# THE CREATION AND DEVELOPMENT OF THE ACADEMIC COMPETENCY TEASING SCALES

A Dissertation Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Philosophy

by

Kelly Lee

May 2016

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## Abstract

The current study examines the construct of academic competency teasing. While research has shown that competency teasing is one of the most frequent forms of teasing, research in this area remains sparse. Only two currently published scales assess competency teasing: the Perception of Teasing Scale (POTS; Thompson et al., 1995) and the Teasing Questionnaire-Revised (TQ-R; Storch et al., 2004). In a previous study, the Academic Competency Teasing Scales (ACTS) were created and piloted on college-aged students (Lee, unpublished manuscript). The three scales included High Competency Teasing, Low Competency Teasing, and Impactful Name-Calling. The current study assessed the newly developed ACTS with college students. First, two distinct factor analyses were conducted: principal component analysis (PCA) and structural equation modeling (SEM) measurement model analysis. The PCA demonstrated a revised three-factor solution, with the scales of high competency teasing, low competency teasing, and impactful name-calling, similar to the 2012 data results (Lee, unpublished manuscript). The SEM measurement model showed the best-fit model as the three-factor revised structure. The constructs of the ACTS were compared to the other established competency teasing scales and demonstrated significant convergent and discriminant validity. Finally, statistical group differences were discovered for giftedness and ethnicity. Gifted students reported more teasing for high competence and higher current college GPA. For ethnicity, Black students reported less teasing related to low competence compared to Asian Americans, and Black students reported lower impact for

name-calling compared to Whites and Asian Americans. The manuscript concludes with a discussion, limitations, and implications.

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# Chapter I

## Introduction and Review of the Literature

Bullying has been identified in the literature as both frequent and damaging for individuals (Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt, 2001). A related but neglected topic in most research is teasing. This may be because teasing is a very difficult term to define (Endo, 2007; Jones, Newman, & Bautista, 2005; Kowalski, 2000; Mills & Carwile, 2009). Of the research conducted on teasing, two main categories emerge: appearance/weight teasing and competency teasing. A review of available literature shows conflict in defining low and high competency teasing with no measureable scale defined in either case. In the current paper, the researcher examined the literature on teasing and competency, highlighted the methods for continued developed on a set of new scale for academic teasing, and explained analyses for examining the scales. Results of the analyses are presented, as well as a discussion, limitations, and future directions.

### Teasing Definition

Throughout the literature, teasing often does not have a concrete definition and is difficult to identify (Endo, 2007; Jones, Newman, & Bautista, 2005; Kowalski, 2000; Mills & Carwile, 2009). The dilemma stems from the many different types of teasing which can be positive or negative. Positive or prosocial teasing can involve friends or family who are "just kidding around," and the tease is not meant to harm the individual (Barnett, Burns, Sanborn, Bartel, & Wilds, 2004; Mills & Carwile, 2009). Cruel or antisocial teasing is name-calling or other verbal insults that ultimately hurt the other person's feelings (Barnett et al., 2004). Shapiro, Baumeister, and Kessler (1991)

identified three characteristics that are associated with teasing: playfulness/humor, ambiguity, and aggression.

**Playfulness/Humor.** Teasing can be distinguished from bullying by the potential of the tease to be interpreted as funny or viewed as a joke (Jones, Newman, & Bautista, 2005; Kowalski, 2000; Mills & Carwile, 2009). Often after teasing excuses such as "I was only kidding" or "I was just joking" are given. The play and humor in the teasing can either be between the teaser and the target (i.e., prosocial teasing) or between the teaser and an audience, making the target an outsider and excluded from the humor (i.e., antisocial teasing; Kowalski, 2000). Jones, Newman, and Bautista (2005) found teasing was interpreted as humorous if it occurred between friends instead of between classmates. This may indicate that the role of the teaser is an important factor in determining humor, and thus distinguishes between prosocial and antisocial teasing.

**Ambiguity.** Humor or playfulness towards or against the target can be ambiguous, as the target may not be aware of the teaser's motive or intention behind the tease (Endo, 2007; Kruger, Gordon, & Kuban, 2006; Mills & Carwile, 2009). In 2007, Endo found the role an individual plays in the interaction of a tease (i.e., teaser or target) and the level of social skill (i.e., low or high) influences the perception of humorous intention in the tease. Specifically, targets that had low social skills reported the most negative perceptions of teasing. Another study by Kruger, Gordon, and Kuban (2006) examined the interpretations of teasing intentions. They concluded targets consistently interpreted the teaser's intentions as less positive and less relevant as compared to the teaser. These studies demonstrate targets can often misinterpret teasers' intentions, with only the teaser knowing his or her true intent. To distinguish between prosocial and

antisocial teasing types, intentions are almost impossible to use in the definition. To compensate for this, definitions often allude to how the teasing makes the target feel or how the target interprets the tease, regardless of the teaser's intentions (Endo, 2007).

**Aggression.** Teases that are antisocial in nature usually have an aggressive component: the target views the teaser as aggressive or the target feels like the victim of aggression. Barnett and colleagues (2004) found that although children in their study experienced less antisocial teasing than prosocial teasing, girls reported experiencing antisocial teasing more frequently in school than boys, and boys displayed a stronger tendency to be antisocial teasers than girls. The definition of antisocial teasing is similar to peer victimization in terms of aggression. Peer victimization is defined as a type of peer abuse in which the victim is a target of peer aggression (Kochenderfer & Ladd, 1996) and is categorized into overt victimization (e.g., physical assaults or threats) and relational victimization (e.g., manipulation and damage to relationships; Crick, 1996; Crick & Grotpeter, 1995; Crick, 1996). Unfortunately, antisocial teasing does not fall into either of these categories, suggesting that it is not clearly delineated and defined in terms of victimization. Therefore, although antisocial teasing and peer victimization are similar in aggression, there are also key differences.

## Types of Teasing

Kowalski (2000) identified seven categories of teasing from autobiographical narratives provided by undergraduate participants. These categories included romantic relationships, body parts/appearance, behaviors such as walking or dancing, intelligence, medical conditions, stereotyping/social groups such as age or ethnicity, and other. Although Kowalski identified seven categories, the main body of research literature for

teasing demonstrates two prevalent categories: weight/appearance and competency (i.e., intelligence; Agliata, Tantleff-Dunn, & Renk, 2007; Scambler, Harris, & Milich, 1998; Storch et al., 2004; Thompson, Cattarin, Fowler, & Fisher, 1995).

Competency teasing is defined as teasing based on an individual's academic ability or identity. This type of teasing is one of the two most frequent forms of teasing found in the teasing literature. Agliata, Tantleff-Dunn, and Renk (2007) found that adolescents experienced competence teasing most frequently, and Scambler, Harris, and Milich (1998) found students were teased about poor school performance second only to appearance teasing. The Perceptions of Teasing Scale (POTS) and the Teasing Questionnaire-Revised (TQ-R) are the only two scales found by this researcher that assess competency teasing. In 1995, Thompson and colleagues created and modified the POTS in order to understand the development of eating disorders or body image issues. While creating the scale, the researchers added non-appearance considerations regarding inabilities and incompetencies with a focus on low competency questions (e.g., "People made fun of you by repeating something you said because they thought it was dumb"). No other explanations were provided for why these items were added to the scale aside from being different from appearance teasing. The POTS has become a hallmark scale for assessing the two main types of teasing: appearance and competence. The weakness in this scale is that it was created to measure appearance teasing, hence limiting its use for competence teasing. Storch and colleagues (2004) recognized this lack of focus on other teasing categories and modified the Teasing Questionnaire-Revised (TQ-R) to include different categories of teasing. One category included in the scale is the

academic domain, which assesses high competency teasing (e.g., teasing because you were "being 'nerdy'" or "cared about class").

Even though these two scales assess competency teasing, they measure different constructs. The TQ-R measures frequency of competency teasing using a scale with response intensities of *never*, *rarely*, *sometimes*, *often*, and *always* (Storch et al., 2004). The POTS, on the other hand, has questions regarding both frequency and impact. Frequency on the POTS is assessed on a 5-point scale, from 1 (*never*) to 5 (*often*). The impact questions also range from 1 (*not upset*) to 5 (*very upset*). Thompson and colleagues (1995) do not provide a reason for the division of frequency and impact. Theoretically, dividing the two constructs may be beneficial, as some teasing, regardless of frequency, may not be as hurtful to the individual compared to other types of teasing. Additionally, individuals may react differently to teasing depending on individual differences such as personality traits or teasing history (Bollmer, Harris, Milich, & Georgesen, 2003).

Although the POTS and TQ-R both assess competency teasing, they also measure different types of teasing. The POTS assesses low competency teasing, or teasing related to academic/intellectual difficulties, while the TQ-R assesses high competency teasing, which focuses on teasing related to the person being intelligent. In addition, both the POTS and the TQ-R assess competency teasing only as a subscale in a larger teasing scale; competency teasing is not the main focus of either scale.

**Competency Teasing and Individual Differences**

Competency teasing may vary depending on certain demographic variables. One factor of importance is age. Jones and colleagues (2005) found that sixth graders expected more negative affect in terms of academic teasing compared to eighth graders. Faith, Storch, Roberti, and Ledley (2008) found that the youngest cohort of their non-clinical participants (age 18-29 out of a range of 18-86 years old) had the highest summed scores for the academic factor. This may show that academic teasing is more frequent and has more of an impact during adolescence compared to any other life span times. Other research on bullying and peer victimization confirms these results (Langdon & Preble, 2008; Nansel et al., 2001; Williford, Brisson, Bender, Jenson, & Forrest-Bank, 2011).

The studies that had examined gender differences in teasing and peer victimization are inconclusive in their results. Some studies concluded no statistical differences in frequency by gender (Dempsey & Storch, 2008; Kochenderfer & Ladd, 1996). However, others have found statistically significant differences by gender (for a review, please see Rose & Rudolph, 2006). Jones and colleagues (2005) hypothesized that the teasing incurred by girls represented a greater social violation as compared to boys, and thus is more hurtful for girls. On the other hand, Grills and Ollendick (2002) found boys were more frequently targeted by aggression but had less anxiety, compared to girls. These inconclusive results demonstrate a need for continued research in this area.

