a huge mistake. In this article we evaluate certain digitally mediated instructional strategies that involve many of the practices described by Jenkins (2006). The theoretical basis of our efforts is Self-Determination Theory as described and researched by Vansteenkiste, Lens, and Desci (2006) that suggests the concepts of autonomous regulation and intrinsic goal contents setting were found to significantly increase motivation, cognition, and perception. We believe our intervention contributed to transforming otherwise reluctant learners into more literate producers and consumers of all forms of media, including text. Further, personal experience framed by researching the literature appears to support our hypothesis that an instructional strategy based on a premise of trans-media story creation (including activities that involve the remixing of the works of others) could become a powerful motivator for otherwise reluctant learners (Jenkins 2005; Kelly 2006; Gunter, Kenny, and Vick 2006). Failure to properly address motivation has been shown to account for as much as 50% of the drop out rate in K-12 schools in the United States. In several surveys conducted over a period of years, over 80% of those surveyed during interviews indicated that they believed their chances of staying in school would have increased if their classes were more interesting and/or provided more opportunities for real-world, mediated learning (Gunter, Kenny, and Vick 2006; Bridgeland, Dilulio, and Morison 2006; Elley 1992; Guthrie et al. 1993; O' Flahavan et al. 1992; Miller 2003; Purves and Beach 1972; Rueda, Au, and Choi 2004; Veenman 1984; Walberg and Tsai 1985; Wixson and Lipson 1991).

When one analyzes what motivates today's students, it does not take long to realize that technology and digital media rank high on the list. These individuals do not know of a time when their leisure hours have not been managed and/or manipulated by the Internet, computers, videos, DVDs, and television (Fletcher 2003; Saltrick, Honey, and Pasnick 2004; Dresang and McClelland 1999). It has been our experience that today's students are certainly more attracted to interactive, visual media and demonstrate a strong tendency to deprecate (or as a minimum, overlook) the value of text (Gunter and Kenny 2008, 2005, 2006; Neiderman et al. 2005; Prensky 2003). It should not be surprising that new, digital forms of media make today's learners less dependent on text-based media to self-express and acquire knowledge (Coiro, Karchmer, and Walpole 2006; Kinzer and Leander 2003).

While many educators acknowledge the existence of these new forms of media, they have been slow to figure out that one of the reasons that media-centric learners become reluctant readers is because they are not only text neutral, they are in fact *text-averse*. The tenets of expectancy-value theory tell us that if one does not see a value in a particular process, he or she is most likely to be reluctant to use it (Fishbein and Ajzen 1974). Because media-centric youths do not see the relevance of text-based communicative forms, they become less motivated to use them. This lack of motivation is exacerbated by technology-averse teachers who mediate their instruction with technology that is inconsistently integrated in the hope that their students will be motivated simply because it is present (Kenny and Gunter 2007; Alvermann and Xu 2003; Gunter, Kenny, and Vick 2006; Shaffer, Squire, and Gee 2005). To be successful in instilling media and media literacy in their students, teachers have to actually embrace it with all of its anomalies.

We suggest that teachers interested in media education face two conflicting but interrelated challenges:

- A lack of understanding (and a misplaced fear) of the potential for legal and ethical retribution related to the most common mediated strategies today's media-centric students use in informal learning environments: namely, sampling and remixing; borrowing and reshaping; and appropriating and recontextualizing remixing (Jenkins 2006); and
- Fully recognizing that today's students are actually intelligent in alternative, mediated modes of communicating.

Reinking (2005) postulates that previous research into the effects of using media to increase comprehension of text and motivation for reading has suffered due to the fact that may teachers are often too heavily invested in text-based methods.

Our own work in local schools confirms this attitude and has revealed some additional interesting evidence as to why many of today's game-playing digital learners do not like to read (Kenny and Gunter 2005). Responses to preference surveys indicate that these adolescent students have trouble with comprehension: first because they feel it is boring, and second because text has little or no meaning to them. Because of this, they often express that they have difficulty with visualizing the text they are reading, increasing their struggles and reluctance to read. The good news is that we discovered (as have others (i.e, Prensky 2003, 355-374)) that these students prefer to learn through pattern recognition. We hypothesized that if we were able to find an instructional methodology that is founded on a universal (i.e., pattern based) intellectual schema, it could becomes a powerful motivator.

