

Interest, Challenge, Choice, and Enjoyment for the Gifted Learner

by

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Gifted learners are engaged in many classroom settings that each offer something different. This study investigated how gifted learners perceive interest, challenge, choice, and enjoyment across three classroom settings: their regular classrooms, gifted classrooms, and a summer enrichment camp classroom. Through the use of the *My Class Activities* survey developed by Gentry and Gable (2001), students reflected on the elements they experienced in these three educational settings. These surveys were then analyzed to determine the discrepancies between each educational setting and the levels of interest, challenge, choice, and enjoyment in each. After ANOVA and MANOVA tests were run, it was found that statistically significant differences existed between the three educational settings. In addition, students experienced differing levels of interest, challenge, choice, and enjoyment amongst their classroom settings.

Keywords: gifted education, gifted learners, interest, challenge, choice, enjoyment, My Class Activities

INTEREST, CHALLENGE, CHOICE, AND ENJOYMENT FOR THE GIFTED LEARNER

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CHAPTER ONE: DEFINITION OF THE PROBLEM

Purpose

Gifted students work with a variety of teachers in many different educational settings. In each of these settings, the needs of the gifted learner may or may not be met. The purpose of this study was to determine whether gifted students' perceptions of three educational settings (regular classroom, gifted classroom and camp classroom) differ. In addition, the study was meant to determine whether gifted students' perceptions of interest, choice, challenge, and enjoyment experienced in these three educational settings differed. This study exists to help inform gifted educators, regular classroom teachers, and administrators about how gifted students feel about their learning environments. In addition, educators and administrators will be able to evaluate their own educational practices in order to best suit the needs of gifted learners.

Introduction to the Problem

Gentry (1999) recognized that programs for the gifted are greatly improved through exposing the students to interest, challenge, and choice. Based on Gentry's ideas, Gentry and Gable (2001) created the *My Class Activities* survey that is comprised of thirty-one questions that address students' perceptions of interest, challenge, choice, and enjoyment in their classroom environment. This instrument has since been used to evaluate gifted programs and their effectiveness in meeting the needs of gifted learners (Pereira, 2010).

As Kronholz (2011) describes, many gifted children are often left behind. As many gifted students are marked as asking too many questions or being too far ahead of their classmates, many regular education settings are not appropriate for gifted learners. When left to their own devices in regular classroom settings, gifted students are often not appropriately challenged.

Research Question

This study provided the opportunity to interact with students who attended a gifted summer camp. To explore any potential differences that gifted learners experienced between educational settings, three different learning environments were analyzed—the regular classroom, the gifted classroom, and a summer enrichment camp classroom. The *My Class Activities* survey was administered to over 161 students over three years, in order to determine the students' perceptions of interest, challenge, choice and enjoyment across these three settings.

This descriptive quantitative study was focused on the following two questions:

- (1) Do gifted students' perceptions of their three educational settings (regular classroom, gifted classroom, and summer enrichment camp classroom) differ?
- (2) Do gifted students' perceptions of the interest, challenge, choice, and enjoyment experienced in three educational settings (regular classroom, gifted classroom, and summer enrichment camp classroom) differ?

Terminology

Gifted Learner: Gifted learners are children who have been identified as high achievers in academic areas. These students have been identified as gifted based on criteria set by the county in which they attend school. Students can be gifted in one or more areas based on their academic or intellectual strengths. For example, a student may receive services in only math, only reading, or in both subjects. In addition, students may be gifted in non-academic areas, such as music or art.

Regular Classroom: The classroom setting in which the gifted learner is heterogeneously grouped with others on their grade level. This classroom setting is considered the student's primary educational setting.

Gifted Classroom: The classroom setting in which gifted learners are pulled from their regular classroom in order to be served with other gifted students.

Summer Enrichment Camp Classroom The classroom setting that takes place while students are enrolled in the gifted summer camp held collaboratively between Pitt County Schools and East Carolina University every summer.

AIG: Academically and/or Intellectually Gifted

CHAPTER TWO: REVIEW OF THE LITERATURE

Introduction

The *My Class Activities* survey provides students the ability to talk about their interest, challenge, choice, and enjoyment in their educational settings (Gentry & Springer, 2002). When using this instrument, students respond to thirty-one questions using a five point rating scale. To score the survey, an average of each rating score is calculated (Pereira, 2010). This instrument has been used by many to determine what characteristics are important in planning and implementing appropriate gifted programs. It has been determined that interest, challenge, choice, and enjoyment are all essential components of the success of a gifted program.

Student Perceptions of Their Learning Environments

In addition to research conducted using the *My Class Activities* survey, other studies have also evaluated what gifted students value in their classroom environments. Chval and Davis (2008) conducted a study where they interviewed twenty-three gifted students about their mathematical experiences starting in sixth grade. During the interview, seven questions were posed and the students were able to discuss their thoughts openly. The questions allowed students to reflect and analyze the kinds of things that they enjoyed and the things they felt could be done to better their learning. Through the study, it was found that there were four factors that gifted children seemed to desire in their classrooms: respect, engagement, challenge, and opportunity for creativity and flexibility. There is much similarity between the factors of the *My Class Activities* instrument and these four categories. For example, both studies deem challenge, choice, and some form of engagement or enjoyment as key factors in a successful gifted classroom. Allowing these factors to have priority in the classroom is a step towards helping gifted children become engaged in their learning.