Ethnicity may be another demographic characteristic that shows differences in competency teasing. The concept of stereotype threat is defined as a psychosocial feeling of threat caused when an individual's group affiliation invokes a negative stereotype (Steele, 1997). Academic stereotype threat is rooted in the misperceived label that Black individuals perform poorly in academic domains, such as math. Therefore, these individuals may be teased about low competency regarding this stereotype. Wessler and De Andrade (2006) conducted a qualitative study with 80 focus groups and 7,000 anonymous student statements. The examples, given in terms of racist language, suggested that Blacks and Latinos were teased about their lack of work ethic while Asian individuals were teased because they were smart and participated in class. These stereotypes and teases may suggest differences in academic competency teasing based on one's ethnicity and the stereotypes attributed to that ethnicity.

Another demographic variable involved in academic competency teasing is giftedness. According to the Jacob Javits Act of 1988, gifted students are defined as "Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities." (NAGC, 2008). Little research has focused on gifted students and teasing. In fact, only two articles specifically discussed teasing and giftedness. The first is an article from *Supporting Emotional Needs of the Gifted* (SENG) by Schuler (2002), which provides parental tools and strategies to assist gifted children. The mention of teasing was anecdotal, and no original research was conducted. The other article is a landmark study by Peterson and Ray (2006). They found name-calling

was the most prevalent form of bullying experienced by gifted students, followed by appearance teasing and intelligence teasing. In terms of name-calling, 36% of students were called names such as dork, geek, or dumb based on intellectual capabilities. The major limitation of the study by Peterson and Ray (2006) was that there was no comparison group of non-gifted students. Therefore it is unknown whether this type of teasing only happens to gifted children or whether there are differences in gifted and non-gifted children's experiences.

In conclusion, academic competence teasing is a significant type of teasing that may affect individuals differently. Academic teasing may be particularly relevant for individuals around the age of adolescence and for gifted students. It is unknown how gender affects teasing due to the discrepancy in results. Additionally, minority individuals such as Blacks and Latinos may be teased for their low competency due to negative stereotypes, and individuals of Asian descent may be teased for their academic prowess. These individual differences were examined in the current study.

**Development of the Initial Scales**

The initial Academic Competency Teasing Scales (ACTS) were developed in the fall of 2012 (Lee, unpublished manuscript) using the methods highlighted in the article by Schlichter and Olenchak (1992). The relevant literature was reviewed, and an initial set of items was created. Three experts in the field assessed content validity of the items.

When creating a measure with relatively new constructs, researchers must operationally define the construct they are trying to measure. This study adapted and used the definition of antisocial teasing from the definition provided by Barnett and colleagues (2004). Antisocial or hurtful teasing was defined as verbal communication

that the target interprets as purposefully hurtful and malicious in intent. Consequently, in the end, the target feels sad or hurt by the tease. Additionally, for the newly developed scales, the directions ask participants to focus on their school experiences of teasing (kindergarten through twelfth grade). This was conducted in order to assess academic competency teasing within a context of when individuals were in a traditional school setting.

After the items were created, each item question was doubled, asking separately about the frequency of occurrence and impact of the teasing (e.g., "*Have you ever been teased* because you enjoy school?"; "*How much did it upset you to be teased* because you enjoy school?"). This was delineated for two reasons. First, the researcher wanted to mirror the questions from the POTS scale by Thompson and colleagues (1995). Second, Agliata, Tantleff-Dunn, and Renk (2007) found their participants were infrequently teased, but reported moderate to high levels of distress, suggesting that frequency and impact are two different constructs. Thus, both frequency and impact were addressed.

The pilot scale included a total of 80 items: 26 high competency frequency items, 26 high competency impact items, 14 low competency frequency items and 14 low competency impact items. Participants ($N = 295$) from a large, ethnically diverse Southwestern university (85.5% females) completed the scales and a principal component analysis (PCA) was performed on the data (Lee, unpublished manuscript). The correlation matrix showed high associations between frequency and impact questions; therefore a decision rule was made to reduce these items based on their loadings on the factors. The best-fit PCA revealed a three-factor solution, including high competency teasing, low competency teasing, and impactful name-calling (Lee, unpublished

manuscript). Based on the PCA and results of this study, the final ACTS includes 36 items assessing high competency teasing (18 items), low competency teasing (11 items), and impactful name-calling (7 items).

The high and low competency teasing scales had two subscales: identity and actions. The identity subscales included teases that distinguished a person's identity (e.g., "How often have you been teased about being an overachiever?" "How often have you been teased because you did not understand something?"), while the actions subscales included performances that identified low or high competency (e.g., "How often have you been teased because you raise your hand to answer questions in class?" "How often have you been teased because you fall behind on your homework?"). The impactful name-calling subscale included both high and low competency name teasing, including being teased about being a "geek" and being teased about being "dumb."

The majority of the items for the high and low competency teasing were frequency questions, while all of the impactful name-calling items were impact questions. Due to the fact that a separate factor encompassed impact questions with a name-calling theme, the researcher concluded that name-calling seems to be qualitatively different.

The current study is an extension of the initial study of the Academic Competency Teasing Scales (Lee, unpublished manuscript). The methods of this study are described below in detail, including participants, instruments, procedures, and analyses. The results and discussion follow.

# Chapter II

# Methodology

## Participants

The participants consisted of 531 undergraduate students (86.6% female) from a large Southwestern university, ranging in age from 18 to 42 years with a median age range of 18-20. The participants were ethnically diverse, with 25.4% listing their ethnic background as White or Caucasian, 18.6% as Black or African American, 31.6% as Hispanic or Latino, 23.5% as Asian or Asian American, 0.4% as Hawaiian and Other Pacific Islander, and 0.4% American Indian or Alaska Native. In addition, 46.9% of the participants indicated they were identified by their school as a gifted student. Demographic information is provided in Table A1.

A university institutional review board approved all study procedures before data collection took place. Participants indicated informed consent and completed the survey from an online research database. Based on the online database's procedures, all participants were enrolled in an undergraduate class and were offered class credit or extra credit for their participation.

## Instruments

**Demographic questionnaire.** Participants identified their age, gender, and ethnicity. A question regarding self-reported giftedness was also asked (i.e., "Were you/are you identified as a gifted/talented student?"). Finally, participants reported their high school grade point average and current college grade point average both by selecting a range from a multiple-choice answers and typing in their grade point average without any specifiers.

**Validity questions.** Five validity items were added throughout the scales to examine whether participants were paying attention to the questions and answering based on the specific question. The five items read, "Please check number *X,*" indicating participants should answer the questions with that particular number. Participants were excluded from the study if they answered any of the validity questions incorrectly. This was decided to ensure all participants were paying attention and items were answered based on the question read. This decision rule excluded 15 participants (2.7% of the original sample) for this study.

**Academic Competency Teasing Scales (ACTS).** The Academic Competency Teasing Scales were developed in the fall of 2012 by the researcher (Lee, unpublished manuscript). The total ACTS includes 36 items assessing high competency teasing (18 items), low competency teasing (11 items), and impactful name-calling (7 items). Content validity was assessed during the generation of items, and all scales had strong reliability (.79 to .93). The questions regarding frequency are on a 7-point scale ranging from 0 (*Never*) to 6 (*More than 1-2 times each day*). The questions regarding impact are on a 7-point scale ranging from 0 (*I have never been teased about this*), to 1 (*Did not hurt at all*) to 6 (*Very hurtful*). In the current study the revised version of the ACTS showed very strong reliability for the High Competency Teasing Scale (.94) and the Low Competency Teasing Scale (.91), and strong reliability for the Impactful Name-Calling Scale (.76).

**The Perceptions of Teasing Scale (POTS).** Thompson and colleagues (1995) created the Perception of Teasing Scale to assess weight and competency teasing. The scale is composed of 22 items (12 items for weight teasing; 10 items for competency

teasing) and has good test-retest reliability (.66 to .90) after two weeks (Thompson et al., 1995). The questions ask about frequency and impact using a 5-point scale, ranging from 1 (*never, not upset*) to 5 (*very often, very upset*). The Cronbach alphas were very strong for the POTS weight subscale (.96) and competency subscale (.92) in the current study.

**The Teasing Questionnaire-Revised (TQ-R).** The TQ-R (Storch et al., 2004) is a 29-item scale that assesses different types of teasing from childhood. It has five subscales, including performance (3 items), academics (6 items), social (7 items), family background (3 items), and appearance (10 items). Reliability ranged from .58 to .84 (Storch et al., 2004). Responses are made on a 5-point scale ranging from 0 (*I was never teased about this*) to 4 (*I was always teased about this*). The Cronbach alphas for the TQ-R in the current study demonstrated moderate to strong reliabilities for performance (.64), academics (.88), social (.75), family background (.48), and appearance (.79), respectively.

**Procedures**

The instruments were posted on an online research database in counterbalanced order, and potential participants read about and agreed to participate in the study. Instruments were presented in counterbalanced order to reduce any primacy or recency bias in answer the items. The participants read and affirmed their informed consent. They then responded to the survey questions, which took no longer than one hour to complete. After the survey was completed, the participants were awarded credit.

**Analysis**

The data collected from the online research database were analyzed to explore the ACTS constructs. First, a bivariate correlation analysis was conducted to assess for redundant items in the scales. Second, two factor analyses (principal component analysis and structural equation measurement model) were used to explore the factor structures. An assessment of convergent and discriminant validity was then examined, using the ACTS, TQ-R, and POTS. Finally, three MANOVAs and univariate analyses were conducted to assess individual differences in academic competency teasing and grade point average.

# Chapter III

# Results

## Bivariate Correlations

A correlation analysis was examined to find any redundancies in the questions. Some researchers (Boyle, 1991; Tabachnick & Fidell, 2007) suggest omitting variables that have correlations of around 0.70 or higher. In the original scale analysis (Lee, unpublished manuscript), many frequency and impact items were highly correlated. In the current analysis, there were eight correlations of items from the ACTS that were over .70. Five items were eliminated based on the researcher's theoretical understanding of the item in comparison to the others. The items removed from the analyses were the impact spelling errors ("How much does it upset you to be teased because you make spelling errors?"), frequency nerd ("How often have you been teased about being a 'nerd'?"), impact stupid ("How much does it upset you to be teased about being 'stupid'?"), frequency raise hand ("How often have you been teased because you raise your hand to answer questions in class?"), and frequency answer question ("How often have you been teased because you answer questions in class?").

