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Teaching Primary Grade Students Perfectionism through Cartoons Compared to Bibliotherapy

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Abstract

This experimental study compared concept acquisition and enjoyment of learning about perfectionism under two conditions: bibliotherapy (control) and analysis and construction of cartoons (experimental) in first, second and third grade students (N=46). Posttest results showed students learned significantly more content in the experimental condition with a medium effect size. Students were more engaged in the cartoon condition, appreciating the humor and opportunity to be creative. Most students reported liking the bibliotherapy but some complained of boredom. The authors recommend that both bibliotherapy and cartoon analysis be used in lessons about perfectionism to maintain student interest and comprehension of concepts.

Keywords: Perfectionism, Cartoons, Bibliotherapy, Elementary students

Introduction

> *A sobbing first grader crumples her recent test in frustration with her performance. Her score was 97 percent, yet, the child judged her work as unacceptably inadequate* (personal experience of second author, a former first grade teacher).

Perfectionism is defined as the need to perform flawlessly in many areas of one's life (Flett & Hewitt, 2002). Perfectionism particularly affects high-performing students (Schuler, 2000) but may be present in all ages and levels of achievers (Pacht, 1984). Perfectionism is recognized as a multidimensional construct by most investigators (e.g., Rice & Ashby, 2007). Debate over whether perfectionism has adaptive as well as maladaptive aspects is ongoing, with

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recognition of and research into adaptive aspects of perfectionism continuing to the present (e.g., Davis & Wosinski, 2012; DiPrima, Ashby, Gnilka, & Noble, 2011; Elion, Wang, Slaney, & French, 2012; Stoeber & Otto, 2006). An early researcher in perfectionism, Hamachek (1978), identified 'normal' perfectionists as those who take pleasure in their efforts and can choose to be less than perfect when expedient; 'neurotic' perfectionists, in contrast, seek typically unattainable levels of performance, feel dissatisfaction with their work, and are unable to relax their standards. This difference has been maintained over time through the use of the terms 'positive' and 'negative' perfectionism (Slade & Owens, 1998) or 'adaptive' and 'maladaptive' perfectionism (Burns & Fedewa, 2005).

Adaptive perfectionists adhere to high standards, experiencing pleasure and satisfaction even when falling short of goals. Positive aspects of perfectionism include organization and orderliness, striving for excellence, and conscientiousness (Burns & Fedewa, 2005) and are related to positive self-esteem (Elion, Wang, Slaney, & French, 2012) and effective psychological adjustment (Rice & Mirzadeh, 2000). In contrast, a persistent feeling of failure (depression) along with fear of mistakes and criticism (anxiety) when goals are unmet, leading to procrastination and indecisiveness are characteristics of maladaptive perfectionism (Grzegorek, Slaney, Fanze, & Rice, 2004; Wang, Slaney, & Rice, 2007). These traits are related to chronic low self-esteem, negative outlook, and symptoms of psychopathology (Bieling, Israeli, Smith, & Antony, 2003; Dunkley, Zuroff, & Blankstein, 2003). However, characteristics of positive and negative forms of perfectionism are not mutually exclusive and have been found to be positively correlated (Flett and Hewitt, 2006); some differences may lie in the duration and intensity of the feelings (Schuler, 2002).

Examination of perfectionism in young children is in its early stages (Gilman & Ashby, 2006), but many researchers (DeKryger, 2005), parents, teachers, and children themselves have noted its occurrence in early grades. For example, Dohnt and Tiggemann (2006) found that girls aged five to eight already had developed feelings of body-dissatisfaction and low self-esteem in reaction to appearance-focused television programs and peer attitudes. Without intervention, students may experience the devastating effects of perfectionism including depression (Stoeber & Yang, 2010), anxiety and rigid behaviors (Marano, 2008), self-harm behaviors (O'Connor, Rasmussen, & Hawton, 2010), eating disorders (Boone, Soenens, Braet, & Goossens, 2010), workaholism (Clark, Lelchook, & Taylor, 2010) setting unreasonable, unreachable goals (Stoeber & Rambow, 2007; Stoeber, Hutchfield, & Wood, 2008), procrastination (Walsh & Ugumba-Agwunobi, 2002), cheating, lack of motivation, and underachievement (Stoeber, Hutchfield, & Wood, 2008). Therefore, it is important for teachers to be aware of the indicators, causes, and mitigations of maladaptive perfectionism so that they may assist students in adopting psychologically healthy mindsets.