Interest. Interest is a key component in increasing student performance and motivation in the classroom and when students are able to explore areas that are interesting to them, they are much more likely to be engaged and excited about the learning that is taking place (Gentry & Springer, 2002). Phillips and Lindsay studied students who had the opportunity to extend their educational opportunities through extra-curricular activities. Students were able to choose topics that were interesting to them and areas that they otherwise would not be able to experience (Phillips & Lindsay, 2006). When engaged in these activities, students were much more attentive and were able to more effectively participate in their learning experiences. In addition, students' motivation can be increased when they are able to interact with others with similar interests and abilities. When this happens, motivation and challenge is also positively affected. To the largest extent possible, students should be able to engage in learning that allows them to "explore areas of their own interests" (Peters, Grager-Loidl, & Supplee, 2000). When this happens, students are much more motivated and are able to develop positive learning skills (Phillips & Lindsay, 2006).

Dating back to 1913 when John Dewey investigated educational reform, student interest was on the forefront of his discussion (Dewey, 1913). Dewey suggested that when students are interested and willing to set forth effort toward a learning activity, they are much more likely to gain meaning from it. On the other hand, when students are asked to put forth effort to a task that is not interesting to them, they are likely to brush the desire for learning aside and simply complete the task for the sake of completion.

Challenge. Chval and Davis (2008) define challenge in the classroom as a "stimulating or interesting task or problem" and "thought provoking activities" (p.270). Students view topics that they are interested in with a much more positive outlook than do when the content and task is perceived as being boring or uninteresting to them (Chval & Davis, 2008). Furthermore, when

a task is not engaging or appropriate for a gifted child, that student will quickly become bored and frustrated, and therefore, unmotivated to engage in any kind of learning. Chval and Davis' definition and examples demonstrate that interest and challenge walk hand in hand to promote gifted learners' success in the classroom.

When teachers have high expectations and promote challenging activities for their students, learning becomes more rigorous for gifted children (Gentry & Springer, 2002). When this challenge is consistent and appropriate, there is a high chance that the learners will be engaged and excited about what is happening in the classroom (Freeman, 1997). Similarly, Vygotsky's Zone of Proximal Development is centered on the idea that students have a zone in which they can operate with assistance even if the material is above their independent level of proficiency. Like Vygotsky, others have found that when challenge is present, students will continue to be engaged (Shabani, Khatib, & Ebadi, 2010). In classrooms where much of the learning is repetitive and low level, gifted children often get bored and are, therefore, not motivated to succeed. They tend to expend minimal amounts of creative thinking and are not challenged to succeed in their academics (Phillips & Lindsay, 2006).

In Phillips and Lindsay's (2006) study, 15 students were selected by their teachers to participate in a series of surveys and interviews that were analyzed to discover what kinds of things motivate them. These students were fourteen and fifteen years old and represented a variety of ethnic groups. The students reported that there was some challenge presented to them on a daily basis. However, they also reported that this challenge did not exist at all times. Boredom was mentioned by half of the participants, but only as an occasional issue. All students involved in this study reported that they were grateful for the fact that their educational experience allowed them to be somewhat independent in their learning approach. In addition,

they were often able to make choices about their pace which allowed them to prevent getting bored with the material (Phillips & Lindsay, 2006).

In many regular education classrooms, gifted children are not provided with an appropriate amount of challenge. Gallagher, Harradine, and Coleman (1997) investigated this issue with 871 students of all ages. These students were all academically gifted North Carolinians and had been identified using the state's standards for identification. The participants were asked to talk about their courses and whether or not they were challenging. They were also given the opportunity to rate some of their experiences with their assignments on a four point scale. Overall, the students in this study said that they felt they had quality teachers and decent classes, but that they just did not feel challenged the majority of the time.

In many cases, gifted students have already mastered the content they are being taught, so they have a hard time engaging in the learning process. When there is moderate challenge in the curriculum and gifted students' needs are catered to, they are more likely to succeed in their schooling (Little, 2012). In a research study conducted by Gallagher et al. (1997), students reported that when they were in their regular education classrooms, they were not very challenged at all. They reported that the pace was very slow and the material was frequently repeated. In addition, they were not able to push their thinking or engage in things that were interesting to them.

Choice. Choice also has a huge influence on the success of gifted learners in the classroom (Chval & Davis, 2008). Street (2001) cited student choice of some activities as a way to foster motivation in the classroom. In addition, he pointed out that often, when gifted students are given the choice of multiple tasks, they tend to choose the more challenging of them. Not only do they choose the more challenging task, but they also create more complex products than

they otherwise would have if they had not been given choice in their assignment. While engaging in these activities, students, according to their teachers, are also notably more enthusiastic about their work. When students have choice over what they are doing, they are able to engage in challenging activities that interests them (Street, 2001).

According to Gentry and Springer (2002), when students are able to make choices in their learning, they have a higher sense of ownership in their work. Also, they feel more invested and accountable for what they are doing and the products that they create. Little (2012) discussed that teachers must be able to not only provide authentic learning experiences in their classrooms, but also allow students to make meaningful choices regarding their work. This allows a sense of intrinsic value within students that will ultimately promote higher levels of engagement.

Enjoyment. Enjoyment is another area that affects how well the learning process can take place. This factor, although often forgotten, is crucial in the learning process (Gentry & Springer, 2002). Especially as students get older, their perceptions of school and the activities that they are asked to engage in changes negatively. As this happens, it is crucial that teachers continue to offer experiences for their students that are enjoyable and suited to their interests (Gentry, Gable, & Rizza, 2002).

Little (2012) suggests that when students are able to complete curriculum-based tasks, they may see the tasks as valuable due to their enjoyment factor. If students perceive the tasks as enjoyable, there is a high chance that the tasks will be meaningful for the students. Overall, when students are working on things that they find enjoyable, they are more likely to be engaged and to benefit from the task in front of them. (Phillips & Lindsay, 2007).

Research Relevance

The literature suggests that interest, challenge, choice, and enjoyment greatly increase a gifted student's learning experience. Whether in the regular classroom or in a gifted program, gifted students need to have these factors in place in order to achieve maximum success.