## Factor Analyses

**Principal component analysis.** A principal component analysis was conducted to verify the original structure. Based on eigenvalues, there were three factors. This solution explained a total of 57.28% of the variance (27.33% for the first rotated factor, 21.44% for the second rotated factor, and 8.52% of the third rotated factor). The first rotated factor was characterized by high competency teasing, the second factor was low competency teasing, and the third factor was impactful name-calling.

In assessing the individual factors as scales, the high competency teasing scale was characterized by a one-factor solution that explained 54.80% of the variance, and the loadings were at or above .65. The low competency teasing scale was characterized by a one-factor solution that explained 56.75% of the variance, and the loadings were at or above .64. Finally, the impactful name-calling scale was characterized by a two-factor solution that explained 67.10% of the variance (high competency name calling explained 38.20%, and low competency name calling explained 28.90% of the variance) and the loadings were at or above .48.

This structure did confirm the original structure; however, when examining the item loadings, several of the items double loaded on the third factor. Specifically, the impactful name-calling items loaded both on the third factor and in their respective high/low sections. For instance, the item IHCOverachiever ("How much does it upset you to be teased about being an overachiever?") loaded .609 on factor three but also loaded .541 on factor one. Four of the six items that loaded on factor three had higher loadings on that factor; two of the six items (i.e., ILCDumb "How much does it upset you to be teased about being 'dumb'?" and ILCNotUnderstand "How much does it upset you to be teased because you did not understand something?") loaded higher on factor two than factor three. See Table A2 for an example of these double loadings.

Compared to the original ACTS, there were some decision rules made with this PCA to alter the items slightly. First, the impact overachiever item (IHCOverachiever) double loaded on the high competency teasing scale and the impactful name calling scale. Theoretically, it fit better with the name-calling factor, so this item was moved. Based on this change, there was only one other impact question in the high and low competency

teasing scales (ILCpayattention) and so the researcher took this item out of the scale for consistency. With these changes, the high competency teasing scale and low competency teasing scales all have frequency questions while the impactful name-calling scale has all impact questions. A final decision was made to eliminate the impact sit alone bus item (IHCsitalonebus) as it loaded low on the third factor (.48), and it is ambiguous in nature. With this elimination, all items loaded on the third factor at or above .75.

The three-factor scales all had strong and very strong reliability. The (three-factor) High Competency Teasing Scale had a Cronbach alpha of .938, the (three-factor) Low Competency Teasing Scale was .905, and the (three-factor) Impactful Name-Calling Scale was .758. No scale's reliability was strengthened by omitting any items.

For exploration purposes, the researcher wanted to compare this three-factor solution to a forced two-factor solution because of the double loadings on the third factor. The two-factor rotated solution explained 52.41% of the variance. The first factor, characterized by high competency teasing, explained 30.41% of the variance, and the second factor, characterized by low competency teasing, explained 22.0% of the variance. These scales demonstrated very strong reliability: the Cronbach alpha for the (two-factor) High Competency Teasing Scale was .946 and the (two-factor) Low Competency Teasing Scale was .915. Neither scale’s reliability was strengthened by omitting any items.

The PCAs demonstrated some discrepancies in the conclusions made regarding the structure of the ACTS. Although the unconstrained structure demonstrated a three-factor model, it was not a simple structure. A two-factor structure was plausible, but the impactful name-calling scale was eliminated. Since there was a discrepancy in the

models using the PCA, the structural equation model was assessed to gather more information about the structure of the scales.

**Structural equation measurement model.** Structural equation modeling was used to assess the revised ACTS and confirm the solution. For a measurement model in SEM, there are five main steps (Meyers et al., 2006). First, the model was specified through the scale construction discussed previously, which resulted in the three-factor model. Next, the model was identified. SEM models should have more known information than unknown parameters (an over-identified model; Byrne, 2010). To obtain the degrees of freedom, and ultimately assess for an identified model, one must subtract the number of known or non-redundant elements from the number of unknown or estimated parameters. An under-identified model is negative, an identified model equals zero, and an over-identified model is positive. The number of known elements is calculated by the equation V(V+1)/2, where V is the number of manifest variables. The original ACTS has 36 manifest variables, so the number of known elements is 666 (36(36+1)/2). The original ACTS are over-identified and appropriate for structural equation measurement modeling.

Next is model estimation, in which the maximum likelihood estimation (ML) is often used. It is an iterative procedure aimed to estimate the values of the parameters that would result in the highest likelihood of the observed data matching with the hypothesized model (Meyers et al., 2006). This step included the running of the analysis. The fourth step is model evaluation. Inspections are conducted on the estimated parameters, the standardized residuals, and modification indices, using several analyses that examine the question of fit between model and data, from different points of view.

Hooper, Coughlan, and Mullen (2008) reviewed the guidelines for determining model fit. The chi-square evaluates overall model fit and the difference between the sample and fitting covariance. The chi-square statistic should be greater than .05, however deviations from normality and sample size makes the chi-square statistic unreliable. This index thus should be interpreted with caution. The next overall model fit is the root mean square error of approximation (RMSEA); it demonstrates how the model fits with population covariance. The general consensus is the RMSEA with 90% confidence interval (CI) should be less than .06 to .07. Incremental model fit indices contrast the chi-square value to the baseline model. The Normed-fit index (NFI) and Comparative fit index (CFI) are ideal incremental model fit indices. The NFI compares the chi-square model to the null model (i.e., all manifest variables are uncorrelated) and the CFI is a revised NFI that takes sample size into account. For the NFI, Hooper, Coughlan, and Mullen reported that the literature suggests a cut off score of greater than or equal to .95, however there have been recommendations to have a cut off score as low as .80. For the CFI, the authors suggested having a cut off score of over .90. In their conclusion, Hooper, Coughlan, and Mullen (2008) noted that the SEM model fit indices are controversial; some researchers feel that the strict adherence to the fit values can lead to rejecting an acceptable model.

The final step in SEM is model respecification, in which the researcher analyzes the data and changes the model. Any change to the model also needs to be theoretically sound. The following are results from several SEM models:

***Spring/Summer 2013 data with original three-factor solution.*** First, the researcher input the current data with the original three factor structure from the 2012 study (Lee, unpublished manuscript). The solution was barely significant for the NFI index but was not statistically significant for any of the other indices, although it was close (*dof* = 579; $\chi^2$ (2624.60) = .000; *RMSEA* = .082; *CFI* = .839; *NFI* = .804; see Figure B1 for Spring/Summer 2013 original structure).

***Spring 2012 data with original three-factor solution.*** Since the new data did not fit significantly with the structure, the researcher decided to assess the previous data to see if they fit well with the original structure. The full structure was assessed and none of the indices were significant (*dof* = 579; $\chi^2$ (1771.11) = .000; *RMSEA* = .084; *CFI* = .783; *NFI* = .711). Each individual scale was also assessed. The original HCTS reached significance on the comparative fit index factor and normed-fit index. The other scores came close but did not reach significance (Original HCTS *dof* = 64; $\chi^2$ (116.83) = .000; *RMSEA* = .053; *CFI* = .968; *NFI* = .932). The original LCTS showed similar results: the CFI and NFI were significant, and although the other factors were non-significant, they came close to significance (Original LCTS *dof* = 19; $\chi^2$ (46.71) = .000; *RMSEA* = .070; *CFI* = .962; *NFI* = .938). For the third factor, the original impactful name-calling scale, the chi-square, CFI, and NFI were all significant, with RMSEA almost reaching significance (Original INCS *dof* = 4; $\chi^2$ (7.85) = .097; *RMSEA* = .057; *CFI* = .992; *NFI* = .983).

***Spring/Summer 2013 data with revised three-factor structure.*** The three-factor revised model was assessed next. This model demonstrated non-significant findings, but it was close to significance (*dof* = 371; $\chi^2$ (1480.465) = .000; *RMSEA* = .076; *CFI* = .881; *NFI* = .848; see Figure B2 for the three-factor structure). The High Competency Teasing Scale reached significance for CFI and NFI based on the information from Hooper, Coughlan, and Mullen (2008). The chi-square and RMSEA indices did not reach significance, but came close (*dof* = 77; $\chi^2$ (352.458) = .000; *RMSEA* = .083; *CFI* = .936; *NFI* = .920). The Low Competency Teasing Scale had the same significant and non-significant findings (*dof* = 27; $\chi^2$ (258.293) = .000; *RMSEA* = .128; *CFI* = .909; *NFI* = .900). Finally, the Impactful Name-Calling Scale reached significance for CFI and NFI but not for chi-square and RMSEA (*dof* = 8; $\chi^2$ (41.936) = .000; *RMSEA* = .090; *CFI* = .972; *NFI* = .966).

***Spring/Summer 2013 data with revised two-factor structure.*** The two-factor model was assessed next. The full structure demonstrated poorer fit compared to the original and revised structures, with no significant indices (*dof* = 465; $\chi^2$ (2955.90) = .000; *RMSEA* = .101; *CFI* = .764; *NFI* = .733; see Figure B3 for the two-factor structure). The individual scales were also examined. Both the two-factor HCTS and LCTS had significance for NFI, but neither the two-factor High Competency Teasing Scale (R-HCTS *dof* = 135; $\chi^2$ (867.42) = .000; *RMSEA* = .102; *CFI* = .872; *NFI* = .852) nor two-factor Low Competency Teasing Scale (R-LCTS *dof* = 54; $\chi^2$ (664.595) = .000; *RMSEA* = .147; *CFI* = .834; *NFI* = .823) met statistical significance on the other indices.

For exploratory purposes, the researcher also conducted an analysis with the three-factor structure but collapsed the impactful name-calling scale into the High Competency Teasing Scale and Low Competency Teasing Scale. This was conducted because the double loadings on the third factor of the PCA might suggest that two factors were significant to explain the structure of the test well. This model was significant for NFI but non-significant for the other indices and was a worse fit compared to the three-factor structure (*dof* = 376; $\chi^2$ (1903.629) = .000; *RMSEA* = .088; *CFI* = .836; *NFI* = .804).

**Decision based on PCA and SEM measurement model.** In summary, there was a discrepancy between the original structure, the current PCA, and the current SEM models. Based on all of the results, the revised three-factor strucure fits best. This includes 14 items for the High Comptency Teasing Scale, 9 items for the Low Competency Teasing Scale, and 6 items for two subscales in the Impactful Name-Calling Scale (4 items for high comptency impactful name-calling and 2 items for low competency impactful name-calling). The remainder of the analyses are based on these three reivsed scales. Please see Table A2 for the final factor loadings and Table A3 for a summary of the SEM measurement models.