Dimensions of Perfectionism

Perfectionism involves setting high, often unreasonable, expectations for oneself and others (Neihart, 2002). There are different perspectives researchers have taken in investigating perfectionism. The Frost Multi-dimensional Perfectionism Scale (Frost, Marten, Lahart, & Rosenblate, 1990) measured Personal Standards, Concern over Mistakes, Doubts about Action, Organization, Parental Expectations, and Parental Criticism. Hewitt, Flett, Turnbull-Donovan, and Mikail (1991) suggested that perfectionism has three dimensions: self-oriented, other-oriented, and socially prescribed. These parameters were measured by the Hewitt Multidimensional Perfectionism Scale (Hewitt & Flett, 1991). Persons with self-oriented perfectionism hold unrealistic, *self-imposed* standards, critically evaluating and scrutinizing their own performance against these values; while other-oriented and socially prescribed perfectionists are motivated by a need to achieve high standards imposed by other people or

by society in general (Hewitt, Flett, Besser, Sherry, & McGee, 2003). It is when high standards are pursued despite significant adverse consequences that such perfectionist tendencies become clinical disorders (Shafran, Cooper, & Fairburn, 2002).

In this article, we focus mostly on the differences between adaptive and maladaptive perfectionism. These ideas were presented to the first through third grade students in this study as 'healthy' and 'unhealthy' perfectionism, as this terminology was familiar to young elementary school students. Healthy or adaptive perfectionists hold high standards, are persistent, and conscientious (Bieling, 2003) with the flexibility to choose the areas in which they apply high standards or ignore the need to perform perfectly as the situation dictates. Adaptive perfectionist behaviors are associated with positive attitudes and satisfaction in life (Stoeber & Otto, 2006). Youth who strive for excellence show hope of success, motivation in their schoolwork, and school achievement (Stoeber & Rambow, 2007). In contrast, unhealthy or maladaptive perfectionists set unrealistic goals and compulsively try to meet them in any way possible, even when the path is unhealthy or dangerous. They feel guilt when their performance is imperfect, but they do not allow themselves to feel pride when work meets high standards; instead, they judge the task as too easy, thereby depriving themselves of satisfaction in accomplishment (Shafran, Cooper, & Fairburn, 2002; Stoeber, Kempe, & Keogh, 2008). Maladaptive perfectionists do not accept advice well, interpreting it as personal criticism.

Hanchon (2011) found that both adaptive and maladaptive perfectionist students endorsed mastery goals, but higher self-confidence and academic performance were traits of adaptive perfectionists, while maladaptive perfectionists evidenced more face-saving, a greater desire to outperform others, and more anxiety, depression, and academic problems. Brown and Beck (2002) recognized the relationship between maladaptive thinking patterns and perfectionism. Some of these negative thinking patterns include overgeneralization (Flett, Hewitt, Blankstein, & Gray, 1998), catastrophization and self-blame (Rudolph, Flett, & Hewitt, 2007), and all-or-nothing (categorical or dichotomous) thinking (Burns & Fedewa, 2005).

Teaching Children about Perfectionism

There are many symptoms of perfectionism in children that teachers may notice (Davies, 2005), alerting them to the need for action. These include students choosing exceptionally high standards for themselves and exhibiting self- criticism, headaches, or other physical complaints when they don't meet those expectations. Perfectionists often have low self-confidence, are easily embarrassed, express anxiety about making mistakes, and are highly sensitive to criticism. They may procrastinate on challenging or evaluated tasks and have difficulty making decisions. They are frequently emotionally guarded with a tendency to be critical of others. A student who repeatedly starts an assignment over, is reluctant to volunteer answers or share work, views grades as 'all-or-nothing,' or has a strong emotional reaction to a relatively minor error, is exhibiting possible signs of perfectionism (Cohen, 1996). Because many perfectionistic traits have the potential to develop into negative behaviors, it is important to help students recognize and manage their perfectionistic inclinations.

Students can be taught strategies through social-emotional skill lessons to manage perfectionist tendencies and use any perfectionist traits in a healthy manner. On the positive side, perfectionism can be used as a tool toward successfully reaching one's goals and may serve as a motivator in tedious or challenging work for many students (Stoeber & Rambow, 2006). '[P]erfectionism must be seen as a potent force capable of bringing either intense frustration and paralysis or intense satisfaction and creative contribution, depending on how it is channeled' (Silverman, 2011, para. 1). Perfectionism lessons can be taught in small or

large group settings at all age and ability levels. Nugent (2000) made several suggestions for how classroom teachers might teach students about the topic, including (1) engaging students in art activities that provide free exploration of new media or techniques, allowing an affective outlet; (2) using bibliotherapy; and (3) creating a positive classroom culture.