Through this review of literature on the topic, there is much information about how important it is to include interest, challenge, choice and enjoyment in everyday instruction. However, there is more to discover about how these factors come into play across educational settings. This study was conducted to determine how gifted students' perceptions of the interest, challenge, choice, and enjoyment experienced in three educational settings (regular classroom, gifted classroom, and enrichment summer camp classroom) differ.

CHAPTER THREE: METHODOLOGY

Study Design

The study was a descriptive quantitative project designed to examine how gifted students perceptions differ among their various learning environments. This study involved students who engaged in a summer camp for gifted students and reflected on their learning environments using the *My Class Activities* survey.

Setting and Participants

The students included in this study were those who attended a summer camp for gifted learners held collaboratively between Pitt County Schools (PCS) and East Carolina University (ECU). For this study, data were collected at the camp that was held at Ridgewood Elementary School in Greenville, North Carolina. Monday through Wednesday, the students stayed at camp from 8:00-12:00pm. During this time, they were able to participate in two seventy minute sessions taught by ECU students, one large group session taught by Pitt County Schools master AIG teachers, and enjoy a snack with their peers. Thursday was a longer day, lasting until 5:00 PM, which provided time for students to visit each of their sessions twice with time at the end of the day to share their week's work with their parents.

All identified gifted students in Pitt County who have finished grades 4-8 are encouraged to attend camp. These students were identified in Pitt County as gifted learners based on the North Carolina state law, Article 9B, as well as county mandated identification criteria. Based on test scores, IQ scores, and grades, students are identified to participate in the gifted programs that Pitt County offers.

During the school year, these students received gifted services primarily through a pull-out program. This program pulled them out of their regular classrooms for reading and math instruction. In addition, students were able to participate in a full day pull-out program where

their higher level learning needs are met. The remainder of their time was spent in the regular classroom where they were heterogeneously mixed with others in their grade level.

At camp, there were several sessions offered to the students. These sessions were planned and taught by students who were in the final semester of the AIG licensure program at East Carolina University. These students were teachers who were earning their AIG certification through an add on-licensure program. Highly focused on rigorous teaching, each unit was intended to challenge gifted learners and give them the opportunity to use creative thinking to solve real-world problems.

As the students registered for camp, they were able to choose their top five choices of sessions to participate in. After the registration deadline passed, the camp director divided the students among all of the offered sessions. Typically, students were placed in two sessions within their top three choices.

Data were collected across three years of students attending the PCS/ECU Academically and Intellectually Gifted Camp. In 2011, 100 participants attended camp. Of these students, there were 65 elementary students. In 2012, 107 participants attended camp, 63 of which were elementary students. In 2013, 105 participants attended camp. Of these students, there were 60 elementary students. Table 1 displays the demographic data broken down by year.

Table 1

Demographic Information of Participants Involved in Data Collection

Year	Number of Participants
2011	65
2012	63
2013	60
Total	188

Data Sources

The *My Class Activities* survey consists of thirty-one prompts that students rate on a five point Likert scale. Students responded to each question with an indication of never, seldom, sometimes, often, or always. Throughout the survey, students were asked to think about the interest, challenge, choice, and enjoyment they have in their classroom environments. To score the survey, an average of each factor is calculated (Pereira, Peters, & Gentry 2010). Each of these four factors is assessed through various prompts on the survey. The first eight prompts on the survey address interest in the classroom. These ask students to think about whether or not there are opportunities to engage in interesting activities and learning in the classroom. Prompts nine through seventeen address the level of challenge present in the classroom. Here, students are asked to reflect on what they do that pushes their learning and challenges their abilities. Numbers eighteen through twenty-four are regarding choice in the classroom. In this section, students are

asked to think about what choices, if any, they are able to make in their classroom. The final section of the survey, prompts twenty-five through thirty-one refer to the level of enjoyment in the classroom. Here, students are able to rate what they enjoy about the teacher, activities, and products that take place in the classroom. Challenge, with nine prompts, interest, with eight prompts, and choice and enjoyment, both with seven prompts, all have equal numbers of questions throughout the use of this survey.

Pereira et al. (2010) conducted a study in order to re-norm the instrument that resulted in the deletion of two items. The revised form is more effective in reporting the results of the instrument with validity and reliability because it is better suited for an enrichment program's evaluation. Gentry and Springer (2002) reported that the revised instrument is able to, with reliability and validity, report on how students perceive their educational settings.

Data Collection

Each student who attends camp is assigned a “study buddy” who serves as his/her mentor throughout the week at camp. This study buddy is a student who is in the first semester of the AIG licensure program at East Carolina University and is expected to help the elementary student debrief his/her camp experience. Throughout the week, each study buddy administered the *My Class Activities* survey three times to the elementary students, each time having them focus on a different classroom setting—once asking them to think about their regular classroom, once asking them to think about their gifted classroom, and once thinking asking them to think about their camp classroom.

The study buddy sat with the elementary student in a quiet and distraction free area throughout the week and asked each of the 31 questions in regards to one of the classroom settings. After each question, the student was able to respond with the degree to which the

statement was true: never, seldom, sometimes, often, or always. After the student responded, the study buddy filled in the appropriate bubble. While the student was engaged in the survey, the study buddy was there to assure the student that the results of this survey would not affect his/her camp participation in any way. This conversation took place in order to yield the most accurate results possible.

After the survey was administered, each study buddy entered his/her camper's results into an online form. This form was then converted into an Excel spreadsheet in order to easily access and analyze the information. In the case that there were incomplete surveys or the data was not completed the affected surveys were deleted. When all of the incomplete sets were removed from the Excel sheet, the data were entered into SPSS to be analyzed further.

Data Analysis

In order to analyze the data that have been collected over three years, both an analysis of variance (ANOVA) and a multivariate analysis of variance (MANOVA) was used. The cases that contained incomplete data sets were deleted in order to preserve the validity of the tests. In addition, those students who did not complete all three surveys, and therefore did not have a complete data set, were eliminated from the study as well.