Epistemological qualities of story

That universal schema, it turns out, is story. Research has shown that story is the one of the oldest and most elemental forms of knowing and has been shown to have a powerful effect on overall cognition. Those who study narrative epistemology have shown that stories "…effect a change in consciousness, a surrendering of defenses, and creative engagement with the imagination" (Bradt 1997, viii). Story based curricula correlate to Jerome Bruner's (1986) ideas about situated cognition, in which he showed that positioning learning in context helps learners retain and understand information for longer periods of time. Situating what is to be learned in the context of a story helps learners select, arrange, and organize information into manageable chunks. We discovered in our own interactions with students that the love of story remains as strong as ever (Kenny and Gunter 2005; Neiderman et al. 2005). We also discovered that an apparent contradiction exists in that even though they seem to have a strong affection for story (especially the personal participatory kind found in narrative based video games) the students we worked with did not possess a strong understanding of the basic tenets of story creation and had trouble correlating story constructs from one modality (i.e., story in games) to another (those found in books).

UB the Director

It was our experience that serious impediments were being imposed on the teachers' ability to increase literacy rates in their students by this increasing credibility gap caused by the differing views on content acquisition and the lack of appreciation on the part of students in the relevance of text. In addition, these teachers did not know how to effectively introduce story creation as a universal construct (pattern). Their students often confronted these teachers with questions as to why they had to read a book rather than watching the movie made from it. Because they were steeping traditions about books simply being more 'intellectually stimulating' than movies, these teachers did not know how to respond to these questions in a relevant and timely manner. The reply that seemed to generate the most positive response was 'why would you want to subject yourself to some director's interpretation of the book... wouldn't you rather become the director of your own movie about it (this is why we called it 'UB-the-Director')?" We hypothesized that an instructional strategy that focused on blending an appropriate use of digital media, appropriation, remixing, and the elements of story invention could do a lot to motivate these reluctant and struggling learners in hopes of turning them into avid consumers of text-based media.

Methodology

Research Question

We hypothesized that educators can engage their students in the learning process and encourage them to perform better academically through the use of the informal participatory creative processes described by Jenkins (2006). It was also our belief that reluctant learners would buy into the reading process if we utilized an instructional intervention that allowed them to easily initiate their investment in it. Thus, we formulated our basic research question:

- Could an instructional strategy (See Attachment A) that blended a favored medium (video) with story result in an instructional strategy of considerable power?

To confirm these notions we conducted several studies over a four-year period in various school settings to create and substantiate the value of a media-based instructional model that evolved over time in response to the aforementioned challenges.

Subjects

In order to validate our hypothesis, we developed and administered a series of instructional activities to students in local K-12 schools in a large metropolitan school district in Central Florida. Participants were students enrolled in regular, gifted, and low performing classrooms. The demographics and gender were representative of the local community: approximately 55% were from ethnic minorities and a 50/50 male to female ratio. The gifted students we worked with were in a self-contained class. However, in the reading remediation class (a special course set up by the schools for those who had failed the statewide standardized reading test at least twice) more than 25% of the students had been previously been classified as 'advanced' or honors students.

Implementation

The curriculum as it evolved was founded on having students "suspend their disbelief" (to borrow a phrase from Brenda Laurel (1993)). To motivate them we would not only allow, but would actually encourage them to utilize remixing, appropriation, and mash-up techniques to create and invent real, digitally mediated stories. We utilized as exemplars many of the engaging practices found in interactive, improvisational performance, narrative-based role-playing games, and reenactment (Kenny and Wirth 2009; Wirth 1994). Narrative constructs were introduced, integrating movies, book trailers, remix challenges, and machinima (recording and editing role-playing games) in ways that students can observe. Students would act out (similar in scope to Total Physical Response (TPR) strategies used in second language learning), use digital media, and participate in story-telling circles and other oral story-telling activities that would lessen the encumbrances imposed by their general weaknesses in and misunderstandings of syntax and grammar. Only after they discovered the story invention process using these means would participants be asked to create written artifacts.