Bibliotherapy is a widely used whole class, small group, or individual student strategy in which stories in books are used to create a link between the student and characters having similar emotional experiences. This connection helps the student find solutions and insights into his/her own feelings (Halsted, 2009). After the book has been read, the teacher engages students in a discussion of the story related to perfectionism, inserting prompts and questions as needed.

A positive classroom culture in which students feel free to respond without criticism and make mistakes is paramount to helping students overcome maladaptive perfectionism. The teacher needs to model his or her own mistakes as pathways to learning. Adelson (2007) recommended that the word 'perfect' be removed from the classroom vocabulary and replaced with other ideas such as 'excellence'. Process, rather than product, should be emphasized with stories of people who made numerous revisions to their work being read so that students understand that mistakes, set-backs, failures, and improvements are normal. Teachers who have overcome maladaptive perfectionism may want to share their struggles, insights, and coping strategies, perhaps leading to a discussion of realistic goal-setting (Brophy & Rohrkemper, 1989).

Guidance counselors often play a large role in working with students who evidence maladaptive characteristics of perfectionism. Therapy may take the form of role-playing, individual counseling, or small group sessions and activities such as play therapy. A beneficial technique recently applied successfully to children with perfectionism (Nobel, Manassis, & Wilansky-Traynor, 2012) is Cognitive Behavioral Therapy. This intervention is based on the theory that students with emotional disorders like anxiety and depression hold cognitive errors or distorted thinking that perpetuate these symptoms (Beck, Rush, Shaw, & Emery, 1979). An example of such a thinking error is that one should be perfect and if flawless performance is not accomplished, one is a complete failure. The essence of this therapy is to expose distorted thinking and to examine environmental evidence that challenges these misperceptions.

Cartoon analysis and creation is a new approach showing potential that can be used by the classroom teacher. This instructional strategy may benefit students through the motivating effects of humor, wordplay, and creative drawing along with the mental manipulations of applying concepts to new (cartoon) situations. Analyzing cartoons for humor and academic content activates students' problem–solving skills (Berk, 2002). Cartoon panels or strips have long been used as a way to focus student attention at the beginning of a lesson (e.g., Trefts & Blakeslee, 2000). Political cartoons are a popular way to build critical thinking skills, stimulate discussion, and motivate students in history or political science (Dougherty, 2002; Risinger & Heitzmann, 2008). Several investigations have been conducted to delineate the teaching strategies, such as making analogical or symbolic substitution lists and concept maps, which lead students to develop more complex, social studies cartoons (e.g., Bickford, 2011).

Unfortunately, few studies have examined how teaching with cartoons can assist elementary students in learning non-political or non-historical content; however, one counterbalanced study (Rule & Auge, 2005) showed that sixth graders studying rocks and minerals through cartoon analysis and creation excelled in content knowledge and motivation with a large effect size as compared to more traditional exercises. In this study and in another

report on a motivating science lesson with low-performing eighth graders (Sallis, Rule, & Jennings, 2009), students discussed the academic concepts represented by the cartoons along with their funny aspects. They suggested improvements to the cartoons to add more science content or humor. Students then read nonfiction books or listened to factual presentations to gather information to complete partly-finished or original cartoons to show more concepts, incorporating puns, impossible situations, or exaggerated emotional expressions to make them appealing. Another use of cartoons in science teaching that employed a different approach is the use of concept cartoons (e.g., Ekici, Ekici, & Aydin, 2007; Kabapinar, 2005; Keogh & Naylor, 1999). In this method, a science concept is explained by different cartoon characters who supply alternative ideas, including the scientifically acceptable one. Students then join the cartoon characters in debating the correct explanation. Teacher facilitation and probing during the class discussion is important to students arriving at the scientifically correct concept.

Recently, cartoons were used to teach the affective topic of bullying. Preservice teachers used cartoons (shown in Rule, Logan & Kohler, 2012) to teach elementary students about the causes, consequences, and mitigations of bullying (Rule, Logan, & Kohler, in press) with positive results of stimulating interactive discussions, motivating students to participate, and creating a more positive classroom climate.