First, a one way between-groups analysis of variance was conducted to explore the differences between interest, challenge, choice and enjoyment across three educational settings (regular classroom, AIG classroom, and camp classroom) as measured by the *My Class Activities* survey.

The ANOVA was selected in order to create a more robust and overall picture of the data across the three classroom settings. This test gives both between-groups and within-groups sums of squares. In the first comparison, a total mean was computed for all 31 items on each of the

three settings. Therefore, the dependent variable was the total mean with the independent factor being the setting that the student was reporting on. This test was intended to compare the three settings that students were engaged in and determined the differences in the overall means from the *My Class Activities* surveys of each of the three settings.

A Tukey post hoc test was conducted. This post hoc test shows a comparison of the differences in total mean across the three classroom settings.

The MANOVA presents the opportunity to compare all three classroom settings (independent variable) to all four factors on the My Class Activities survey-interest, challenge, choice and enjoyment (dependent variable). Based on the large sample size in this study, no assumptions have been violated.

Limitations

During this study, there may be some researcher bias present due to pre-existing ideas about what happens in various classroom settings and the researcher's training in gifted education. In addition, throughout this research study, three sets of pre-existing data were analyzed. These data were collected over three years which may have skewed the accuracy of the results. Throughout the three years, several different people who served as camp study buddies collected and entered the data that were used. The students that were surveyed and those who recorded and entered the results all have different perspectives about how to accurately complete the survey.

In addition, the sample population all came from the same area and was identified as gifted using the same criteria, so there was not a significant amount of diversity represented. In addition, students were self-reporting on the survey and may have reported inaccurately due to

desire to appear favorable to the person collecting the data. All of these factors have an effect on the validity and accuracy of the study.

Role of the Researcher

During this study I have played several roles. In 2012, I was a study buddy for a camper and assisted her in completing her *My Class Activities* survey. In 2013, I taught a unit and interacted with several campers and ECU students. Currently, I am working to synthesize the data that have been collected in order to determine the implications for gifted students and teachers.

CHAPTER FOUR: FINDINGS

Differences in Classroom Setting

A one-way between-groups analysis of variance (ANOVA) was conducted to explore the differences of students' perceptions of their classroom environments as measured by the *My Class Activities* survey. There were a statistically significant differences: $F(2, 480)=52.0, p<.001$. Post-hoc comparisons using the Tukey multi-comparisons test indicated that the mean score for the regular classroom ($M=3.45, SD=.52$) was statistically different from the mean score for the AIG classroom ($M=3.97, SD=.48$) with a mean difference of $-.52$. The mean scores for the regular classroom and the camp classroom ($M=3.90, SD=.48$) were also statistically different with a mean difference of $-.44$. The AIG classroom, when compared to the camp classroom did not have statistically significant results with a mean difference of $-.07$.

When examining the results of the one-way ANOVA comparing the final means across settings, there were statistically significant results. The mean of rating scores of the 31 items for the regular classroom was 3.45 with a standard deviation of .52. The lower bound mean was 3.37 and the upper bound mean was 3.54. The minimum mean was 2.00 and the maximum mean was 4.61.

In the AIG classroom, the mean of rating scores was 3.97 with a standard deviation of .48. The lower bound was 3.90 and the upper bound was 4.05. The minimum mean was 2.10 and the maximum mean was 5.00.

When examining the results from the summer camp classroom, the mean of rating scores was 3.90 with a standard deviation of .48. The lower bound was 3.82 and the upper bound was 3.97. The minimum mean was 2.29 and the maximum mean was 5.00.

Figure 1 shows the differences among the total mean in each classroom setting.