**Construct Validity**

Convergent and discriminant validity of the ACTS were assessed using the Perceptions of Teasing Scale (POTS; Thompson et al., 1995) and the Teasing Questionnaire- Revised (TQ-R; Storch et al., 2004). A multi-trait, multi-method matrix was created to assess convergent and discriminant validity (Campbell & Fiske, 1959).

Please see Table A4 for the MTMM matrix, means, standard deviations, and reliabilities of the scales and subscales.

Mono-trait hetero-method correlations should confirm convergent validity, as this is when two different measures are assessing the same concept (Heppner, Wampold, & Kivlighan, 2008). The association between the HCTS and the TQ-R (high competency) academic subscale was strong (.786), as well as the association between the LCTS and the POTS (low) competency subscale (.609). INCS was associated with both the TQ-R (high competency) academic subscale (.647) and POTS (low) competency subscale (.681). These correlations demonstrated convergent validity of the ACTS.

Discriminant validity is proven when two instruments measuring different constructs disagree; this is also known as hetero-trait hetero-method (Heppner, Wampold, & Kivlighan, 2008). For this analysis, the HCTS and POTS (low) competency subscale were weakly associated (.337) as well as the correlation between the LCTS and the TQ-R (high competency) academic subscale (.236). These results confirmed discriminant validity between the high and low competency teasing measures.

Convergent and discriminant validity for the ACTS were confirmed by comparing the scales against other known teasing measures. The multi-trait, multi-method matrix also demonstrated some unexpected findings. First, the HCTS and LCTS were correlated at .343, which similarly matches the correlation between the POTS (low) competency subscale and the TQ-R (high) competency subscale (.385). Second, another unexpected finding was that the LCTS was moderately correlated with both the TQ-R performance (.526) and social (.574) subscales. These findings will be reviewed in the discussion.

**Individual Differences**

Individual differences in gender, ethnicity, and giftedness on grade point average (GPA) and the ACTS were assessed through use of three multivariate analyses of variance (MANOVAs). First, the correlations between giftedness, high school GPA, and current college GPA were examined for redundancies. The results were weak for the association between giftedness and high school GPA ($r$ = .328), very weak for giftedness and current college GPA ($r$ = .129), and very weak for high school and current college GPA ($r$ = .293). The written-in GPAs were not analyzed because the responses varied in details and scales (i.e., some provided weighted GPA compared to others that did not). Additionally, two of the six ethnicities were excluded due to low participant numbers (i.e., only two participants in each group). Hawaiian and Other Pacific Islander and American Indian or Alaska Native were excluded for the ethnic group MANOVA.

The second step in these analyses was to make roughly equal groups for each predictor variable. Giftedness had roughly equal groups with the original data collected, but ethnicity and gender needed to be revised in order to establish equal sizes. To address this issue, the researcher used a random number generator and deleted participants from the ethnicities that had too many participants for the analyses. Leech, Barrett, and Morgan (2011) suggested the ratio for obtaining roughly equal size groups is the lowest number group plus half of this number (or a 1:1.5 ratio). For example, the ethnic group African American or Black only had 99 participants, so the revised group numbers could not exceed 148 (99 + (.5*99) = 148.5). The Hispanic or Latino ethnic group was randomly cut from 168 to 148 participants to fit within the parameters of equal

groups. Similarly for gender, there were only 71 males, so the female group could not exceed 106.

Finally, there was not an equal distribution for some of the variables. To assess distribution, Box's Test of Equality of Covariance Matrices and Levene's Test of Equality of Error Variances were examined. Box's M demonstrates whether the covariance between groups is significantly different. A significant p-value for Box's M demonstrates differences in covariance between groups; therefore, a non-significant p-value is desired. Tabachnick and Fidell (2007) noted that Box's M is a sensitive to large samples and is unnecessary to assess if sample sizes are roughly equal. Levene's test examines the homogeneity of variance, and a significant p-value for Levene's test demonstrates that the variances between the groups are significantly different (Field, 2009). To test group differences, groups should be similar in variance; therefore, a non-significant Levene's test is desired.

Box's M was significant originally in all MANOVAs. For gender, Box's M = 33.31, $F$ (15, 80209.06) = 2.14, $p$ = .006. For ethnicity, Box's M = 70.69, $F$ (45, 449321.17) = 1.54, $p$ = .011. For giftedness, Box's M = 59.29, $F$ (15, 947430.07) = 3.91, $p$ = .000).

Each MANOVA also had at least two significant Levene's tests. For gender, Levene's test was significant for current college grade point average (CCGPA; $F$ (1,165) = 5.15, $p$ = .025), High Competency Teasing Scale (HCTS; $F$ (1,165) = 4.62, $p$ = .033), and Low Competency Teasing Scale (LCTS; $F$ (1,165) = 7.07, $p$ = .009). For ethnicity, the Levene's test was significant for the CCGPA ($F$ (3,473) = 5.58, $p$ = .001) and LCTS ($F$ (3,473) = 2.90, $p$ = .035). For giftedness the Levene's test was significant for high

school grade point average (HSGPA; $F$ (1,496) = 16.35, $p$ = .000), HCTS ($F$ (1,496) = 5.27, $p$ = .022), and LCTS ($F$ (1,496) = 4.77, $p$ = .029).

To try to correct these problems and obtain better distribution, the researcher transformed the data. The square root transformation (SQRT) was chosen because it corrected for positive skew and unequal variance (Field, 2009). MANOVA tests were executed again so that all variables were changed through a square root transformation.

After the square root transformation, Box's M was non-significant for gender (Box's M = 19.84, $F$ (15, 80209.06) = 1.28, $p$ = .206) and the significant factors on the Levene's test were square root transformation (SQRT) CCGPA, $F$ (1,165) = 5.32, $p$ = .022 and SQRT LCTS, $F$ (1,165) = 5.26, $p$ = .023. This means that the covariance was equal and that HSGPA, HCTS, and Impactful Name-Calling Scale (INCS) have similar variances between groups. It also means CCGPA and LCTS are not interpretable.

For SQRT equal sample size ethnicity, Box's M was found to be non-significant (Box's M = 60.81, $F$ (45, 449321.17) = 1.33, $p$ = .071) and the only significant factor on the Levene's test was SQRT CCGPA, $F$ (3,473) = 5.93, $p$ = .001). This means that the covariance is equal for the analyses and HSGPA, HCTS, LCTS, and INCS have similar variances between groups. CCGPA was not interpretable.

After the square root transformation, Box's M was still significant for giftedness (Box's M = 60.53, $F$ (15,947430.07) = 3.99, $p$ = .000) and Levene's Test was significant for SQRT HSGPA ($F$ (1,496) = 25.98, $p$ = .000) and LCTS ($F$ (1,496) = 4.68, $p$ = .031). This means Box's M did not find equal covariance; however, due to the large sample size and the fact that there were equal sample sizes, Tabachnick and Fidell (2007) suggested it was appropriate to move on even if the analysis was found significant. Furthermore,

CCGPA, HCTS, and INCS have similar variances between groups. HSGPA and LCTS were not interpretable due to the Levene's test significance.

**Gender.** To test group differences between men ($N = 67$) and women ($N = 100$), a MANOVA was conducted with gender as the predictor variable and HCTS, LCTS, high school GPA, and current college GPA as the criterions. Current college GPA and LCTS were significant in the Levene's test; therefore, they were not interpretable for this analysis because the score distributions were shaped too differently for meaningful comparison.

A one-way multivariate analysis of variance (MANOVA) was conducted, with Wilk's Lambda used as the test statistic. Results indicated there were no statistically significant differences for gender (*Wilks'* $\lambda = .942$, $F\ (5,161) = 1.99$, $p = .083$, *partial* $\eta^2 = .058$), meaning that the linear composite of GPA and teasing did not differ by the students' gender. See Table A5 for the Levene's Test and Tests of Between Subjects results.

**Ethnicity.** To test group differences among the ethnicities of White/Caucasian ($N = 128$), Black/African American ($N = 90$), Asian/Asian American ($N = 115$), and Hispanic/Latino ($N = 143$), a MANOVA was conducted with ethnicity as the predictor variable and HCTS, LCTS, high school GPA, and current college GPA as the criterions. Current college GPA was significant in the Levene's test; therefore, differences between groups were not interpretable for this analysis.

A one-way multivariate analysis of variance (MANOVA) was conducted using Wilk's Lambda as the test statistic. Results indicated there were statistically significant differences for ethnicity (*Wilks'* $\lambda = .894$, $F\ (15,1295.10) = 3.58$, $p = .000$, *partial* $\eta^2 =$

.037). Analyses of each individual dependent variable, using a Bonferroni adjusted alpha level of .013 (.05 divided by 4 dependent variables), showed significant contributions for LCTS ($F$ (3,473) = 4.14, $p$ = .007, *partial* $\eta^2$ = .026) and INCS ($F$ (3,473) = 4.37, $p$ = .005, *partial* $\eta^2$ = .027). Since Levene's test was significant, CCGPA was not taken into consideration in this analysis. See Table A5 for the Levene's Test and Tests of Between Subjects. Means and standard deviations are presented in Table A6.

For the LCTS, according to Tukey HSD's post hoc test, there were significant differences between Blacks and Asian Americans (.003), such that Black students reported less low competency teasing. For the INCS, according to the Tukey HSD's post hoc test, there were significant differences between Blacks and Whites (.023) and Blacks and Asian Americans (.004), such that Black students reported lower impactful name-calling compared to Whites and Asian Americans.

Due to the two opposing factors in INCS, each item was individually examined through an ANOVA. Both low competency name-calling items were significant: Impact Dumb (How much does it upset you to be teased about being "dumb"?; $F$ (3,505) = 5.78, $p$ = .001) and Impact Not Understand (How much does it upset you to be teased because you did not understand something?; $F$ (3,506) = 4.22, $p$ = .006). Post hoc analyses using Tukey's HSD show differences between Blacks and Asian Americans ($p$ = .000), such that Black students report less impact when called dumb. Also, for the impact of not understanding, Blacks were significantly different from Whites ($p$ = .009) and Asian Americans ($p$ = .013), such that Black students reported lower impact of not understanding compared to the other two ethnicities.