Cartoons have been used in conjunction with cognitive behavioral techniques to help students change their thinking patterns related to optimism and other psychological states. Ellis (1962) developed an 'ABC' model based on the idea that people react differently to the same event because of belief systems. The 'A' of this model is the 'activating event' mediated by 'B' – 'beliefs' and resulting in 'C' 'consequences' of emotions and behaviors. A three-panel ABC cartoon was used to help pessimistic adolescents identify the link between their thoughts, feelings, and behaviors. The first frame shows an activating event, while the third frame shows the negative emotional result on a person. The middle frame shows blank thought bubbles ('B' – beliefs) that the adolescent then completes in a logical manner as a bridge between A and C. Identifying how the cartoon person's beliefs have resulted in the emotional consequences of the third panel gives the student insight into his or her own automatic thoughts and styles of processing information, and is followed by a deeper process of analysis without cartoons (Gillham & Reivich, 2004). This therapeutic cartoon technique operates differently than the cartoon strategy in the current study in two main ways: (1) humor or clever puns are not used to motivate the student; and (2) the point of the cartoon is to help the student in self-analysis rather than to illustrate an academic concept. However, both cartoon strategies do provide application of concepts in many different scenarios.

Because of the motivating humor of cartoons and the opportunity for self-expression through completing partly-finished cartoons or creating original ones, the investigators of the current study wondered if cartoons might be successfully applied to teaching elementary students about perfectionism. We chose the widespread, traditional teaching technique of bibliotherapy as a comparison because this teaching strategy is often encountered in classrooms and has been used successfully for decades. The authors of the current study had permission to use a set of cartoons focusing on perfectionism concepts that were made by graduate students in a gifted education course taught by the second author. In that graduate course, teachers preparing to be educators of gifted students researched perfectionist concepts and completed partly-finished cartoons furnished by the instructor that had been created with clip art and drawing functions in PowerPoint. The cartoons submitted by graduate students underwent peer review by classmates who each chose the ten most effective in content and humor, describing positive attributes and making suggestions for

improvements. These reviews were used to choose and improve upon the pool of cartoons used in the current study, which was designed to test their efficacy with primary-age students. The following are research questions addressed by this study:

1. Which of the two methods, cartoon analysis and production, or bibliotherapy using books featuring characters experiencing perfectionism, results in greater student learning of perfectionism concepts?

2. What aspects of both methods are particularly effective or engaging for students based on teacher observation?

3. Which method of teaching do students perceive as most enjoyable and why?

Methods

Participants and Research Setting

Forty-six elementary students of mixed abilities (21 male, 25 female; 32 European-Americans, 4 Hispanic, 8 African-American, 1 Native American, 1 Asian American) in three grades (first, second, and third; ages 6 to 9 years) at a suburban public school in Iowa, United States participated in the study. Seventeen percent of the school's population received free or reduced-price lunches, indicating the generally middle class socio-economic status of the remaining school population. Because two mixed-ability, inclusive classes existed at each grade level, one of the two at each grade level was randomly chosen to be part of the control group (11 male, 12 female; 5 first graders, 11 second graders, 7 third graders) while the remaining classes composed the experimental group (10 female, 13 male; 7 first graders, 7 second graders, 9 third graders). Permission to conduct the study was obtained from the overseeing university's human subjects review committee and the school principal. Students included in this study and their parents agreed in writing to participate.

Research Design

The research design was a pretest-posttest experimental group-control group design. Both conditions were taught by the same enthusiastic teacher who was the school's education of the gifted teacher. Her role at the school was to provide enrichment lessons to all students in their classrooms and to deliver high-level instruction to identified gifted students. She had taught several successful lessons about perfectionism previously at another school using several children's books. However, she was curious as to how cartoon lessons would fare with students. The lessons reported here were enrichment lessons delivered to all students in the primary grades (grades 1, 2, and 3) of the school as enhancement in academic and personal/social development. Regular classroom teachers assisted when the lessons were conducted in their classrooms. Four thirty-minute lessons were delivered to each of the classrooms involved (according to the randomly assigned condition). The lessons for each condition addressed the same concepts about perfectionism as shown in Table 1.

Table 1. *Set-up of the Study*

Order	Perfectionism Concepts Taught
Pretest	
Lesson 1	Some perfectionism is good, but it can be "bad" or unhealthy also.
30 min.	Order, neatness, organization are good aspects of perfectionism.
	No one can really be or do everything perfectly.
	Pressure from parents or others may cause perfectionism.

Table 1 (Continue). *Set-up of the Study*

Order	Perfectionism Concepts Taught

Lesson 2	Some perfectionists are obsessive.
30 min.	Perfectionism can result in depression when those who aren't perfect think they are worthless.
	Perfectionists sometimes procrastinate because they are afraid they may not perform perfectly. Need risk-taking in a safe environment.
Lesson 3	Perfectionists tend to set unreachable goals.
30 min.	Some perfectionists cheat to maintain a perfect record.
	Perfectionism kills creativity.
	Accepting advice and constructive criticism is good.
	Unhealthy perfectionists have trouble with criticism because then they feel worthless.
	It's okay to be different.
Lesson 4	It is important to enjoy process and the journey rather than focusing on the result.
30 min.	Even if something is not perfect, it can still be good and fun.
	Accepting some imperfections indicates healthy perfectionism.
	All or none thinking indicates unhealthy perfectionism.
	Errors are common; it is okay to make some mistakes.
Posttest after one week - Same for all participants	