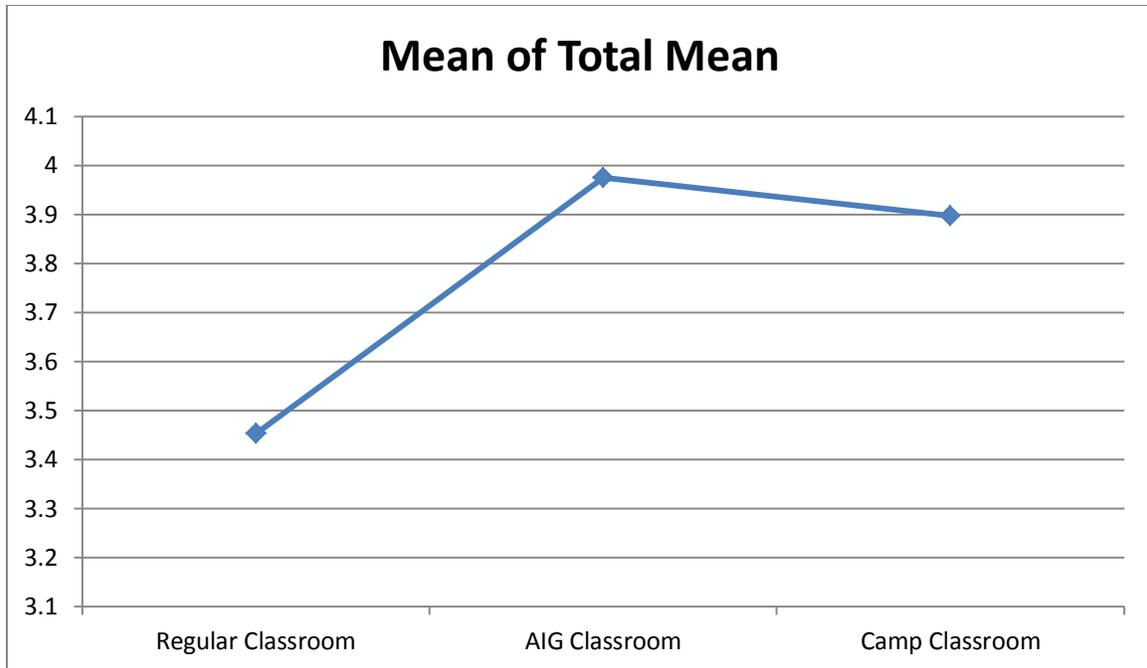


Figure 1: Mean of Total Mean

Student Perceptions of Interest, Challenge, Choice, and Enjoyment

In order to investigate the differences between interest, challenge, choice, and enjoyment across the three classroom settings, a one-way between-groups multivariate analysis of variance (MANOVA) was performed. Four dependent variables were used: interest, challenge, choice, and enjoyment. The independent variable was setting. Preliminary assumption testing was conducted to check for normality with no serious violations noted. There was a statistically significant difference between the three settings on the combined dependent variables: $F(8, 954)=28.30, p<.001$; Wilks' Lambda=.65; partial eta squared=.192. When the results for the dependent variables were considered separately, the only difference that was not statistically significant using a Bonferoni adjusted alpha level of .0125 was the choice factor: $F(2, 483)=2.99, p=.051$; partial eta squared=.01.

While conducting the MANOVA, four dependent variables were used: interest, challenge, choice, and enjoyment. The independent variable was setting. Preliminary assumption

testing was conducted to check for normality with no serious violations noted. There was a statistically significant difference between the three settings.

When examining the results of the MANOVA, more specific details about each of the three settings were found. Here, the mean of each of the four factors, interest, challenge, choice, and enjoyment was calculated for each of the three classroom settings.

Interest. There was a statistically significant difference between the mean scores of the students' perceptions of interest in their three classroom settings: $F(2, 483)=65.20, p<.001$; partial eta squared=.21.

In regards to interest, the regular classroom had a mean of 3.66 with a standard deviation of .61. The AIG classroom had a mean of 4.25 with a standard deviation of .58. The camp classroom had a mean of 4.34 with a standard deviation of .56. Figure 2 displays the mean of the interest factor in each of the three classroom settings.

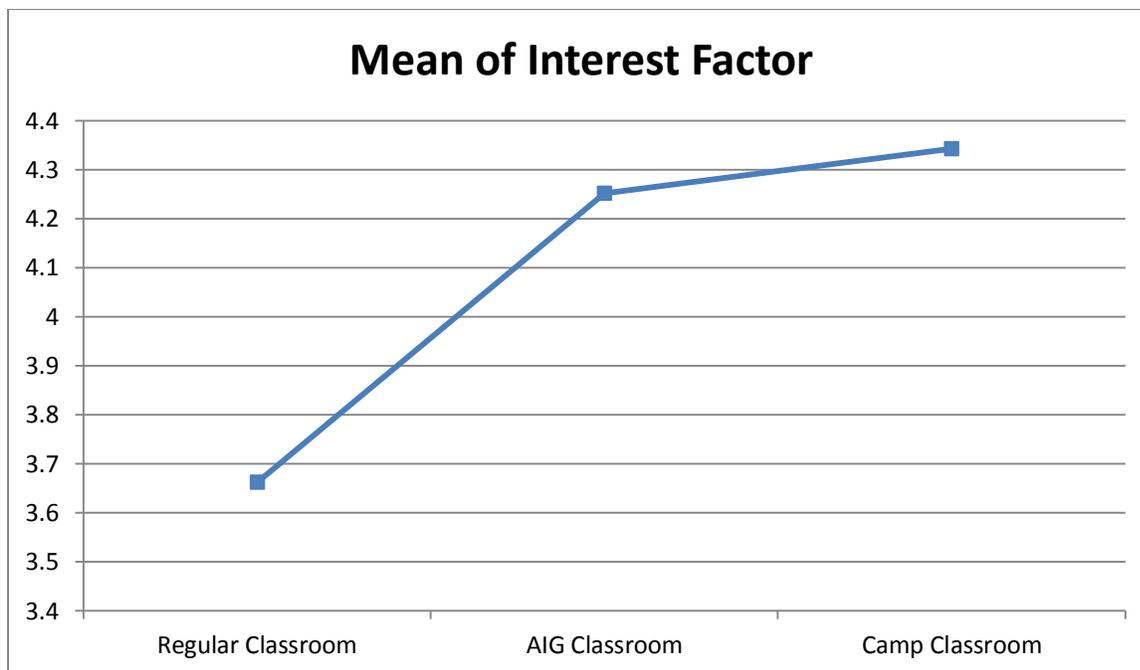


Figure 2: Mean of Interest Factor

Challenge. The next factor analyzed was challenge. There was a statistically significant difference between the mean scores of the students' perceptions of challenge in their three classroom settings: $F(2, 483)=28.16, p<.001$; partial eta squared: .10.

While analyzing challenge, the regular classroom had the lowest mean of 3.44 with a standard deviation of .65. The AIG classroom had the highest mean of 3.94 with a standard deviation of .56. The camp classroom had a mean of 3.51 with a standard deviation of .71. Figure 3 illustrates the mean of the challenge factor in each of the three classroom settings.

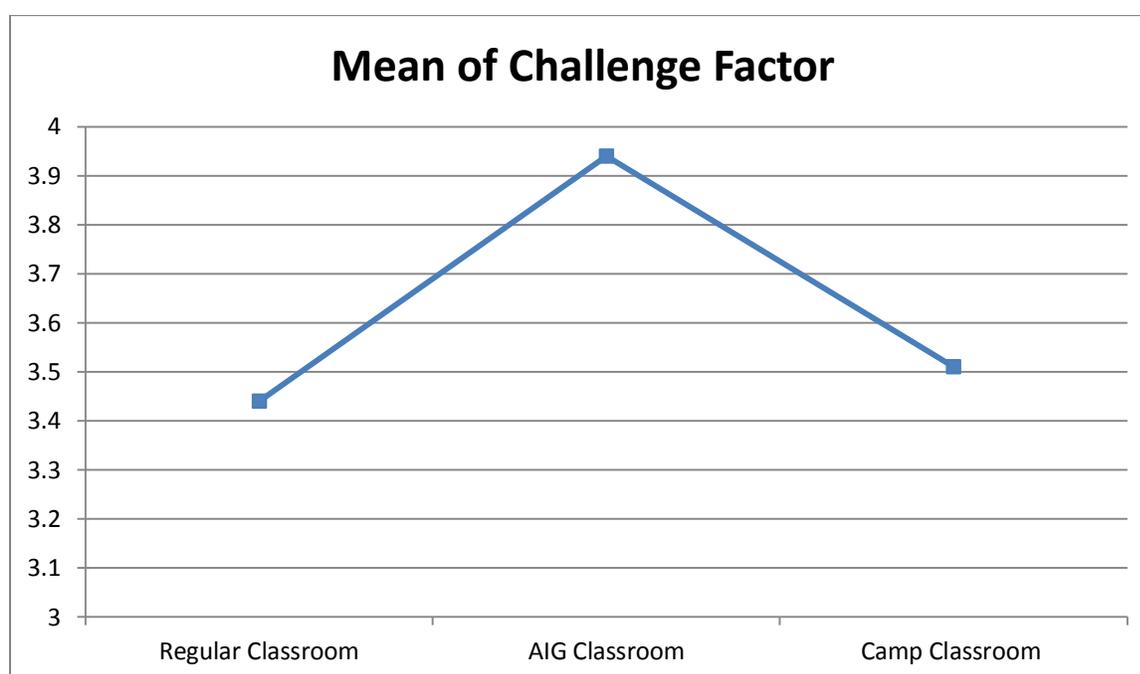


Figure 3: Mean of Challenge Factor

Choice. The choice factor was the next factor to be analyzed. There was not a statistically significant difference using a Bonferoni adjusted alpha level of .0125 between the mean scores of the students' perceptions of choice in their three classroom settings: $F(2, 483)=2.99, p=.051$; partial eta squared: .01.

When looking at choice, the regular classroom had the lowest mean of 3.06 with a standard deviation of .82. The AIG classroom had a mean of 3.28 with a standard deviation of

.73. The camp classroom had a mean of 3.19 with a standard deviation of .83. Figure 4 displays the mean of the choice factor in each of the three classroom settings.

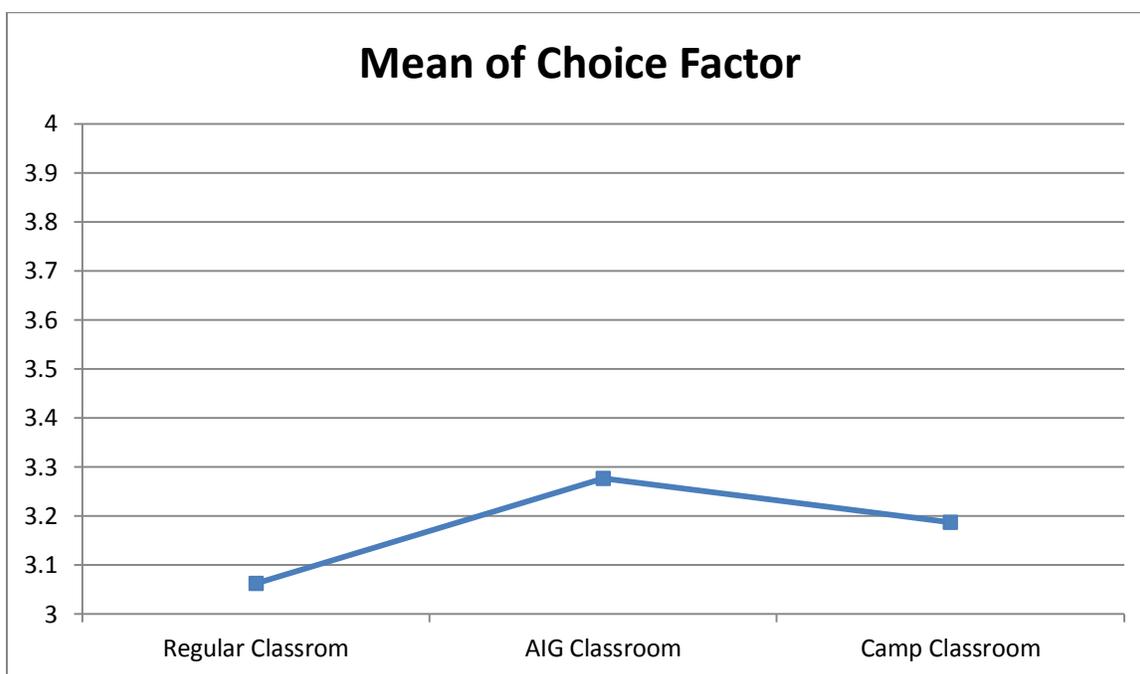


Figure 4: Mean of Choice Factor

Enjoyment. The final factor evaluated in the *My Class Activities* survey was enjoyment. There was a statistically significant difference between the mean scores of the students' perceptions of challenge in their three classroom settings: $F(2, 483)=76.77, p<.001$; partial eta squared: .24.

The regular classroom had the lowest mean of 3.80 with a standard deviation of .78. The AIG classroom averaged next highest with a mean of 4.48 and a standard deviation of .58. The highest score in this area was the camp classroom with a mean of 4.60 and a standard deviation of .47. Figure 5 illustrates the mean of the enjoyment factor in each of the three classroom settings.