**Giftedness.** To test group differences between the gifted ($N = 230$) and non-gifted ($N = 267$) groups, a MANOVA was conducted with giftedness as the predictor variable and HCTS, LCTS, high school GPA, and current college GPA as the criteria. High school GPA and LCTS were significant in the Levene's test; therefore, differences in high school GPA between groups were not interpretable for this analysis.

A one-way multivariate analysis of variance (MANOVA) was conducted with Wilk's Lambda used as the test statistic. Results indicated there were statistically significant differences for giftedness (*Wilks'* $\lambda = .867$, $F(5,492) = 15.11$, $p = .000$, *partial* $\eta^2 = .133$). Analysis of each individual dependent variable, using a Bonferroni adjusted alpha level of .016 (.05 divided by 3 dependent variables), showed significant contributions for HCTS ($F(1,496) = 18.75$, $p = .000$, *partial* $\eta^2 = .036$) and current college GPA ($F(1,496) = 7.91$, $p = .005$, *partial* $\eta^2 = .016$). Analysis of means showed gifted students reported more HCTS and had higher CCGPA compared to non-gifted students. See Table A5 for the Levene's Test and Tests of Between Subjects. Means and standard deviations are presented in Table A6.

# Chapter IV

## Discussion

The Academic Competency Teasing Scales were established in 2012 (Lee, unpublished manuscript) to provide more research and assessment tools to an area currently lacking in psychological research. Results from the current study provide additional support for the newly developed scales (see Appendix A for final revised scale). The analyses of the ACTS demonstrated the best fit as a three-factor structure with a High Competency Teasing Scale, Low Competency Teasing Scale, and Impactful Name-Calling Scale. The factor analyses were intended to be confirmatory, but due to inconsistencies within and between the factor analyses, all factor analyses should be considered exploratory. The non-constrained principal component analysis (PCA) showed three eigenvalues greater than one. It demonstrated similarities to the original three factors and explained 57.28% of the variance: high competency teasing (27.33%), low competency teasing (21.44%), and impactful name-calling (8.52%). The High Competency Teasing Scale and Low Competency Teasing Scale both demonstrated a unidimensional model, and the Impactful Name-Calling Scale showed a two-factor model (i.e., high competency name-calling and low competency name-calling). Unexpectedly, the impactful name-calling items double-loaded on the third factor and high competency/low competency factors.

A forced two-factor solution eliminated the double loading problem and explained 52.41% of the variance with high competency teasing (30.41%) and low competency teasing (22.0%). To understand best fit, the SEM measurement model analysis was used in an exploratory manner to examine the multiple structures. Several models were

examined, including the original structure, the three-factor revised structure, and the two-factor revised structure. The best fit was the three-factor revised structure (*dof* = 371; $\chi^2$ (1480.465) = .000; *RMSEA* = .076; *CFI* = .881; NFI = .*848*). The revised scales of the ACTS showed strong and very strong reliabilities (*HCTS* $\alpha$ = .938; *LCTS* $\alpha$ = .905; *INCS* $\alpha$ = .758). This is in line with the 2012 study in which impactful name-calling demonstrated a distinct concept, apart from competency teasing (Lee, unpublished manuscript). Name-calling may target a person's stable sense of identity instead of actions or behaviors that can be changed. This may be why the impact of name-calling is also distinct from its frequency. Name-calling therefore appears to be potentially more detrimental and may affect an individual more than other types of teasing about actions or behaviors.

The revised structure is different from the original structure based on the number of items in each scale and the subscales: the revised structure has 14 items for the unidimensional High Competency Teasing Scale, 9 items for the unidimensional Low Competency Teasing Scale, and 6 items for the two-subscale Impactful Name-Calling Scale (i.e., high competency name-calling, 4 items; low competency name-calling, 2 items). The revised three-factor structure is a better fit both theoretically and statistically than any of the other structures measured.

Based on the information from the 2012 data, the PCA, and SEM, the rest of the analyses were examined using the revised three-factor model of the ACTS. The revised ACTS were compared to other scales and subscales in the area of teasing research in order to assess convergent and discriminant validity. These correlations confirmed the construct validity of the scales. Convergent validity was established between ACTS

High Competency Teasing and TQ-R Academic Subscale, and between ACTS Low Competency Teasing and POTS Competency Subscales. Additionally, the INCS showed moderate correlations with both the TQ-R Academic Subscale and POTS Competency Subscale. Discriminant validity was established with weak correlations between ACTS High Competency Teasing and POTS Competency Subscales and between ACTS Low Competency Teasing and TQ-R Academic Subscales. These results show that the distinction between high and low competency teasing held up under comparisons with their conceptual opposites.

It is important to note that TQ-R family background subscale showed only moderate reliability (Cronbach alpha = .48). This Cronbach alpha was the same in Storch and colleagues' (2004) article that revised the Teasing Questionnaire. Additionally, the TQ-R family background subscale correlations were all weak in strength (i.e., $r = .45$ and below) with the ACTS, POTS, and other TQ-R scales/subscales. Storch and colleagues (2004) do not address this low internal consistency in their article. It may be the case that the individual items do not fit well together (i.e., ethnic differences, family didn't have as much money, had a "funny" name). For example, ethnic differences may fit better in TQ-R *appearance* than *family background*. More research on this topic is needed in order to use this subscale reliably.

Unforeseen correlations were found between ACTS Low Competency Teasing Scale and the TQ-R Performance and Social Subscales. Competence and performance are linked in research examining language acquisition (Steinberg, 1976), which demonstrates that this ability-behavior correlation is found in other areas. While knowledge on how to complete an activity is different from the performance of an

activity, the two concepts are connected because one needs competence in an area in order to perform. The correlations between competence, performance, and social skill may also be related to confidence. If an individual is teased about low competency, he or she may also demonstrate low confidence in his or her performance and social lives. Since this was an unexpected finding, more information is needed to confirm and explain the true relationship between these constructs.

The significant convergent and discriminant validity demonstrated that the newly developed Academic Competency Teasing Scales assesses competency teasing, as defined in the previously literature. These results lend credence and credibility to the new scales and provide more evidence that the scales are strong for measuring academic competency teasing.

Another set of findings is related to group differences. There was no significant group difference for gender. This result may demonstrate that for academic competency teasing, men and women are equally teased about the same academic issues. Also, men and women in this sample performed similarly for high school grade point average and current college grade point average. The non-significant results on gender differences provide more documentation for the controversy of gender differences in victimization (Dempsey & Storch, 2008; Kochenderfer & Ladd, 1996; Rose & Rudolph, 2006).

Results showed significant group differences for giftedness and ethnicity for the ACTS and GPA. For giftedness, gifted students reported more teasing about high competence and a higher current college GPA compared to non-gifted students. These results are not surprising and confirm what researchers have suspected (Peterson & Ray, 2006): gifted students are teased for being smart. This information is valuable as it can

now lead to prevention and intervention efforts for gifted students. Since there is evidence that gifted students are teased for being smart, the next line of research should be to determine whether this type of teasing is serious or negligible.

For ethnicity, the researcher found group differences for low competency teasing and impactful name-calling. Based on ethnic stereotypes, it was expected that Black students would be teased more about low competency and Asian American students would be teased more about high competency (Steele & Aronson, 1995; Wessler & De Andrade, 2006). However, it was found that Black students reported lower frequency of low competency teasing compared to Asian American students. These results are in direct opposition to other studies on teasing and ethnicity (Wessler & De Andrade, 2006) and stereotype expectancies (Steele & Aronson, 1995).

The most likely theory explaining why Black students reported less teasing about low competency compared to Asian American students involves the teaser's internalized stereotypes of these ethnicities. Said in a different way, the teasers may expect Black students to do poorly in school; therefore, they do not tease these students about low competency because they feel it is an unremarkable occurrence. On the other hand, low competence would be considered remarkable among Asian American students, according to stereotypes.

There are two commonly held stereotypes for the Black community concerning academic competency: the anti-intellectualism stereotype and "Acting White" (Fordham & Ogbu, 1986; McWhorter, 2001). The anti-intellectualism stereotype was coined by John McWhorter, explaining that due to a history of victimization and separatism, the Black community rejects the idea of academic achievement as a form of success, because

that is inherently what Whites view as successful (McWhorter, 2001). Similarly, Fordham and Ogbu (1986) suggested that group identity and cohesion require Black individuals not to behave in a manner that is "acting white." At the school in which they conducted their qualitative study, Fordham and Ogbu noted that behaviors that were identified as "acting white" included, "spending a lot of time in the library studying… working hard to get good grades in school… getting good grades in school (those who get good grades are labeled 'brainiacs')." These two stereotypes may explain the ethnic differences results of this study. Black students are less likely to be teased for low competency teasing because that is in line with the stereotypes of their community. The low competency teases are aligned with appropriately "acting Black" as Black students (according to these theories) should not try to achieve academically; therefore, they are not teased about low competency.

In contrast, teasers may taunt Asian American students for doing poorly in school because it is unexpected and viewed as negative. Asian Americans are stereotyped as the "model minority" because they function well in society and value hard work and achievement (Sue, 1994; Yoo, Burrola, & Steger, 2010). Teasing based on low competency does not fit the "model minority" stereotype; consequently, they may be teased more about low competency.

Two alternative theories emerged to explain these ethnic differences. One explanation is if these stereotypes are internalized, it may be that Black students do not notice or care when they are teased for low competency; it may be of no consequence for them because the teasing is so common and they expect to do badly at academics. Alternatively, low competency related to academics is the least of their worries and the

least hurtful of many types of slurs they endure in daily life. For Asian Americans, teasing about low competency may be unexpectedly harmful based on their stereotype, and thus these teasing incidents are remembered more often in their memories. Furthermore, the vivid memory of such teasing supports a cultural stereotype; Asians are especially pained when they lose face or do not achieve (Kim, Atkinson, & Yang, 1999).

The second alternative theory for these results is related to stereotype threat. Black students may not want to confirm or activate stereotype threat; therefore, they report less low competency teasing than is actually being experienced (Steele & Aronson, 1995). Similarly, Asian Americans may not want to confirm the stereotype that they do well in school, so they report more low competency teasing.

Differences were also found for the impactful name-calling items between Black students and White students, as well as Black students and Asian American students. Due to the opposing nature of the questions in this scale, individual items were assessed. The researcher found that Black students reported lower impact for being teased about being called dumb and not understanding something in class, compared to the other two ethnicities. These results mirror the other low competency teasing results, and thus the explanation for these results are the same: Black students may report lower impact for being called dumb or not understanding because it confirms the stereotype of Blacks and academics, whereas Whites and Asian Americans are more humiliated by these name calls because they violate group identity.

The results did not show a broad diversity in the ethnic group differences for competency teasing. For example, there were no significant group differences for high

competency teasing and no significant group differences between the Hispanic/Latino group and other ethnicities. Continued studies on this topic should be pursued.

**Potential Limitations**

The current study should be weighed against some possible limitations. First, the scale asked participants to recall teasing based on their entire school experiences (kindergarten through twelfth grade) retrospectively. Conclusions concerning the validity and reliability of retrospective studies are inconsistent: some studies find retrospective designs to be accurate and stable over time (Olweus, 1993; Rivers, 2001), while others express concerns over the validity and accuracy of retrospection (Hardt & Rutter, 2004; Lewinsohn & Rosenbaum, 1987; McFarland & Buehler, 1998). The use of retrospective measurement could be a limitation to this current study.

Participants in this study self-identified as gifted or non-gifted students. The distribution of giftedness was 46.9%, which is much higher than the prevalence rates of gifted and talented students ([3.5-13.1%] U.S. Department of Education, 2006; [6%]; National Association for Gifted Children, 2008). This sample may be higher due to the nature of the participants (i.e., college students), or the participants may have over-reported their giftedness. Additionally, specific type of giftedness was not included in this self-identification. Perhaps these students not only included intellectual giftedness, but other forms as well. The distribution of intellectually gifted students, artistically gifted students, or other type of gifted participants, is unknown here. Future lines of research should examine whether there are any group differences among types of gifted people.

A final limitation in this research is the sample population examined for the 2012 and 2013 data factor analyses. Both samples come from college-aged participants attending a Southwestern university enrolled in education and psychology classes. These studies also had a majority of female participants (85.5% in the 2012 study, Lee, unpublished manuscript; 86.6% in the current study). The use of these data hinders generalizability to other populations in terms of age, gender, geography, and educational level.

**Future Directions**

Future research using the ACTS is required to understand the full scope of academic competency teasing. A confirmatory analysis should be performed to validate the structure of the ACTS, especially due to the inconsistency of the third subscale, Impactful Name-Calling. Continued SEM measurement modeling is also recommended because the best fit model found in this study did not meet all of the model fit indices' cut-off values.

In the future, researchers could use this scale in a functional way to help inform outcomes in psychosocial adjustment and academic achievement. Limited correlational studies have assessed anxiety and depression with high competency teasing (Storch et al., 2004); however, the ACTS provides an advantage by allowing a comparison between low and high competency teasing simultaneously. The study of academic achievement with the ACTS is advantageous as it relates to competency and performance in academic settings. Stereotype threat in regard to academics also aligns closely with academic teasing. A component and prerequisite of stereotype threat is an academic domain identification (Steele, 1997). If an individual is teased about his or her high or low

academic competence, this academic identification may shift. Pairing the ACTS with larger concepts such as stereotype threat is a new direction for future research.

The retrospective design of the ACTS may be a limitation; therefore, to address this in future studies, the ACTS should be used with younger participants so that the retrospective range in years is less. For example, if the ACTS is used with middle school students, then the individual only needs to reflect back eight or nine years. This is in contrast to the college-aged participants used in this study in which they had to retrospectively focus on their entire school experience (i.e., kindergarten through twelfth grade). Additionally, the ACTS can be examined with different time frames. Participants' memory for shorter, more recent time frames may be better.

The current study assessed demographic variable group differences (i.e., ethnicity, gender, giftedness). A variable not assessed that could be of interest is learning disability (e.g., attention deficit/hyperactivity disorder, dyslexia, autism disorder). Students who have these disabilities or deficits may be teased about their actions and identity at school, where their struggle is more likely to be exposed. An increased complexity, but higher population of interest for the ACTS, may be twice-exceptional individuals: those who have both giftedness as a strength and a learning disability as a weakness (Foley-Nicpon, Allmon, Sieck, & Stinson, 2011). Since these individuals have both a gift and disability, it would be informative to discover evidence of being teased for low or high competence.

The sample used to create and develop these scales was majority female and all college students enrolled in education and psychology courses. Future research on this topic should diversify the samples, including examining more males and different foci of studies. For example, science, technology, engineering, and math (STEM) majors may

show different patterns of performance on ACTS because of the rigorous focus in their studies at an advanced college level. Additionally, the impactful name-calling results may change if a different sample assessed males. Changing the demographics and populations of the sample may lead to new results.

The ACTS does not assess for teaser and victim group status; therefore, this could potentially be another area of future growth. The current study found that gifted students were teased more than non-gifted students in certain areas. Similarly, Asian Americans and Caucasians were teased more than Blacks. Unfortunately, the data collected did not assess for whether these group members were teased by people in their own group (i.e., gifted students teasing gifted students: Asian American students/Caucasian students teasing someone of their own race) or were teased by someone outside of their group. Jones, Newman, and Bautista (2005) found relationship status made a difference in the tease's interpretation. This again reinforces that teaser and victim group status should be examined in future work.

Continuing with the teaser and victim groups, future research can use the Academic Competency Teasing Scales to assess the degree to which teasers use academic competency teasing as acts of aggression. This line of inquiry would help establish consistency between what the teasers report versus what the victims report.

**Research and Clinical Implications**

These scales contribute to the examination and refinement of the teasing concept. No existing scales have previously been established for the purpose of studying academic competency teasing; thus, the ACTS is able to fill the gap. The ACTS adds valid and

reliable measurement to a relatively new field of competency teasing that is gaining much attention in the United States.

The development of this academic teasing scale can lead to new research and can strengthen the teasing literature. To date, no scale offers examination of both low and high competency teasing developed solely for academic competency teasing. Thus, these scales can allow future researchers to examine competency teasing independent of other teasing forms.

The intent of this study was to establish scales for academic competency teasing; thus, there are no explicit clinical and policy outcomes. The scales' main usefulness is to provide a standard measure for research purposes, so that studies of teasing can easily be compared or combined. Although the main use is research based, the use of the scales by future researchers, clinicians, and schools can lead to the development of clinical and policy outcomes. Specifically, clinicians may be able to use the ACTS as a screener for academic competency teasing. The scale can aid in honing in on problems that children may be having or may have had in the past with teasing. The school system in particular may find the use of the ACTS helpful as it is specific to academics and learning.

For counseling psychologists, the establishment of these scales and the results of this study demonstrate more focus on how stereotypes, both in terms of ethnicity and giftedness, are manifested for individuals through teasing. Assessing an individual's group identity and resiliency may be of use to those affected by academic competency teasing. In particular, frequency and impact should be determined separately for name-calling, because they are separate constructs.

## Conclusion

The Academic Competency Teasing Scales are the first of their kind to purposefully measure academic teasing for both high and low competency. The scales demonstrated strong reliability and validity compared to other subscales of a similar nature. Group differences were noted for ethnicity and giftedness, and no group differences were found for gender. All of these results inform and add to the teasing literature. The development of the ACTS has started the process of investigating the numerous questions about competency teasing. It is hoped that these scales and results will be a gateway for new research and curiosity in this relatively young field.

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# Appendix A

## Tables

Table A1
*Frequency and Percent of Demographic Variables*

| Category | Variable | Frequency | Percent |
|---|---|---|---|
| *Gender* | Male | 71 | 13.4 |
| | Female | 460 | 86.6 |
| *Ethnicity* | Non-Hispanic White | 135 | 25.4 |
| | Hispanic or Latino | 168 | 31.6 |
| | Black or African American | 99 | 18.6 |
| | Asian or Asian American | 125 | 23.5 |
| | Hawaiian or Other Pacific Islander | 2 | 0.4 |
| | American Indian or Alaska Native | 2 | 0.4 |
| *Giftedness* | Yes | 249 | 46.9 |
| | No | 282 | 53.1 |
| *Age* | 18-20 | 204 | 38.4 |
| | 21-23 | 199 | 37.5 |
| | 24-26 | 66 | 12.4 |
| | 27-29 | 21 | 4.0 |
| | 30-32 | 10 | 1.9 |
| | 33-35 | 12 | 2.3 |
| | 36-38 | 7 | 1.3 |
| | 39-41 | 7 | 1.3 |
| | 42 or older | 5 | 0.9 |
| *High School GPA* | <1.99 | 3 | 0.6 |
| | 2.0 to 2.49 | 22 | 4.1 |
| | 2.5 to 2.99 | 77 | 14.5 |
| | 3.0 to 3.49 | 189 | 35.6 |
| | >3.5 | 227 | 42.7 |
| | Missing | 13 | 2.4 |
| *Current College GPA* | <1.99 | 17 | 3.2 |
| | 2.0 to 2.49 | 63 | 11.9 |
| | 2.5 to 2.99 | 118 | 22.2 |
| | 3.0 to 3.49 | 180 | 33.9 |
| | >3.5 | 134 | 25.2 |
| | Missing | 19 | 3.6 |

Table A2
*Academic Competency Teasing Scales Varimax Rotated Factor Loadings- Final 3-Factor Structure*

| Item | HCTS | LCTS | INCS |
|---|---|---|---|
| FHC Excel | .806 | | |
| FHC Understand Teacher | .759 | | |
| FHC Brainiac | .748 | | |
| FHC Participate | .741 | | |
| FHC High Scores | .739 | | |
| FHC Overachiever | .739 | | |
| FHC Enjoy School | .729 | | |
| FHC Prepared | .729 | | |
| FHC Geek | .727 | | |
| FHC Good Study Habits | .705 | | |
| FHC Difficult Concepts | .696 | | |
| FHC Won Fair Bee | .659 | | |
| FHC Hang Out Excel | .633 | | |
| FHC HW Recess PE After | .600 | | |
| IHC Overachiever | *.541* | | .609 (HC) |
| IHC Geek | *.493* | | .597 (HC) |
| IHC Nerd | *.475* | | .707 (HC) |
| IHC Teacher's Pet | *.451* | | .521 (HC) |
| FLC Poor Study Habits | | .784 | |
| FLC Fall Behind HW | | .770 | |
| FLC Dumb | | .760 | |
| FLC Pay Attention | | .759 | |
| FLC Scored Low | | .757 | |
| FLC Poor Science | | .744 | |
| FLC Not Understand | | .728 | |
| FLC Reading | | .664 | |
| ILC Dumb | | *.660* | .424 (LC) |
| ILC Not Understand | | *.633* | .474 (LC) |
| FLC Spelling Errors | | .601 | |

*Note.* HCTS stands for High Competency Teasing Scale,
LCTS stands for Low Competency Teasing Scale,
INCS stands for Impactful Name-Calling Scale,
HC stands for INCS high competency subscale,
LC stands for INCS low competency subscale

Table A3
*Structural Equation Measurement Model Indices for the 2- and 3- factor solutions*

| Model | DF | $X^2$ | P of CS | RMSEA | CFI | NFI |
|---|---|---|---|---|---|---|
| 2013 Data with Original 3-Factor Structure | 579 | 2624.60 | .000 | .082 | .839 | .804 |
| 2012 Data with Original 3-Factor Structure | 579 | 1771.11 | .000 | .084 | .783 | .711 |
| (Best Fit) 2013 Data with Revised 3-Factor Structure | 371 | 1480.47 | .000 | .076 | .881 | .848 |
| 2013 Data with Revised 2-Factor Structure | 465 | 2955.90 | .000 | .101 | .764 | .733 |
| 2013 Data with Exploratory 2-Factor Structure | 376 | 1903.63 | .000 | .088 | .836 | .804 |

*Note.* Significant results, based on Hooper, Coughlan, & Mullen (2008)

Table A4
*Sample Multi-trait Multi-method Matrix for ACTS, POTS, and TQ-R*

| *Measures* | | *ACTS* | | | *POTS* | | *TQ-R* | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (Sub)Scales | | HCTS | LCTS | INCS | Appear | LComp | Perform | HComp | Social | Family | Appear |
| *ACTS* | HCTS | 1 | | | | | | | | | |
| | LCTS | .343** | 1 | | | | | | | | |
| | INCS | .593** | .523** | 1 | | | | | | | |
| *POTS* | Appear | .157** | .237** | .194** | 1 | | | | | | |
| | LComp | .337** | .609** | .681** | .285** | 1 | | | | | |
| *TQ-R* | Perform | .405** | .526** | .509** | .311** | .541** | 1 | | | | |
| | HComp | .786** | .236** | .647** | .202** | .385** | .493** | 1 | | | |
| | Social | .398** | .574** | .550** | .249** | .602** | .688** | .437** | 1 | | |
| | Family | .342** | .349** | .419** | .132** | .384** | .422** | .375** | .459** | 1 | |
| | Appear | .443** | .390** | .526** | .492** | .504** | .625** | .561** | .558** | .508** | 1 |
| *N* | | 526 | 530 | 530 | 527 | 531 | 531 | 530 | 530 | 529 | 529 |
| Mean | | 11.42 | 7.33 | 7.62 | 13.86 | 19.59 | 2.07 | 4.79 | 4.21 | 2.28 | 8.42 |
| SD | | 12.14 | 7.81 | 5.78 | 12.86 | 9.59 | 2.16 | 4.71 | 4.16 | 2.31 | 6.48 |
| Reliability | | .938 | .905 | .758 | .964 | .916 | .636 | .875 | .751 | .480 | .792 |

*Note.* (ACTS) HCTS = ACTS high competency teasing scale; (ACTS) LCTS = ACTS low competency teasing scale; (ACTS) INCS = ACTS impactful name-calling scale; (POTS) Appear = POTS appearance teasing subscale; (POTS) LComp = POTS (low) competency teasing subscale; (TQ-R) Perform = TQ-R performance subscale; (TQ-R) HComp = TQ-R academics (high competency) subscale; (TQ-R) Social = TQ-R social subscale; (TQ-R) Family = TQ-R family background subscale; (TQ-R) Appear = TQ-R appearance subscale
** = p<.01; ** = p<.001*

Table A5
*Multivariate Analyses of Variance for ACTS and GPA on Demographic Variables (with square root transformation)*

| Demographic Variable | Dependent Variable | Levene's Test Significance | Test of Between Subjects df | Test of Between Subjects F | Test of Between Subjects p | Test of Between Subjects $\eta^2$ |
|---|---|---|---|---|---|---|
| *Gender* | HCTS | .225 | 1, 165 | .252 | .616 | .002 |
| | ~~LCTS~~ | ~~.023~~ | ~~1, 165~~ | ~~4.060~~ | ~~.046~~ | ~~.024~~ |
| | INCS | .225 | 1, 165 | .009 | .924 | .000 |
| | HS GPA | .806 | 1, 165 | .499 | .481 | .003 |
| | ~~CC GPA~~ | ~~.022~~ | ~~1, 165~~ | ~~1.055~~ | ~~.306~~ | ~~.006~~ |
| *Ethnicity* | HCTS | .495 | 3, 473 | .414 | .743 | .003 |
| | LCTS | .198 | 3, 473 | 4.135 | .007** | .026 |
| | INCS | .503 | 3, 473 | 4.374 | .005** | .027 |
| | HS GPA | .329 | 3, 473 | 1.209 | .306 | .008 |
| | ~~CC GPA~~ | ~~.001~~ | ~~3, 473~~ | ~~7.557~~ | ~~.000~~ | ~~.046~~ |
| *Giftedness* | HCTS | .381 | 1, 496 | 18.752 | .000*** | .036 |
| | ~~LCTS~~ | ~~.031~~ | ~~1, 496~~ | ~~4.864~~ | ~~.028~~ | ~~.010~~ |
| | INCS | .847 | 1, 496 | 1.444 | .230 | .003 |
| | ~~HS GPA~~ | ~~.000~~ | ~~1, 496~~ | ~~60.684~~ | ~~.000~~ | ~~.109~~ |
| | CC GPA | .484 | 1, 496 | 7.907 | .005** | .016 |

*Note.* Those with a strike through did not meet assumptions of equal variance, and thus are not interpretable
* = p<.05, ** = p<.01, *** = p<.001
For three variables interpretable, a Bonferroni correction was made, such that 0.0167 is significant (.05/3)
For four variables interpretable, a Bonferroni correction was made, such that 0.0125 is significant (.05/4)

Table A6
*Means and Standard Deviations for ACTS and GPA by Significant Demographic Variables*

| Demographic Variable | Group | *N* | HCTS | | LCTS | | INCS | | HS GPA | | CC GPA | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M | SD | M | SD | M | SD | M | SD | M | SD |
| *Ethnicity* | Non-Hispanic White | 128 | - | - | - | - | $2.82^{B*}$ | 0.08 | - | - | - | - |
| | Hispanic or Latino | 143 | - | - | - | - | - | - | - | - | - | - |
| | Black or African American | 90 | - | - | $2.24^{A**}$ | 0.25 | $2.45^{BC}$ | 0.10 | - | - | - | - |
| | Asian or Asian American | 115 | - | - | $2.83^{A}$ | 0.11 | $2.91^{C**}$ | 0.09 | - | - | - | - |
| *Giftedness* | Gifted | 230 | $3.45^{D***}$ | 1.59 | - | - | - | - | - | - | $2.18^{E***}$ | 0.26 |
| | Non-Gifted | 267 | $2.85^{D}$ | 1.49 | - | - | - | - | - | - | $2.11^{E}$ | 0.27 |

*Note.* Differences in means with similar superscripts were statistically significant.
* = p<.05; ** = p<.01; *** = p<.001

# Appendix B

## Figures

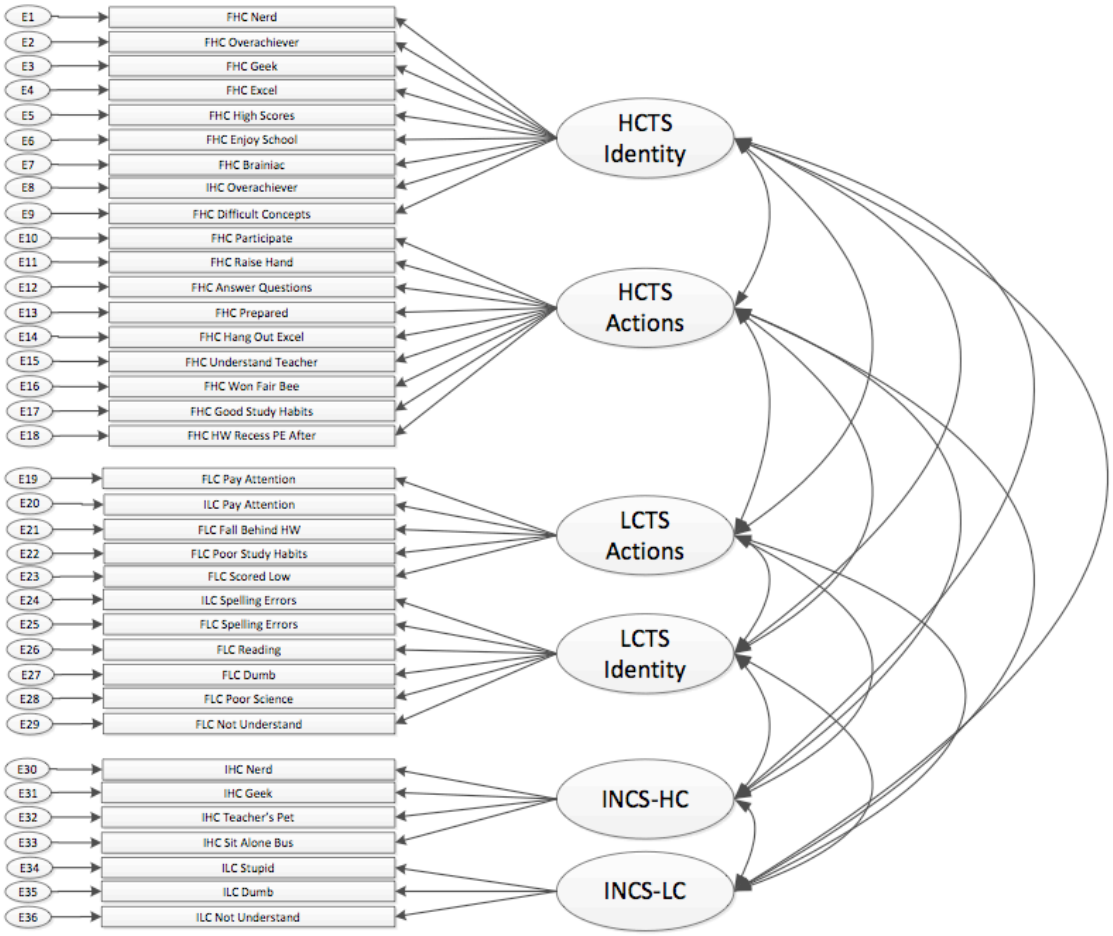


*Figure B1*. Structural equation measurement model for the original three-factor structure.