We coupled their natural desire to appropriate and remix existing media with their affinity for story. We introduced story invention using a conceptual framework we borrowed from Edward Branigan's book: *Narrative Comprehension in Film* (1992) in which he explores the basic concepts of narrative theory and its relation literary analysis. Branigan brings together theories from linguistics and cognitive science, and applies them to the screen. That process is boiled down to four basic elements:

- TIME and PLACE - all stories need to have a setting or background, which in a film or video is shown visually.
- CAUSE and EFFECT - This is that all-important moment in which the central character faces a decision to succumb to the conflict or fight. Most often, this conflict/challenge cannot be overcome unless the character goes through some type of transformation or change. The moment of change is the 'teachable moment' and represents the key difference between introducing the elements of story hypothetically and in the abstract and teaching students how to actually construct stories. Being able to re-enact these events on video or identify these in the role-playing games they record in the machinima exercise is what differentiates this instructional intervention from a book report or discussion about the book that is recorded on video.
- All stories need both a teller and a listener. Students were asked to decide on how they would COMMUNICATE THE STORY. This is crucial. The story needs to be credible so that viewers will be willing to suspend their disbelief for an instance and buy into the storyline. We allowed students to utilize existing media and remix it into new narrative forms using metaphoric media (images, voice-overs, music, video clips, etc.). One example is our adoptation of Colbert's 'green screen challenge' (2010) in which students are asked to insert into their videos action clips performed in front of a green screen and remix the snippet into their story lines.

We believed that our students, given the right opportunity, would be motivated to design and create quality media-based artifacts. Once created and produced, we would begin to utilize these objects as personal bridges to creating text-based constructs –a process we would refer to as 'screen to text'. Vocabulary and sentence construction would be gradually introduced by way of reflective writing and asking them

to write out journals and general descriptions of what took place in their videos. We found that once students understood these concepts, they began to learn how to read more critically and look for things in the books they were reading. The concepts of 'cause and effect' and 'consequences for one's actions' became recognizable tools for critical analysis. This process of gradually and increasingly introducing more complex structures in the reading process is a basic component of metacognition, a generally recognized learning remediation strategies (Taylor and Gunter 2008).

Instrumentation

To back up or observations, we administered a pre- and post-test Reading Preference Questionnaire (See Attachment B) that was developed and validated by a panel of colleagues who specialized in reading and motivation and media. In each instance, participants were asked to complete an identical a pre- and post-test survey that was adapted from the Motivation the Read Profile (MRP) (Gambrell et al. 1996). The original instrument contained ten direct questions that utilized a 5-point Likert-¬type scale with '1' representing Strongly Disagree and '5' representing Strongly Agree. The MRP has been shown in the literature to be a valid and reliable testing inventory that assesses motivation, perceptions, and attitudes toward the value of reading. The adapted questions were created and validated by a panel of reading specialists and educators familiar with identifying suspected causes for the apparent failures of previous reading interventions, which we believed would allow us to assume with confidence the face validity of the instrument. A reliability analysis resulted in a reliability (Cronbach) alpha of .73.

Open-ended questions (which were hinted or prompted) were also included that inquired into which medium participants preferred to use to communicate ideas, their future plans, and the importance and value of reading in relationship to those plans. Prompts and hints were used to minimize opportunity for outlying responses and to increase reliability of the responses to the direct questions. In order to triangulate the responses, we followed up on the hinted questions with observations, interviews, and conversations with the participants and their teachers, which were recorded for later analysis. The open-ended and free responses were evaluated by identifying key phrases and repeated themes.

Implementation

In each administration, we utilized intact classrooms because treatment and control groups were impractical and, in some cases, not permitted by school administration. Instead, we utilized a validated research design in which the pre-test results would become the "control' (Berg and Latin 2007, 192). The construct validity of testing for gain scores in this manner has been accepted as a reasonable alternative to traditional treatment and control group studies (Bruning and Kintz 1968; Fitz-Gibbon and L.L. Morris 1987).

Some direct questions asked on the first part of the survey were supplemented with hinted or open-ended responses in the second part. For example, we asked each participant on the post-test to indicate whether he or she felt that the activity had changed his or her attitude towards reading. We also asked for a response to a similar, opened ended question: whether the activity had changed their opinions about reading and why. We implemented the instruction in regular classrooms, gifted classes, and in a reading remediation class that was mandated for students who had failed a statewide standardized reading exam. Administering the program to students from different types of classes provided us the opportunity to determine if the curriculum model would be effective for students in differing classroom environments. We calculated differences in means for responses to the questions among the different types of classrooms.