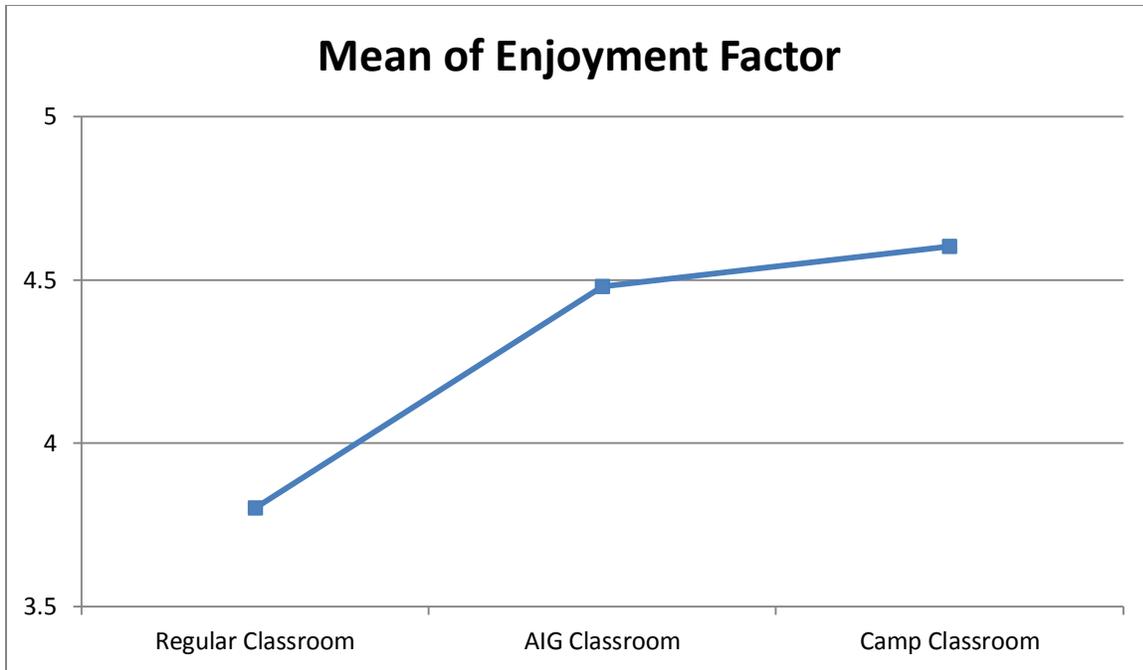


Figure 5: Mean of Enjoyment Factor

CHAPTER FIVE: CONCLUSIONS

Purpose of Study

The purpose of this study was to identify and analyze gifted students' perceptions of their three classroom environments. In addition, this study investigated the differences of interest, challenge, choice and enjoyment across three educational settings

Results

First, this study was designed to determine whether students' perceptions of their three educational settings differed. When looking at the mean of rating scores across the 31 items on the *My Class Activities* survey, it became clear that the students had different experiences across their three educational settings. When reflecting on their regular classrooms, students reported the lowest overall mean with an average of 3.45. On the instrument, the third rating score is listed as "sometimes" and the fourth is "often." Based upon these results, on average, students indicated that they feel the presence of interest, challenge, choice, and enjoyment in their regular classrooms only "sometimes." This mean score was the lowest of the three educational settings, suggesting that the regular classroom provides the least amount of student engagement.

When discussing the elements of the AIG classroom, students reported a mean of 3.97. This mean was the highest overall of the three settings which suggests students feel the most engaged across the board in their AIG classrooms. In addition, the maximum reported score was a 5.00, which is the highest possible score on the rating scale for each of 31 items. Based on the results of this test, students feel that their AIG classrooms provide a stimulating overall learning environment.

The final mean that was calculated was for the camp classroom. Here, the overall mean was 3.90, which is slightly lower than the average mean of the AIG classroom. However, the

minimum mean was 2.29, which is the highest among the three classroom settings. The maximum mean was 5.00, which, as was the case with the AIG classrooms, is the highest possible score. Overall, students rated their camp classroom fairly high, with their average responses leaning towards “often” on the Likert rating scale.

While doing this analysis, there were several differences found. Students reported significant differences in their perceptions of their regular and AIG classrooms. In addition, there were differences between students’ perceptions of their regular and camp classrooms. In both of these cases, the results showed statistically significantly different mean scores. However, there were not significant differences between the AIG and camp classrooms. This shows that the students’ perceptions of their AIG classrooms and camp classrooms are somewhat similar. As both of these classrooms are centered on the needs of gifted learners, this similarity is not surprising. Because these classroom settings are catered toward gifted learners, the students are more likely to have similar experiences.

Secondly, the study looked to see whether there were differences of interest, challenge, choice, and enjoyment across three educational settings (regular classroom, gifted classroom, camp classroom). In order to isolate each factor in each classroom setting, the results of the MANOVA were individually analyzed.

Interest. When solely looking at interest in the classrooms, the regular classroom had the lowest mean (3.66) and the camp classroom had the highest mean (4.34). The AIG classroom also had a relatively high mean at 4.25. These results show that students feel they are least interested in the content and products in their regular classroom. Due to the nature of the camp classroom, students are able to participate in units that are completely catered to their interests. They are able to select what interests them out of several unit topics and are not asked to

participate in areas that are not interesting to them. Therefore, it is not surprising that the mean of the camp classroom rates the highest in the interest area. The AIG classroom scored a high mean in this area as well which suggests that students feel quite interested in the material presented in their AIG classroom. However, the higher mean in the camp classroom is most likely attributed to the fact that students actually have the ability to only participate in topics that are interesting to them while at camp. In their AIG classrooms, students are able to participate in more rigorous activities and engage in creative products, which most likely suit their interests. However, they are not able to explicitly select courses that interest them.