Lesson Procedures

Experimental condition. At the start of each of the four cartoon lessons, each student was given a piece of paper with six cartoons printed on it to use and keep. Every cartoon had a number so that the teacher could easily refer to it during the lesson. First, student volunteers or the teacher read the caption for the cartoon and any talking bubbles. The teacher asked questions to lead a discussion of each cartoon: 'What is happening?' and 'How does the character feel?' 'Why?' 'Can you think of a time or situation in which you felt this way?' 'What is interesting or funny about the cartoon?' Twenty-four different cartoons were used during the four lessons for the experimental group. Figures 1 through 3 are example cartoons used in the lessons.

At the first lesson, after this initial cartoon discussion (Which took most of the half hour because the perfectionism concepts and use of cartoons were new), the teacher showed a large image of a partly-finished cartoon to the class and asked for suggestions on how to complete it to show one or more of the perfectionism ideas that had been discussed during the lesson. The cartoon was then completed with ideas from the students. After the initial discussion of all cartoons in lesson two (as described in the previous paragraph), each student was provided a page of several partly-drawn cartoons and given time to complete one or more with perfectionism ideas just learned. These were shared with the class as time permitted. To introduce more variety on lesson three, after the discussion of new cartoons, students were divided into small groups of four students. Each group was assigned one of the cartoons just discussed and given a few minutes to prepare a short skit showing the main perfectionism concept of their cartoon but applied to a new situation. Student groups then presented their skits to the rest of the class and class members identified the perfectionism concept being portrayed. More cartoons and perfectionism concepts were introduced during the final cartoon lesson and discussed as described previously. Then, students worked together to suggest ideas and to complete a three-panel cartoon strip about perfectionism concepts.
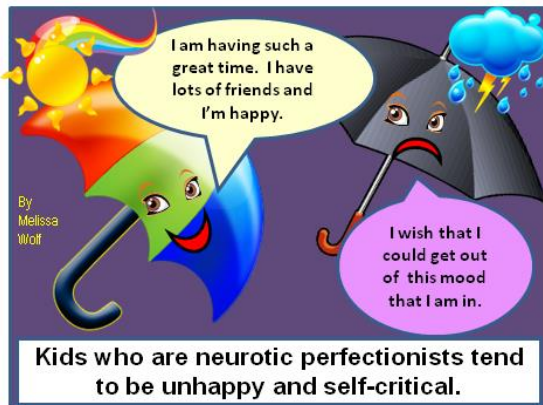
Figure 1. Example Lesson Cartoon Showing Unhappiness of Neurotic Perfectionists
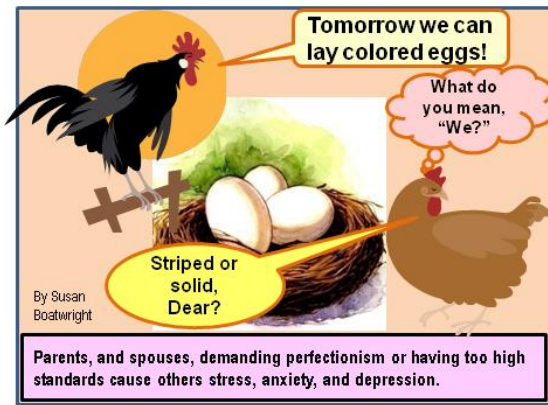

Figure 2. Example Lesson Cartoon Showing Family Pressures

Figure 3. Example Lesson Cartoon Showing Lack of Balanced Perspective of Neurotic Perfectionists

Control condition. The control group learned concepts about perfectionism through reading and discussion of children's books – bibliotherapy. Table 2 shows an annotated list of books used in the control group lessons. All books were quality children's books that had received favorable reviews or recommendations as indicated in this table.

Each of the four bibliotherapy lessons began with the teacher introducing the perfectionism concept and asking students if they had ever felt that way. Then, for the first three lessons, the teacher read the book to the students, stopping to show illustrations and to ask questions about the story. A short discussion of perfectionism concepts related to the story ensued. After the first story and class discussion on Alexander's terrible day, the teacher asked students to write a letter to Alexander about his desire for everything to be perfect and how he might consider a new viewpoint. These were shared as time permitted. In lesson two, after reading the story about the carved duck, students first discussed with a partner, then as a whole class, a time when felt they were less than perfect, comparing their feelings to those

of Daniel in the story. In the third lesson, students talked with a partner after the counting rope story to generate ways each person is unique and to think of an example of a situation in which one might enjoy the process even when the result is less than perfect. These ideas were shared with the class as time permitted. The last book was presented as a Reading Rainbow video of the book rather than a read-aloud by the teacher. After the video, the teacher led a discussion of perfectionism concepts related to the story.