Before administering the pre-test surveys, we obtained informed consent. After participating in the program (which took between three to six weeks, depending on the school we were working in), individuals completed the post-test questions so we could compare the responses. For this review, we analyzed a composite of the responses for previous administrations of the program to identify emerging themes and trends.

Table 1 – Paired sample t-test for pre- and post-test

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Standard Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Upper	Lower			
Pair 1	waste - waste2	1.872	2.034	.167	1.543	2.202	11.235	148	.000
Pair 2	enjoy - enjoy2	-.195	.991	.081	-.355	-.034	-2.397	148	.018
Pair 3	anxious - anxious2	-.101	1.070	.088	-.274	.073	-1.148	148	.253
Pair 4	concept - concept2	.107	.953	.078	-.047	.262	1.376	148	.171
Pair 5	telling - telling2	-.128	1.237	.101	-.328	.073	-1.258	148	.210
Pair 6	watch - watch2	-.121	1.133	.093	-.304	.063	-1.302	148	.195
Pair 7	nervous - nervous2	.007	1.075	.088	-.167	.181	.076	148	.939
Pair 8	visual - visual2	1.275	1.635	.134	1.010	1.540	9.519	148	.000
Pair 9	picture - picture2	-.376	1.165	.095	-.564	-.187	-3.937	148	.000
Pair 10	underst - underst2	-.262	1.159	.095	-.449	-.074	-2.757	148	.007

Data Analysis

In a post hoc review we calculated a consolidated paired sample t-test (Table 1) between the questions on the pre- and post-tests to determine which responses changed between the time participants began the activity and when they finished. As can be seen in Table 1, responses to questions one, two, eight, nine, and ten changed significantly. These particular questions refer to participants' views on the relative value of reading as an activity, whether they enjoyed reading, how well they perceived them selves as being able to visualize what they were reading, whether thoughts came to them in pictures or words, and whether they understood what they were reading even if they did not like the content.

In order to determine the effect the intervention had on participants regarding the four desired outcomes, responses to the ten direct questions were consolidated into four categories: attitude towards reading (attitude), reading anxiety (anxiety), visualizing ability (visual), and struggling to read (struggle). In our statistical analysis we suspected that a statistical data reduction could reduce the ten questions into four categories. A post hoc analysis based on a Principal Axis Factoring confirmed that such a grouping of responses existed. As a result, we were able to group question three (I feel anxious when asked to complete a reading activity) with question five (I feel comfortable telling stories in front of people) and seven (I get nervous when I think of trying to read something…) to formulate one category (anxiety). We did the same type of categorization to arrive at another three groupings.

As can be seen in Table 2, the intervention had a significant positive effect on students' overall attitude towards reading (attitude), their ability to begin visualizing what they were reading (visual), reading anxiety (anxiety), and their struggle to read (struggle) even when they had difficulty with the vocabulary and/or understanding the relevance of the assignment.

Table 2 – Paired sample t-test of the data reduced effects of the intervention

		Paired Differences					*T*	*Df*	*p*
		Mean Difference	Standard Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Upper	Lower			
Pair 1	attitude - attitude2	1.95	2.6	.21	1.52	2.37	9.11	148	.000
Pair 2	anxiety - anxiety2	-.095	1.62	.13	-.36	.17	-.71	148	.481
Pair 3	visual - visual2	-.505	1.84	.15	-.80	-.21	-3.34	148	.001
Pair 4	struggle - struggle2	1.645	2.28	.19	1.27	2.01	8.79	148	.000

$p < .05$ with 2-tails

Table 3 – Test of effects between schools and student types

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
School	attitude2	156.38	1	156.38	65.83	.00	.318
	visual2	2.66E-01	1	2.66E-01	.00	.999	.00
	anxiety2	4.00	1	3.99	1.849	1.76	.013
	struggle2	105.26	1	105.26	55.09	.000	.281
Student Type	attitude2	1.216	1	1.21	.510	.476	.004
	visual2	4.27	1	4.27	1.56	2.14	.011
	anxiety2	2.37	1	2.37	.11	.743	.001
	struggle2	21.20	1	21.20	11.10	.001	.073
Error	attitude2	334.93	141	2.38			
	visual2	386.96	141	2.74			
	anxiety2	304.24	141	2.16			
	struggle2	269.39	141	1.91			

P < .05 with 2-tails

The post-test mean scores for negative attitude significantly reduced compared to pretest scores with the mean difference Md = 1.95 (SD = 2.61). From the negative mean difference (M = -.50 (SD = 1.84) between pretest scores and posttest scores, we noted that participants' self-efficacy for visualizing increased after the intervention. Struggles with reading also decreased significantly (Md =1.64 (SD = 2.28)).