In 2010, Gentry and Springer concluded that interest is extremely important to increase student performance and motivation. Through their study, they determined that when students are interested in their learning, they are more likely to be engaged. Gentry and Springer's findings support the current study in regards to interest in the classroom.

Challenge. In the *My Class Activities* survey, the next section of questions had to do with challenge. Here, students were asked questions that related to what they did in their various classrooms that challenged their thinking and ability. In this area, it is clear that students view their AIG classroom as the educational setting where the most challenge is present with a mean of 3.94. In their AIG classrooms, students are often presented with new material and are forced to think critically about difficult tasks. They expect these classrooms to push their thinking and tend to view them as challenging. In their regular classrooms, gifted children have often already mastered the majority of the content being taught. Therefore, it is not surprising that students find their regular classrooms the least challenging of the three.

The camp classroom is, by nature, challenging, but not in the same ways as a regular or AIG classroom. At camp, students are asked to think critically about real world problems and

come up with creative solutions to them. They are also expected to really take their thinking and products to a higher level in order to make the content as rigorous as possible. However, since the material the students are learning at camp is highly interesting to them, they might not perceive the content as challenging. In addition, since they are self-reporting, some gifted students may respond that they are not being challenged for fear of being perceived as less intelligent.

In accordance with the study conducted by Shabani et. al (2010), this study shows that students tend to be engaged when they are challenged in their classroom environments.

Choice. When reflecting on choice, students were asked questions that had to do with how often they are able to choose their materials, products, and groups. There were several questions about choosing whether to work individually, in partners, or in a group. Also, there were questions about choosing materials and audiences for products. Here, students felt that they had the least choice in their regular classrooms with a mean of 3.06, and the most choice in their AIG classrooms with a mean of 3.28. The camp classroom scored in the middle of the two other classroom settings, but the differences were not large. The way that the questions on the survey are worded may have accounted for this unexpected result of the camp classroom not having the highest rating. While at camp, students are in complete control of their learning environment as they choose which unit they want to participate in. However, they may not have considered this as choice while completing their survey.

This area was the only factor that did not produce statistically significant results. In addition, the mean for the choice factor across all three settings was, overall, lower than the other three factors. As choice is an area that is fairly simple to incorporate into any classroom, the small difference of means in this area is not terribly surprising. Based on these results, students

feel that they encounter about the same amount of choice in each of the three classroom settings they participate in.

Street (2001) asserted that when students are choosing what they are engaging in, they are more apt to choose a challenging and interesting task. These findings seem to be relevant to the current study as well.

Enjoyment. The final section of the survey gave the students an opportunity to rate their enjoyment in each of the three classroom settings. The questions in this section focus on how much the students enjoy what they are doing in class, whether or not the learning, projects, and work are fun, and how much the student looks forward to the class. The regular classroom scored the lowest in this area, which shows that the majority of students do not experience as much enjoyment in their regular classrooms as they do in their other two classroom settings. The mean scores for the AIG classroom and camp classroom were very close to each other, but the camp classroom scored the highest with a mean of 4.60.

The results of this section show that students find the most enjoyment when they are engaged in their camp classroom. This enjoyment could be attributed to many things. The camp classroom is a different setting that does not necessarily feel like a typical classroom. Students are in a small group and are participating in a less formal learning process where active learning is essential. Because the entire unit has to be taught over four short days, a lot takes place and there are more activities for students to participate in than there might be in their typical classrooms. Also, since the sessions are only seventy minutes each, there is not much time for students to become disengaged and bored.

In 2002, Gentry, Gable, and Rizza stated that it is crucial for educators to offer enjoyable learning experiences to their students. As this study also suggests, students must be able to enjoy the topic at hand in order to have the best perception of their classroom environment.

Implications

This study carries many implications for both regular education and gifted education teachers. Overall, students' perceptions of their regular classroom are significantly lower than that of their AIG and camp classrooms. This challenges educators to improve the quality of their classroom environments to better suit the needs of their gifted students. It is crucial to engage students by continuing to push them to the best of their abilities. When this happens, students will become more engaged, invested, and interested in their learning process.

In addition, this study shows that gifted learners are experiencing vast differences in the interest, challenge, choice, and enjoyment across their three educational settings. Based on the results of the survey and its analysis, the regular classroom has the lowest ratings in all four categories of interest, challenge, choice, and enjoyment. This also challenges regular education teachers to work towards incorporating each of these four factors into their everyday classrooms. In addition, if gifted educators are able to share their strategies and ideas with others, these areas of the regular classroom may improve.

Overall, gifted learners' perceptions of their three classroom settings are vastly diverse. Gifted learners are having different educational experiences in their various classroom settings, and educators must begin to adjust their teaching methods to ensure that gifted students' needs are met from one setting to the next.

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Appendix



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Notification of Amendment Approval

From: Social/Behavioral IRB
To: [Elizabeth Fogarty](mailto:Elizabeth.Fogarty@ecu.edu)
CC:
Date: 10/28/2013
Re: [Ame2_UMCIRB 12-001315](#)
[UMCIRB 12-001315](#)
Academically Intellectually Gifted Camp Research

Your Amendment has been reviewed and approved using expedited review for the period of 10/27/2013 to 7/9/2014. It was the determination of the UMCIRB Chairperson (or designee) that this revision does not impact the overall risk/benefit ratio of the study and is appropriate for the population and procedures proposed.

Please note that any further changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. A continuing or final review must be submitted to the UMCIRB prior to the date of study expiration. The investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).

The approval includes the following items:

Document	Description
Sub Investigator Added: Brian Housand	
Other Study Staff Added: Katherine Blanchard	

The Chairperson (or designee) does not have a potential for conflict of interest on this study.