Table 2. *Books use to teach perfectionist concepts to the control group.*

Lesson	Book	Favorable Review or Award	Summary
1	*Alexander and the terrible, horrible, no good, very bad day* (Viorst, 1987)	Included as one of educators' top 100 children's books (National Education Association 2007). Listed as Recommended Literature (K-12) by the California Department of Education (2002).	Alexander's day goes from bad to worse and it seems that nothing is going his way. Eventually, Alexander realizes that no matter who he is or where he lives, bad days will happen. This book emphasizes that no one can be or do everything perfectly.
2	*Daniel's duck* (Bulla, 1982)	Favorably reviewed by The New York Times (Paperbacks: New and Noteworthy, 1983)	*Daniel's Duck* is a story about a young, aspiring wood carver. At a trade show, Daniel's duck draws attention that he feels is negative. He experiences feelings of worthlessness and depression, but with the help of a fellow wood carver, is able to appreciate imperfections.
3	*Knots on a counting rope.* (Martin & Archambault, 1997	Included as one of educators' top 100 children's books (National Education Association 2007). Listed as Recommended Literature (K-12) (California Department of Education, 2002).	A book focusing on differences, *Knots on a counting rope* follows a traditional Native American Family. The main character understands and accepts his physical differences with the help of his grandfather. He learns that even though he didn't meet his goal, he enjoyed the process and tried his personal best.
4	*Regina's big mistake* (Moss, 1990)	Favorably reviewed by Sutherland (1990)	Regina is an elementary student who is attempting to create an original work of art. Her classmates criticize her abilities and ideas. By the end of the story, Regina is able to make a masterpiece from her mistakes. Regina accepted her imperfections and made the most out of them.

Instrumentation

The pretest-posttest was constructed by the teacher with the first five items criterion-referenced to the main concepts taught about perfectionism. It contained the following response items (some additional items appeared on the posttest as shown later):

1. Tell what the word 'perfectionism' means.

2. Tell at least four ways that perfectionism can be good – tell the characteristics or actions of a healthy perfectionist.

3. Tell at least four ways perfectionism can be bad – tell the characteristics or actions of an unhealthy perfectionist.

4. Tell at least two causes of perfectionism.

5. Tell four ways to stop or overcome unhealthy perfectionism.

 Additionally, the posttest contained the following items:

6. Tell what you liked the most about the way you learned about perfectionism from the teacher.

7. Circle a number below (a scale from 1 to 10 was given with 'didn't like it at all' written by '1' and 'loved learning about this topic' written by '10') to tell how much you liked learning about this topic of perfectionism compared to other lessons from this teacher.

8. Tell three reasons why you rated the perfectionism lessons this way.

Possible correct responses to these pretest-posttest items were generated by the researchers prior to the lessons being taught. To ensure that students received the same perfectionism content knowledge during both conditions, the teacher reviewed the concepts before teaching the lessons of both conditions, making sure they were all addressed by her teaching of the lessons in both conditions.

The pretest was given the day before the lessons started, while the posttest was given a few days following the last lesson. On both the pretest and posttests, students spent some time attempting to answer the questions by writing independently, but then were individually assisted by the teacher (while other students worked on another assignment) by recording their verbal answers in her writing on the questionnaire as needed. This ensured that lack of writing skill did not prevent a student from showing what he or she knew.

Results and Discussion

Pretest and Posttest

The pretest and posttest results of the five perfectionism content questions asked on both instruments are shown in Table 3. Students in both conditions knew little to nothing on the pretest, whereas in both conditions, some students were able to answer most of the components of each question correctly. This confirms that students were presented with and learned concepts of perfectionism in both of the conditions. However, students in the experimental condition supplied significantly more correct responses on the posttest than those in the control condition. A t-test was conducted to determine if the higher posttest score for the experimental group were statistically significant. The *p*-value was 0.02, indicating that the experimental group scored significantly higher on the posttest questions. The effect size, Cohen's *d,* was 0.5 indicating a medium effect size (Cohen, 1988).

Table 3. *Student Responses to Pretest and Posttest Questions*

Correct Response to Pretest/ Posttest Questions	Number of Correct Responses			
	Control Group		Experimental Group	
	Pretest	Posttest	Pretest	Post test
1. Definition of Perfectionism Perfectionism means thinking you have to be perfect at everything.	0	10	0	11
2. Ways perfectionism can be good or characteristics of a healthy perfectionist				
Being organized and orderly	0	1	0	9
Dedicated, hard-working, attention to detail	0	7	0	5
Open to advice and criticism	0	2	0	1
People depend on them	0	0	0	3
Happy and not depressed	0	1	0	6
Total Score for Question 2	**0**	**11**	**0**	**24**
3. Ways perfectionism can be bad –characteristics or actions of an unhealthy perfectionist				
Sets unreasonable goals.	0	1	0	2
Doesn't enjoy or have fun unless he/she thinks he/she is perfect.	0	1	0	5
May procrastinate or not try at all.	0	2	1	0
May be grumpy, depressed, or feel worthless.	0	12	1	8
They may cheat to get good grades.	0	0	0	2
May be obsessive.	0	0	0	3
Be afraid to be different and creative.	0	1	0	2
Total Score for Question 3	**0**	**17**	**2**	**22**
4. Causes of perfectionism				
Living for approval from people who praise too much	0	0	0	3
Constant success early in life without experience of struggle or failure	0	2	0	1
Parents who are too pushy	0	1	0	0
Total Score for Question 4	**0**	**3**	**0**	**4**
5. Ways to stop or overcome unhealthy perfectionism				
Enjoy the process, rather than focusing on the final product.	0	0	0	1
Talk with others about your feelings.	0	1	0	4
Set more reasonable goals.	0	2	0	1
Learn to accept imperfection.	0	2	1	8
Be willing to try new things, take risks, and be different.	0	2	0	3
Total Score for Question 5	**0**	**7**	**1**	**17**
Cumulative Score for All Questions	**0**	**48**	**3**	**78**

Table 4 shows the aspects students stated they liked most about the lessons. These categories were developed by the constant comparison method in which similar responses to each of the questions were grouped into categories while simultaneously comparing all the responses to the question. The categories were refined as additional responses were read that

shifted the category labels and defined new relationships (Dye, Schatz, Rosenberg, & Coleman, 2000). In general, the main conveyance of the perfectionism ideas for the condition, books or cartoons, was cited the most in its respective condition. Although the same teacher delivered all lessons with enthusiasm, students in the experimental condition focused more on the lesson activities as being what they liked most about the lessons, in contrast to the four people of the control condition that said they liked the teacher herself the most. More students in the control condition replied 'nothing' or left the answer blank than in the experimental condition, possibly indicating more apathy toward the lessons.

Table 4. *Aspects Students Liked Most about the Lessons*

Aspect about Lessons Students Liked Most	Number of Students Indicating this Aspect	
	Control Group n=23	Experimental Group n=23
The cartoons and cartoon work	0	12
The books the teacher presented	7	0
The teacher	4	1
Acting things out in the skit	0	4
Learning to like myself the way I am	3	1
Nothing/no idea/ no response	8	4
Everything	1	1

Student ratings of the instructional condition were also analyzed by tabulating the numerical ratings and computing a mean and standard deviation. Students in the control condition rated their liking of the way they learned about perfectionism compared to other lessons presented by the same gifted education teacher. Students in the control group responded with an average rating of 7.0 (Standard deviation = 3.5) out of 10, while students in the experimental group rated the lessons as 8.3 (s. d. = 2.4) out of 10. A t-test showed that the experimental group's higher rating was statistically significant only at the alpha = 0.10 level (p = 0.08). Table 5 shows the reasons students gave for their ratings. The control group gave somewhat fewer positive reasons and provided quite a few more neutral to negative reasons (about a third of the reasons given were neutral or negative) than the experimental group.

Another cartoon study used lesson reflection data from preservice teachers who taught three short cartoon-based lessons on bullying to special education-inclusive groups of elementary students to evaluate the efficacy of the cartoon teaching strategy (Rule, Logan & Kohler, in press). In that study, preservice teachers reported that the concise nature of the reading task associated with the cartoons, the attention-getting humor (students must pay attention and comprehend the action in the cartoon to understand the joke), and interesting visual nature kept student attention on the topic.

These qualities of this cartoon teaching strategy are likely the reasons students rated the cartoon condition higher than the bibliotherapy condition in the current study.

Table 5. *Reasons Given by Students for Rating the Way They Learned about Perfectionism*

Reasons Given	Number of Students Giving this Reason	
	Control Group *n*= 23	Experimental Group *n*= 23
Positive Reasons		
The lessons were awesome, fun, or interesting.	8	5
The skits were engaging	0	6
The stories or books were interesting.	6	0
The lessons helped me learn about my own perfectionism.	6	4
The cartoons were engaging.	0	5
I like the teacher.	2	4
The lessons were relaxing.	1	0
I like group work.	0	1
Total Positive Reasons	**23**	**25**
Neutral or Negative Reasons		
I liked some parts but didn't like others.	4	0
I don't know.	1	0
The lessons were boring.	4	0
The work was hard or difficult.	3	2
I dislike criticizing myself or others.	0	1
Total Neutral or Negative Reasons	**12**	**3**

Teacher Observations

The control group was initially receptive to bibliotherapy. Students were excited to listen to a new book and participate in a whole-class discussion. However, during the second, third, and fourth lessons the excitement diminished markedly. Students' remarks included, 'This is boring,' and, 'We are reading *another* book?' When relating perfectionism to the books being read, students' responses were limited. They made personal connections to the text, but not as many connections to perfectionism as the teacher had hoped. Discussion prompts seemed ineffective at times, as student attention and excitement had been lost.

Students taught about perfectionism through the use of cartoons were engaged in the lessons from beginning to end. There was an aura of excitement in the classrooms when the teacher said, 'Time to pass out the cartoons we will be discussing.' Students smiled, laughed, and said, 'Awesome!' During elbow partner time students shared their learning and personal examples of ways they had experienced perfectionism related to the cartoons. It was truly an

interactive and engaging experience. During a second grade lesson, the regular classroom teacher from the control group walked into the experimental class to borrow materials. She later pulled the gifted education teacher aside and said, 'Wow, they really looked like they were having fun. Can you do the cartoon lessons with my students next year?'

A factor that may have affected student interest in bibliotherapy is the movement in most elementary schools in the United States to emphasize literacy (Dee & Jacob, 2010) because of the high stakes standardized tests required by No Child Left Behind Legislation (2002). In many schools, including the school in the current study, extra reading lessons are being implemented to improve student skills and test scores. Students may feel saturated with book-reading and therefore not as interested in bibliotherapy as students of past decades. Cartoon interpretation and production are part of literacy education and therefore could provide variety in the reading curriculum while improving student proficiency, much as graphic novels have motivated many reluctant readers through their engaging illustrations (Martin, 2009).

Student Cartoons

The teacher provided students with half-finished cartoons (Zimmerman, 2012) so that they could complete them to express what they were learning about perfectionism. Figure 4 shows the work of two students who completed a cartoon about a person and a thinking cat. Both the cartoons show the positive characteristics of healthy perfectionists of being orderly and organized. The top cartoon also contains a pun with the word 'purrfect.' Two other students, responding to another cartoon template, expressed additional behaviors of perfectionists – being self-critical (the upper cartoon) and having the tendency to avoid situations in which success is not guaranteed (the lower cartoon). The cartoons made by students were evidence that they understood some of the perfectionism concepts being taught in the experimental condition.

Figure 4. Student-completed cartoons using person and cat.

Figure 5. Student-completed cartoons featuring man and butterfly.

Conclusion

Limitations of the Study

This investigation examined the effects of teaching perfectionism concepts through cartoons or bibliotherapy to first through third grade students at one suburban school in Iowa, United States. Although it does provide evidence for the efficacy of teaching with cartoons in this small population, these results may or may not be generalizable to other populations such as urban students of low socio-economic status or students with English as a second language who may have difficulty with puns and subtle humor aspects of the cartoons. Additional studies may provide more evidence for this technique with other populations.

Implications of the Findings

Students demonstrated greater learning of perfectionism concepts along with more excitement and engagement using cartoons than bibliotherapy. Humor captivated students' attention in the cartoon condition in contrast to observed and reported boredom or apathy during bibliotherapy lessons. However, the average ratings of lesson enjoyment for both conditions were quite high (7.0 versus 8.3 out of a possible 10), indicating that students enjoyed both sets of lesson activities for the most part. Therefore, we recommend that teachers not abandon bibliotherapy, but add cartoon analysis and creation as another effective strategy for teaching about the important concepts of perfectionism.

Suggestions for Future Research

Teaching with cartoons is a relatively new strategy for subject areas outside of history and political science. Cartoons, because of their visual nature, humorous aspects, and concise delivery of content, attract students' attention, motivating them to consider the message of the cartoon and to understand any puns or humor. Completing partly-made cartoons or creating original cartoons allows students self-expression and engages them through allowing

communication of their humorous or clever ideas. More research into the use of cartoons for teaching other topics besides perfectionism, bullying, and science needs to be conducted as this is a promising approach that engages students.

■   ■   ■

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