To explore potential effects on student types, we conducted a two-way ANOVA test, which revealed that significant negative attitudes towards reading ($F = 65.83$, $p < .001$, $\eta^2 = .32$) and visualizing ability ($F = 55.09$, $p < .001$, $\eta^2 = .28$) (See Table 3) were significantly different among schools. Among student types only visualizing ability were found significantly different with $F = 11.10$ ($p < .001$, $\eta^2 = .07$).

An examination of pre-test results (Table 4 using pairwise comparisons ($p < .001$) revealed that remedial students (i.e., those attending reading remediation classes) had significant negative mean score differences for reading attitude prior to the treatment with remedial students of lower Mean scores of 7.14 (SD = .34) were higher than a regular student mean score of 10.28 (SD = .40) and honor students mean score of 9.19 (SD = .19). The results showed that for these students, attitudes towards reading improved significantly after participating in the program.

Table 4: Pairwise comparisons of pre-test results

Dependent Variable	Student Type	Mean	Standard Error	95% Confidence Interval	
				Lower Bound	Upper Bound
attitude2	Regular	10.28 (a,b)	0.40	9.48	11.08
	Gifted	9.19 (a,b)	0.19	8.81	9.56
	Remedial	7.14 (a,b)	0.34	6.47	7.82
pictell2	Regular	4.43 (a,b)	0.44	3.57	5.29

a. Covariates appearing in the model are evaluated at the following values: \attitude1 = 10.3490, anxiety1 = 7.0537, visconcept1 = 12.0268, pictell1 = 4.4832.

b. Based on modified population marginal mean.

Discussion

These results appear to show a significant increase in positive attitudes towards reading for all student groups over the four-year period. The results of the paired sample t-tests show that the students' attitude towards reading was generally negative when they started but significantly improved after participating in these activities. More than forty-five percent of the students expressed newly found enjoyment for reading and/or no longer thought reading was a waste of time. Based on a review of the open-ended responses, we were able to infer that this occurred because participants believed that the activity provided a relevant and meaningful purpose for the reading assignments. Participants also confirmed this in follow-up discussions, indicating that they began to understand how to better critically analyze the reading content critically in order to produce the book trailers that would be shown to their peers during our "Premier Night".

Another positive outcome of these activities was to confirm Vansteenkiste, Lens, and Desci's (2006) ideas about motivational increases created by the intrinsic, autonomy-supportive social environments that were derived by participants being able to establish personal creative content goals via the videos they produced. Students told us anecdotally and in open -ended responses that they felt that being required to write book reports as the required deliverable for reading was looked upon as 'punishment'. On the other hand, they stated that they loved being able to create videos, to re-enact scenes and have relative control over production and outcomes. Video is a medium in which they seemed to truly enjoy working. The trailers actually accomplished the same thing that book reports were intended to demonstrate: that they understand the main theme(s) of the book and that they understood the four elements of story creation.

On the post-test, a majority (65%) indicated in both the directed and prompted questions that, although their preferred communicative medium was still video, they discovered a newfound enjoyment of reading. This, we suggest, was that they now better understood how to visualize what they were reading. The process of producing the videos required them to learn how to translate into picture the text they were reading. These results confirmed our hypothesis that the intervention would at least partially be responsible for these kinds of improvements.

These same ideas were confirmed by conversations we conducted with the participants' teachers. Several indicated that their students were becoming more descriptive in their depictions of events. Previous to working with us, when asked to describe scenarios they were more often found to simply state facts. Now, they were beginning to add more descriptive adjectives to relate the events. Some participants explained that the activities made them think more critically about their reading and required them to picture in their minds what famous movie star might play the roles in movies that might be made about the books, and look for appropriate locations to shoot the scenes from the books that they wanted to portray in their trailers.