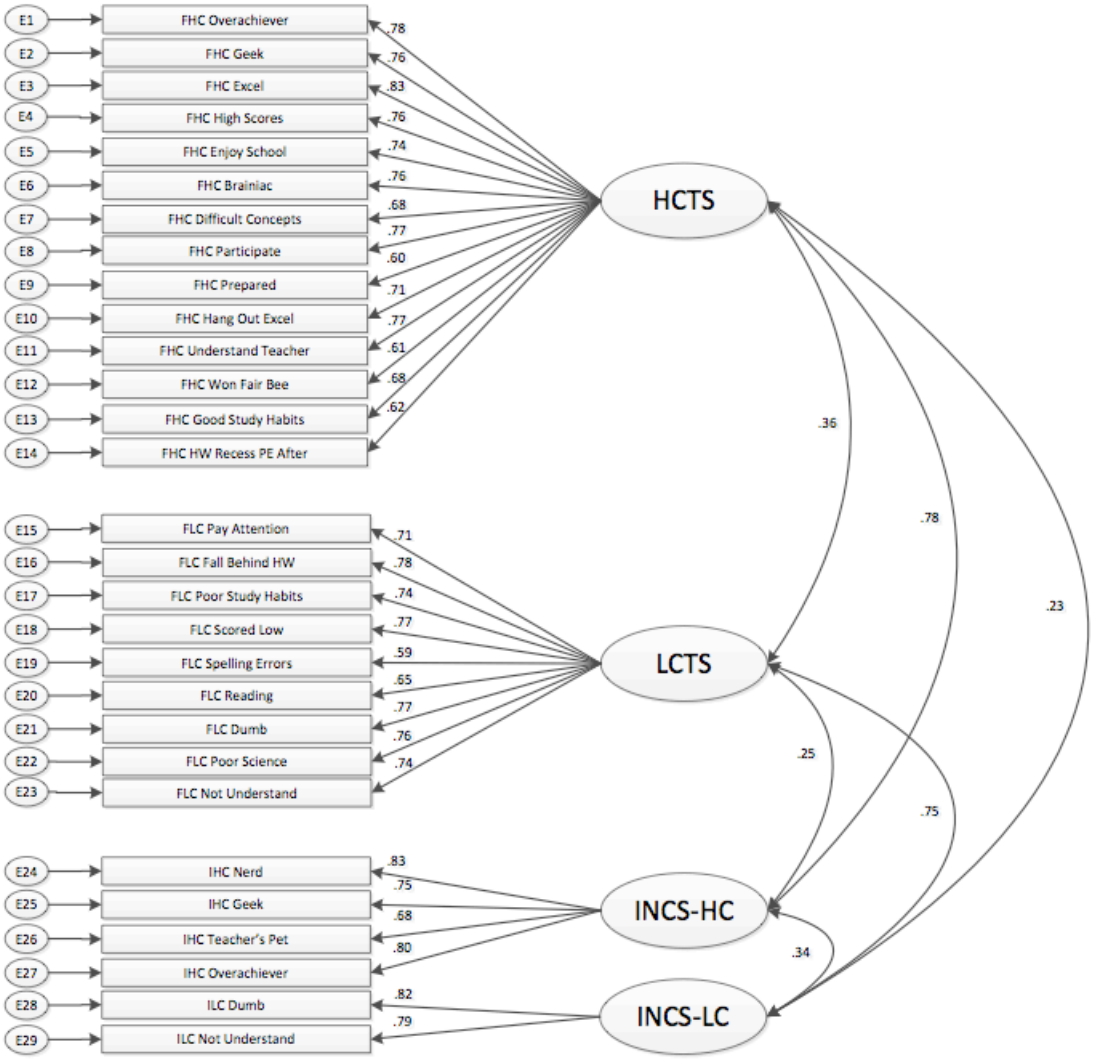


*Figure B2.* Structural equation measurement model for the revised three-factor structure with standardized estimates. This is the final model for the Academic Competency Teasing Scales.

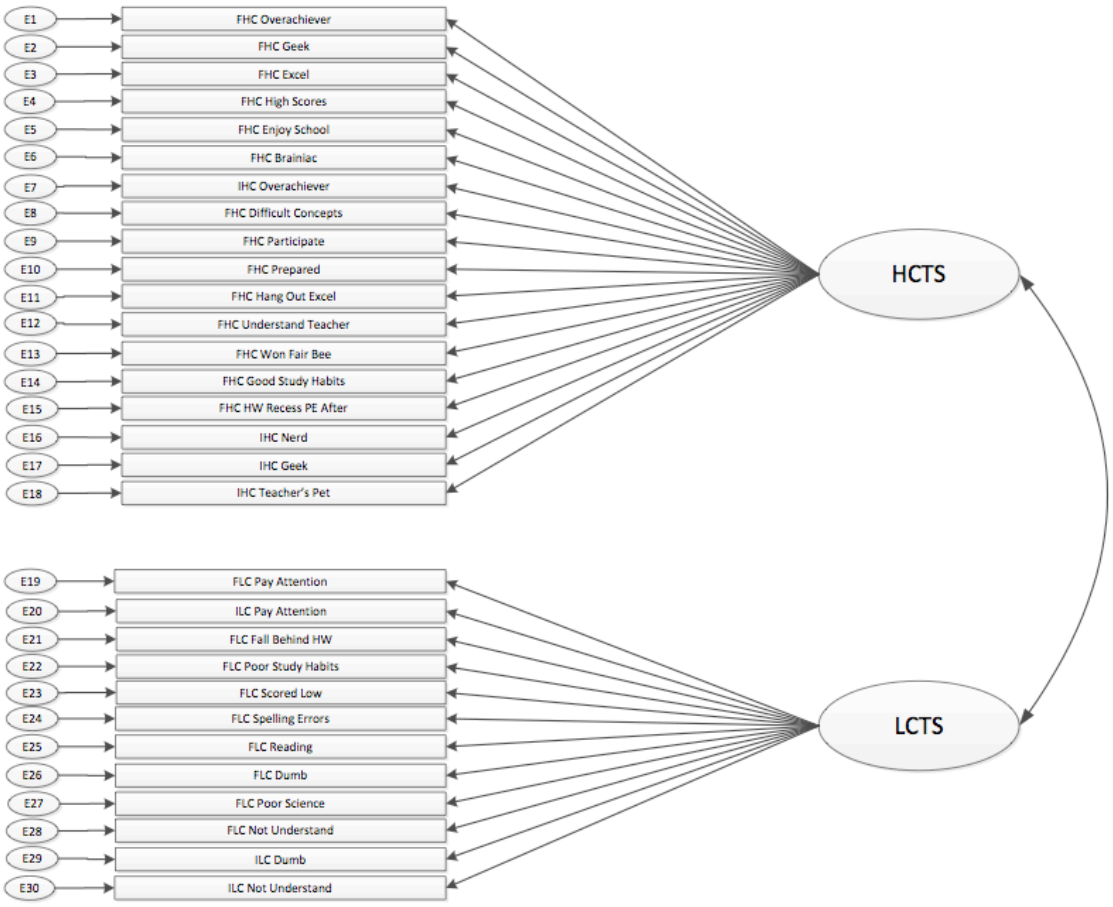


*Figure B3.* Structural equation measurement model for the revised two-factor structure.

# Appendix C

## Academic Competency Teasing Scales

High Competency Teasing

1. How often have you been teased about being an overachiever? (FHCoverachiever)
2. How often have you been teased about being a "geek"? (FHCgeek)
3. How often have you been teased because you excel at school? (FHCexcel)
4. How often have you been teased because you make higher scores than most classmates? (FHChighscores)
5. How often have you been teased because you enjoy school? (FHCenjoyschool)
6. How often have you been teased about being a "brainiac"? (FHCbrainiac)
7. How often have you been teased because it is easy for you to understand difficult concepts? (FHCdiffconcepts)
8. How often have you been teased because you participate in class? (FHCparticipate)
9. How often have you been teased because you are often prepared for class? (FHCprepared)
10. How often have you been teased because you hang out outside of school/class with people who excel at school? (FHChangoutexcel)
11. How often have you been teased because you understand what the teacher is saying before everyone else? (FHCunderstteach)
12. How often have you been teased because you participated in or won the science fair/spelling bee/math triathlon? (FHCwonfairbee)
13. How often have you been teased because you have good study habits? (FHCgoodstudyhab)
14. How often have you been teased because you do homework during recess/PE/immediately after school? (FHCHWrecessPEaf)

Low Competency Teasing

1. How often have you been teased because you do not pay attention in class? (FLCpayattention)
2. How often have you been teased because you fall behind on your homework? (FLCfallbehindhw)
3. How often have you been teased because you have poor study habits? (FLCpoorstudyhab)

4. How often have you been teased because you scored low on a test/exam? (FLCscoredlow)
5. How often have you been teased because you make spelling errors? (FLCspellerrors)
6. How often have you been teased because you have a difficult time reading? (FLCreading)
7. How often have you been teased about being “dumb”? (FLCdumb)
8. How often have you been teased because you do poorly in science? (FLCpoorscience)
9. How often have you been teased because you did not understand something? (FLCnotunderstan)

Impactful Name Calling

1. How much does it upset you to be teased about being a “nerd”? (IHCnerd)
2. How much does it upset you to be teased about being a “geek”? (IHCgeek)
3. How much does it upset you to be teased about being a “teacher’s pet”? (IHCteachpet)
4. How much does it upset you to be teased about being an overachiever? (IHCoverachiever)
5. How much does it upset you to be teased about being “dumb”? (ILCdumb)
6. How much does it upset you to be teased because you did not understand something? (ILCnotunderstan)