One additional unintended consequence came about. Students told us that they had begun to look more critically at the movies and television programs they watched. A few of the boys actually commented jokingly that we were responsible for "ruining their dates" because they kept interrupting the show to explain to their girlfriends the camera shots and what they meant from a visual point of view. In some cases they were able predict events that would subsequently take place in the movie based on their recognizing the shooting and/or editing techniques that were being utilized. Apparently, our sessions on visual language of moving image and the story invention process were effective.

We were also told by several participants that they felt much more empowered in the creative process because they were allowed to remix a certain portion of their videos from other small clips and/or combine some of the background music to come up with their own creations. We did not allow simple copying of copyrighted material but required that the original works be remixed into original contexts and genres, etc. This process helped them learn how to make critical contextual decisions about the appropriateness of what they were choosing to appropriate, generating several 'teachable moments'. Allowing them to remix existing content stimulated several discussions about copyright and ownership of intellectual property. These successes with media further encouraged them to begin writing more descriptively and to read more critically.

Our follow-up informal discussions further confirmed the statistical findings. Students were asked if they could read for understanding even though they did not particularly care about the subject matter. On the pre-test, approximately 60% of the respondents indicated that liking the content factored heavily into their ability to comprehend what they were reading. This reduced to less than 30% on the post-test. Students noted that they felt more empowered and confident to the tackle the reading assignments. It is interesting to note that increases in motivation and improvements in visual processing grew as much for those enrolled in gifted classes as they did for those in regular and remedial reading classes.

We deduced that gifted students had merely answered questions about whether they liked to read during our interviews with those positive responses that they thought we wanted to hear. On the questionnaires (which were anonymous) they divulged their real attitudes, which were not quite so positive. Similar to their counterparts in regular and reading remediation classes, approximately sixty percent of the gifted students indicated that video and video games ranked as their favorite communication methods. They further told us that knowing that they would be able to utilize them as tools to help them understand reading content factored into their enjoying reading the passages.

These results correlate to studies into intrinsic motivation conducted by Lepper et al. (2005) and Vansteenkiste et al. (2006). We argue that bridging the gap between internal and external motivation causes students to more actively engage in the process of learning. Both types of motivation are useful in their own ways. The best instructional strategies involve appropriate application of each one at the appropriate time. We further suggest that participants were internally motivated because they were allowed to utilize the communicative tools that they are already familiar with. This line of thinking is the basis of Doman's (1984) ideas about teaching to one's strengths and then remediating the weaknesses.

We understand that the results presented here can only be generalized to our own population of students. We also realize that a true experimental design with control and treatment groups would have been optimal and that using pre- and post-test as our control mechanism may have limited the power of our research. Having said this, however, we need to state that we do feel that the results sufficiently validated our initial assumptions about the positive effect media can have to motivate and empower reluctant and striving learners, warranting future studies, which are ongoing. The results also seem to strongly indicate that one of the anomalies discovered when analyzing this so-called group of digitally oriented, 'visual learners' is that they actually have difficulty visualizing the text that they are reading and that this short-coming competes as a primary cause of their lack of motivation and/or inability to read. We further suggest that the visual media we utilized contributed to these individuals overcoming these shortfalls.

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Attachment A

UB the Director™ includes a series of instructional activities intended to change the motivational and cognitive processes associated with reading for striving readers both in the context of digital and traditional text. The activities include the use of video games, book trailers, re-enactments, story circles and teacher directed interactive activities.

The following outlines a summary of those classroom sessions and placed on a 3-6 week timeline.

Instructional Sessions - Duration: 3-6 weeks
(as the length of these sessions can vary, so too will the actual length of the process)

Session	Instructional Strategies	Discussion / Justification
1	Introduce stories and narrative schema and per Branigan's constructs for film. Introduce the concept of thinking about your thinking (metacognition) by having teachers use the think aloud. Researchers will model the think aloud. Students are drawn into a short discussion about stories and fiction and non-fiction books. Interpretations of Star Wars movies and George Lucas' idea on story and character development are introduced. Students are asked what is it about movies or video games that they like more than reading.	Usually the students' answers come back like 'reading is boring', or that they cannot seem to visualize the meaning of the words or comprehend what there are reading, that movies and games have more action, and/or that they like being able to interact with the characters. This introduction is used to set the tone for the remainder of the first session in which students are shown the various techniques used to deconstruct stories and narrative text structure.
2	Fantasy Circle – Story stimulus Teachers will read aloud from visual novels such as Fever Dream by Ray Bradbury while thinking aloud regarding fantasy & plot structures. Using a book The Grammar of Fantasy by Gianni Rodari as a guide, students form teams and create story vignettes using word prompts and information from familiar stories to create short stories in groups. As they create the stories, students will be asked to think aloud.	This is an icebreaker session that sets the stage for group/peer interactions. The students will first see how an expert reader thinks while reading fantasy. Rodari first wrote this book in the late 1850s, and contains dozens of ideas. This type of activity gets the participants motivated to share, breaks down barriers, and promotes creative thinking. The Me-Stories session flows very smoothly afterwards.
3	meStories – (Story Circle – Peer to peer story creation). Participants are instructed to create a personal narrative. They are given 10-15 minutes to outline their notes. Topics include things like best/worst day in school, a day in their life, who they are, etc. Students then gather in a circle and in round-robin fashion, tell their stories.	As a part of learning the four elements of story, initializing the writing process and differentiating between fiction and non-fiction schemata. Students then get to create these stories on video as a meStory.
4a	Gameplay Students are introduced to a selected narrative based game and begin. The gameplay is recorded. Students then work in groups to edit the recordings down into 2-3 minute 'stories' that demonstrate their understanding of Branigan's four elements.	Session length varies, according to the successful completion of the games.
4b	Book Trailers Alternatively, students are asked to read sort books and then create/reenact them in the form of video book trailers.	Again, these sessions will vary based on technical knowledge and support found in the school

Session	Instructional Strategies	Discussion / Justification
5	Reflections After the games are completed, students are asked to begin to verbalize how the games helped them read and to express what they have learned from the process. Students are asked to relate the game play metacognitive actions with those they do when reading text.	Reflections help students focus on the purpose of all the activities and help the teacher ascertain whether they are comprehending the elements of story
6	Written Story If time remains, students the write out stories based on their experiences.	This session is where the culmination of the process comes together.

Attachment B

Pre Test Survey

Participant ID: _____

For each of the statements below, please check the column that best describes your feelings. Please be honest. There are no right or wrong answers.

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1. I feel that learning how to read is a waste of time.					
2. I think reading is enjoyable and stimulating.					
3. I feel anxious when asked to complete a reading activity.					
4. I understand the concept of reading but struggle with the words.					
5. I feel comfortable telling stories in front of people.					
6. I would rather watch a movie than read a book.					
7. I get nervous when I think of trying to read something and then tell someone what it is about.					
8. I do not like to read because I have trouble visualizing the action.					
9. When I think, my thoughts come to me in pictures instead of words.					
10. I can read things and understand them even if I don't like the topic(s).					

Short Answer

When you look into the future, what do you see yourself doing?
Do you think reading will be important in that future?
If you go to college, do you think liking to read will be important?
What do you think is the best way to communicate stories (writing, dance, drawing, video, etc). Why?
Do you think that learning to read novels is a worthwhile activity? Why/Why not?

Post Test Survey

Participant ID: _____

For each of the statements below, please indicate the extent of your agreement or disagreement by checking the appropriate box under the column that describes your feelings.

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1. I feel that learning to read for enjoyment is a waste of time.					
2. I think reading is enjoyable and stimulating.					
3. I feel anxious when asked to complete a reading comprehension activity.					
4. I understand the concept of reading for comprehension but struggle with the words.					
5. I feel comfortable telling stories in front of people.					
6. I would rather watch a movie than read a book.					
7. I get a nervous when I think of trying to read something and then tell someone what it is about.					
8. I do not like to read because I have trouble visualizing the action.					
9. When I think, my thoughts come to me in pictures instead of words.					
10. I can read things and understand them even if I don't like the topic(s).					

Short Answer

What do you want to do in the future?
Do you think reading will be important in your future employment?
If you go to college, do you think liking to read or write will be important?
What do you think is the best way to communicate stories (writing, dance, drawing, video, etc). Why?
As a result of doing this activity, do has your idea as to how to read changed? (Circle one) For the positive For the negative No change Comments: