

**Investigating both the relationship between CSE and academic
satisfaction/performance and the validity of CSE.**

James O’Gorman



Dublin Business School
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Supervisor: Garry Prentice

Head of Department: Dr S. Eccles

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Department of Psychology

Dublin Business School

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Abstract

The first aim of this study was to investigate the relationship between CSE and academic satisfaction as well as the relationship between self-esteem, self-efficacy, locus of control and emotional stability and academic satisfaction. The second aim of the study was to investigate whether CSE was a predictor of academic performance as well as investigating whether self-esteem, self-efficacy, locus of control and emotional stability were also predictors of academic performance. The third aim of the study was to investigate whether there was a relationship between CSE and the individual traits of CSE (self-esteem, self-efficacy, locus of control and emotional stability). A survey comprised of five scales assessing the psychological measures and three open ended items assessing academic satisfaction and academic performance was distributed to 90 participants attending an undergraduate. Results found that only CSE and self-esteem had a significant relationship with academic satisfaction. Results also found that CSE as well as the individual psychological traits of CSE were not predictors of academic performance. The final findings of the study were that neither CSE nor the individual traits of CSE were predictors of students' estimated degree classification that will be received. The results also found that CSE has a significant relationship with self-esteem, self-efficacy and emotional stability but not with locus of control. The implications of these findings are discussed along with recommendations for future research.

Core Self- Evaluation (CSE) is a relatively new construct and has been strongly associated with job performance and job satisfaction (Judge and Bono, 2001). CSE is comprised of self esteem, self efficacy, locus of control and emotional stability. CSE has predominately shown significant effects on work related performance and behaviour; however the construct has been applied to other areas as well (Bono and Colbert, 2005; Dormann, Fay, Zapf and Frese, 2006; Judge and Bono, 2001a, 2001b; Judge, Bono, Erez, and Locke, 2005; Judge, Locke, Durham, and Kluger, 1998; Judge, Van Vianen and De Pater, 2004; Rode, 2004; Schinkel, van Dierendock and Anderson, 2004; Wanberg, Glomb, Song and Sorenson, 2005 as cited in Johnson, Rosen and Levy, 2008 p.391).

Academic performance and academic satisfaction has been shown to be influenced by dispositional traits (Johnson et al, 2008). However to knowledge of the researcher of the present study, CSE as an entire construct has not been used in previous research in relation to academic performance and academic satisfaction.

The validity of the measurement of CSE has been criticised by researchers. Given that CSE is a multidimensional construct, researchers have suggested that it is inappropriate to use CSE or its trait indicators as summed scale scores (Johnson et al, 2008). Instead CSE has been suggested to be measured as an aggregate construct and single scale measures, such as the Core Self-Evaluation Scale, should be avoided (Johnson et al, 2008).

The current study will investigate the relationship between CSE and academic satisfaction and as well as investigating if CSE is a predictor of academic performance. The current study will also investigate the validity of the measurement of CSE.

What is Core Self Evaluation?

According to Johnson et al. (2008) the theory of CSE arose in order to allow a framework that would address the effects of employee dispositions on employee's level of job satisfaction and is intended to explain why certain traits predict job satisfaction.

There are a large number of studies that suggest a link between CSE and job satisfaction (Heller et al., 2002; Judge et al., 2003; Judge, Locke, et al., 1998 as cited in Johnson et al., 2008). In addition to the extensive amount of research linking CSE and job satisfaction, studies have found that there is evidence to suggest that CSE is a predictor of other outcomes including job performance (Erez and Judge, 2001; Judge et al., 2003, 2005; Wanberg et al., 2005 as cited in Johnson et al., 2008).

However, in an article by Judge, Erez, Bono, and Thoresen (2003) it was mentioned that in order for CSE to fully develop as a construct and for researchers to fully understand it, CSE must be applied to areas outside of job satisfaction and job performance. This study will investigate the link between CSE and academic satisfaction and between CSE and academic performance.

There has been very little research linking CSE and academic satisfaction as well as CSE and academic performance. However there has been a substantial amount of studies linking the individual traits of CSE with academic satisfaction and academic performance. The following studies give examples of the link between the individual traits of CSE and academic satisfaction as well as the individual traits of CSE and academic performance.

Self-Esteem and Academic Satisfaction and Academic Performance

Self-esteem has been defined as one's sense of self-worth as well as the extent to which one values and/or appreciates one's self (Holt et al., 2012, p. 517). However there is limited European research in relation to self-esteem and academic satisfaction and academic performance. However there are non-European studies suggesting a relationship between self-esteem and academic satisfaction and between self-esteem and academic performance, although a large number of which are not recent studies.

Some examples of evidence to suggest a link between self-esteem and academic satisfaction and academic performance can be observed among the following studies.

A link between self-esteem and academic performance can be found in a 3-year longitudinal study examining self-esteem and academic performance from a sample of 1,611 American-Indian high school students. A 6 item Rosenberg self-esteem scale was used in order to assess self-esteem. A self reported item was used to assess grades. Results found that trajectories of self esteem showed a clear relation between the academic performance (Whitesell, Mitchell and Spicer, 2009).

There has also been a suggested link between self-esteem and academic satisfaction and performance among younger students. In a study involving the assessment of two aspects of self-esteem and student's achievement among 87 second graders results showed that both aspects of self-esteem (level and stability) were positively correlated with academic achievement (Kugle, Clements and Powell, 1983). This shows that there is a link between self-esteem and academic satisfaction and performance at stages in life even before adulthood.

Self-esteem has been proven to predict academic performance at undergraduate level as well. In a study conducted by Morrison, Thomas and Weaver (1973) three measures of self-esteem were used in order to test whether 36 undergraduates with low self-esteem would also receive lower grades on examination than 36 undergraduate students with high self-esteem. Students with low self-esteem proved to receive lower results than students with high self-esteem scores. The results of that study proved a link between self-esteem and academic performance.

It should be recommended to conduct modern research into the relationship between self-esteem and academic performance and academic satisfaction, especially in Europe. Despite the lack of modern research, it is clear to see that there is a link between self-esteem and academic performance. There is a gap in literature regarding self-esteem and academic satisfaction, however as there is a large amount of evidence to suggest a link between self-esteem and academic performance it will be assumed that self-esteem will have an influence on academic satisfaction also.

Self-efficacy and Academic Satisfaction and Academic Performance.

Self-efficacy refers to the belief in an individual's own ability to cope in challenging situations and also the belief in one's control over a given challenge (Bandura, 1977).

A substantial body of literature exists that suggests a link between self-efficacy and academic satisfaction and between self-efficacy and academic performance. For example researchers conducted a study involving the examination of self-efficacy and academic satisfaction among a sample of 457 Mexican-American college students. A 20-item College self-efficacy inventory was used in order to assess self-efficacy.

Academic satisfaction was assessed using a 7-item scale. Results found that there were positive relations between college self-efficacy and academic satisfaction, as well as academic goal progress (Ojeda, Flores and Navarro, 2011).

Another study conducted by Richardson, Abraham and Bond (2012) found medium sized correlates between academic self-efficacy and grade point average. This study highlighted a relationship between self-efficacy and academic performance. In addition to these findings, performance self-efficacy and grade point average were also found to be strongly correlated.

In other studies an increase in academic performance has also been predicted by self-efficacy. For example, in a longitudinal analysis of self-efficacy for education conducted by Majer (2009), the baseline rates of self-efficacy significantly predicted increases in grade point average at 1-year. In this study it is suggested that the findings demonstrate that self-efficacy for education is an important cognitive resource, thus emphasising the importance for researchers to further examine the link between self-efficacy and academic satisfaction and academic performance.

From these studies it is clear to see that there is a relationship between self-efficacy and academic satisfaction and academic performance, however little research has been conducted in European countries and should be encouraged in order to gain a better understanding of CSE.

Emotional Stability and Academic Satisfaction and Academic Performance.

Emotional stability (conversely referred to as neuroticism) is a trait which reflects an individual's tendency to feel calm and secure. Individuals who are emotionally stable are less likely to experience negatively balanced emotions (Johnson et al., 2008).

There is very little research linking emotional stability with academic satisfaction and academic performance. Most studies involve emotional stability as part of the Big-Five theory and are not singly measuring emotional stability's relationship with academic satisfaction and academic performance (McAbee and Oswald, 2013; Trapmann, Hell, Hirn and Schuler, 2007).

The following examples of the investigation of the relationship between emotional stability and academic satisfaction and between emotional stability and academic performance can be observed in the following studies.

A recent meta-analysis examined the relationship between the Big Five and academic success at university. A total of 258 correlation coefficients from 58 studies published since 1980 were included in the analysis. Studies were from 15 different countries (predominantly North American, European and Asian countries). Results found that although emotional stability (Neuroticism) was found to be related to academic satisfaction, out of the other big-five traits Conscientiousness had a much stronger correlation with academic grades (Trapmann, Hell, Hirn and Schuler, 2007).

Another meta-analysis by conducted by McAbee and Oswald (2013) investigated personality measures (Big-Five factor model) as predictors of academic performance (grade-point average). Psychological literature was taken from 1992 to 2012. A total of 51 studies containing 274 correlations were obtained. The findings suggested that conscientiousness was the strongest predictor of grade point average. The study also found that the other traits of the Big-Five factor model (extraversion, agreeableness, neuroticism and openness), including emotional stability were found to be generally quite low predictors.

These findings do not work in favour for CSE if it is to develop and expand as a construct by being applied to other outside job satisfaction and job performance as Judge et al. (2003) suggested.

By observing previous studies it raises questions in relation to emotional stability and academic satisfaction and emotional stability and academic performance. Emotional stability has been found to be very influential for job satisfaction and for job performance when featured as part of the CSE construct, while simultaneously not being an influential trait regarding academic satisfaction and academic performance when featured as part of the Big-Five factor model. Perhaps the construct with which emotional stability is being associated and the dependent/criterion variables that are being measured have an impact on results. In order to gain further understanding future studies need to be conducted to investigate emotional stability and academic satisfaction as well as emotional stability and academic performance.

Locus of Control and Academic Satisfaction and Academic Performance

Locus of control is said to be the belief in one's personal control in the one's life.

Individuals with an external locus of control believe life's outcomes are based on external factors such as luck and chance, whereas individual's with an internal locus of control believe that life's outcome are largely based on individual efforts (Holt et al., 2012, p. 590-591).

There is strong evidence to suggest that locus of control has a relationship with both academic performance and academic satisfaction. Some examples of evidence to suggest a link between locus of control and academic satisfaction and

between locus of control and academic performance can be observed among the following studies.

A literature review on the relationship between locus of control and academic achievement was conducted. The review found a total of 275 tests that suggest a link between locus of control and academic performance. Specifically the review showed that internal locus of control beliefs were associated with greater academic achievement. Interestingly, however, this relationship was found to be stronger among adolescents than for adults or children and was also stronger among males (Findley and Cooper, 1983).

Another study involved the investigation of locus of control and performance in university exams among 52 undergraduate students. Locus of control was assessed using Reid and Ware's multidimensional locus of control scale. Results found that internal locus of control believers could correctly predict grade point average compared to external believers. This study supports the link between locus of control and academic performance. However, it is important to acknowledge that older students correctly predicted grade point average regardless of internal-external beliefs. It was assumed experience was an influence in the prediction of grade point average (Gilmor and Reid, 1978).

In another study involving 54 undergraduates, participants were randomly assigned to one of two teaching conditions (a high discipline condition and a low discipline condition). Students with an internal locus of control performed better under low discipline teaching conditions than students with external locus of control under low discipline teaching conditions. The study also found that students with external locus of control performed better under high discipline teaching conditions. In addition to these findings the study revealed that the students that were assigned to

the preferred discipline condition showed higher academic satisfaction than students that were not assigned to the preferred condition (Parent, Forward, Canter and Mohling, 1975). It is clear to see that there is a strong link between locus of control and academic satisfaction and between locus of control and academic performance.

Judging from previous research it is clear to see that there is evidence to suggest that there is a link between the individual CSE traits and academic satisfaction and between the individual CSE traits and academic performance. The present study will use these studies as a justification to test the relationship between CSE (as a construct) and academic satisfaction as well as to test whether CSE (as a construct) is a predictor of academic performance.

Validity of the measurement of Core Self-Evaluation

The validity of the current measure of CSE has been criticised in an extensive article by Johnson et al. (2008). In particular Johnson et al. criticised the frequently used single scale measurement of CSE (the Core Self-Evaluation Scale). It was argued that a construct with many components such as CSE cannot be sufficiently represented in one summed scale score; and that CSE is too broad a construct. It was also argued that the use of a single scale to measure CSE fails to capture differences in relationships between constructs and their indicators and also ignores relationships between indicators and their measures (Edwards 2001, as cited in Johnson et al., 2008). Instead, Johnson et al. recommended researchers to measure each trait of CSE individually with an established scale. The technique of measuring each trait individually and separately is thought to provide an opportunity for researchers to

explore potential moderated and mediated relationships among the traits. Considering the criticisms outlined in this article, it would be questionable for the present study to only use the CSE scale to assess CSE. The current study will investigate the validity of using CSE as a single scale measure. This will be achieved by the means of using the Core Self-Evaluation Scale as well as the Rosenberg Self-Esteem scale, Generalised Self-Efficacy Scale, Rotter's Locus of Control Scale and an Emotional Stability Scale (taken from the Big-Five Domain) and analysing the relationship between the scores of CSE and of the scores four remaining scales.

Hypotheses

As previous research has shown a large amount of evidence to suggest a link between self-esteem, self-efficacy, locus of control and to a certain extent emotional stability and academic satisfaction and as well as self-esteem, self-efficacy, locus of control and to a certain extent emotional stability and academic performance, it is therefore hypothesised that Core Self-Evaluation as an entire construct will have a significant relationship with academic satisfaction. The additional aspect of this hypothesis is that self-esteem, self-efficacy, locus of control and emotional stability will also have a significant relationship with academic satisfaction.

As research has also suggested a link between self-esteem, self-efficacy, locus of control and to a certain extent emotional stability and academic performance, it is therefore hypothesised that Core Self-Evaluation will predict academic performance as well. The second aspect of this hypothesis is that self-esteem, self-efficacy, locus of control and emotional stability will predict academic performance.

In order to investigate the validity of using CSE as a single scale measure, the final hypothesis for this study is that Core Self-Evaluation will have a significant relationship with self-esteem, self-efficacy, locus of control and emotional stability. For example, if the CSE scores have a significant relationship with the self-esteem scores, self-efficacy scores, locus of control scores and emotional stability scores this should add to the justification of using the CSE Scale as a single measure.

In summary the three hypotheses for the present study are (1) CSE will have a significant relationship with academic satisfaction and self-esteem, self-efficacy, locus of control and emotional stability will also have a significant relationship with academic satisfaction. (2) CSE will predict academic performance and self-esteem, self-efficacy, locus of control and emotional stability will also predict academic performance. (3) CSE will have a strong positive relationship with self-esteem, self-efficacy, locus of control and emotional stability.

Method

Participants

The participants were obtained by using convenience sampling and were drawn from the population of students attending a college course. A total number of 90 students participated in the study. In order to gain access to the participants, tutors from Dublin Business School were contacted and informed about the study and asked if classes could be used in order to hand out surveys and obtain students as participants. In order to obtain participants, permission was granted by the tutors and surveys were subsequently handed out. There was no refusal rate; however some students did not fill out certain sections of the questionnaires. Missing values were therefore indicated in the sections that were incomplete during statistical analysis. Participants were assured confidentiality and the study was fully explained before surveys were given to participants as well as an opportunity to ask questions after questionnaires were distributed. The age range of participants varied from 18 to 63 year of age. There was a slight gender imbalance as 24 males and 62 females participated in the study (4 participants did not give details regarding gender. There were no circumstances for which the students participated, the participants of the study did not receive any pay or course credit.

During the first wave of data collection first year BA (Hons) psychology students participated in the study. The second wave of data collection second year Higher Diploma psychology students participated. During the third wave of data collection first year Higher Diploma psychology students participated in the study.

During the final wave of data collection surveys were distributed and complete by email.

Design

The present study was a Correlational design. The predictor variables were Core-Self Evaluation, as well as the individual traits of Core Self-Evaluation (self-esteem, self-efficacy, locus of control and emotional stability). The Criterion Variables were defined as academic satisfaction, academic performance as well as estimated degree classification. As this was a Correlational design there was no requirement for experimental or control groups.

Materials/Apparatus.

A survey was used in order to measure the predictor and criterion variables. The survey comprised of five standardized questionnaires as well as three questions regarding academics. The 12 item standardized Core Self Evaluation scale was used in order to assess Core Self-Evaluation. Participants were asked to answer items using a five-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree”. Items 2, 4, 6, 8, 10 and 12 were required to be recoded before data analysis.

The 10 item Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to measure Self-Esteem. Items were measured on a four-point Likert scale ranging from “Strongly Agree” to “Strongly Disagree” There was no “Neutral” option. Items 2, 5, 6, 8, 9 were required to be recoded before data analysis.

The 10 item generalized Self-Efficacy Scale was used to measure Self Efficacy (Schwarzer and Jerusalem, 1995). Items were measured using a four point Likert scale ranging from “Not at all true” to “Exactly true”. There was also no “Neutral” option given. No recoding was needed

The Rotter’s Locus of Control scale (13 items) was used to measure Locus of Control (Renn and Vandenberg, 1991 as cited in Rotter, 1966). For each item participants were asked to circle one of two statements that the participants believed to be most representative of the participants’ beliefs. For items 1, 3, 4, 5, 10, 11, 12 and 13 statement “a” assigned a score of 1 and statement “b” assigned a score of 0. For items 2, 6, 7, 8 and 9 statement “a” assigned a score of 0 and statement “b” assigned a score of 1.

The 10 item Emotional Stability Scale (obtained from the Big-Five Domain) was used to measure Emotional Stability (Socha, Cooper and McCord, 2010). Items were measured on a five point Likert scale ranging from “Very inaccurate” to “Very Accurate”. Items 1, 3, 5, 6, 7, 8, 9 and 10 were required to be recoded before data analysis.

Three open ended items in relation to academics were also included as an exploratory method, although open ended items to assess academic satisfaction and academic performance has been used in previous research (Whitesell, Mitchell and Spicer, 2009). The first item asked “How satisfied are you with your results to date?” and was used measure satisfaction with academic performance through a five-point Likert item (ranging from “very unsatisfied” to “very satisfied”).

The second item asked “Can you give a rough percentage of your average grade for this year?” and was an open ended question. Asking students for a “rough average” was chosen over asking participants for actual results in order to allow

participants to complete the questionnaire anonymously. Also, it was assumed if actual results were asked then students could be more inclined to not give honest results, especially if certain participants received poor or average results. There was also the possibility that further permission would be asked in order to obtain documentation to verify results, which would have jeopardised anonymity.

The final item asked “If you were to estimate the classification you will be awarded when you graduate, which classification do you believe you will receive?”. Participants were asked to circle one of four options (First Class Honours (1st), Second Class Honours, upper division (2:1), Second Class Honours (2:2), and Third Class Honours (3rd)). This item was not of huge concern to the present study and was used for exploratory analysis in order to gain further insight into CSE and CSE’s traits.

Procedure

As the distribution of surveys was prearranged participants were informed by tutors that the researcher of the present study would during the final twenty minutes of the lecture in order to hand out surveys as part of the researcher’s final year project. Data collection was therefore obtained in the participants’ classrooms. Before surveys were distributed, participants were informed that the researcher’s final year project was investigating the relationship between CSE and academic satisfaction/performance, as well as the validity of the CSE scale. A brief definition of CSE was also explained. Students were informed that no deception was involved and that surveys would be kept anonymous. Students were also made aware of the right to withdraw at any point. Students were asked to tick a box on the first page of the survey in order to show that

they have consented in taking part. Participants generally took 15 to 20 minutes to complete the survey, however 3 students took half an hour and were asked to complete the survey outside of the classroom. Information of support services was given on the final page of the survey in case any of the items caused some distress. Contact details of the researcher and the researcher's supervisor were given on the final page also.

Results

Table 1: *Descriptive Statistics of Psychological Measures*

Variable	Mean	Standard Deviation
CSE	41.90	7.396
Self Esteem	21.19	5.387
Self-Efficacy	31.12	4.537
Locus of Control	6.76	2.226
Emotional Stability	32.44	7.827

Table 1 presents descriptive statistics of the psychological measures being tested.

A total number of 90 participants took part in the study (24 males and 62 females, 4 participants did not tick an option for gender. The ages of participants ranged from 18 to 63.

41 participants were attending part-time courses and 49 participants were attending full-time courses. The 41 participants attending part-time courses were studying for a higher diploma and the 49 full-time participants were studying for an undergraduate degree. A total of 89 participants of 90 indicated the year of study. 63 participants were attending 1st year. 17 participants were attending 2nd year. 7 participants of the study were attending 3rd year and 1 participant was attending 4th year.

Results were both consistent and inconsistent with the hypotheses. CSE did not predict average grade result or estimated degree classification and the individual traits of CSE (self-esteem, self-efficacy, locus of control and emotional stability) did not predict average grade results or estimated degree classification. However there

was a significant relationship between CSE and academic satisfaction and also between academic satisfaction and self-esteem. However there was no significant relationship between academic satisfaction and self-efficacy, between academic satisfaction and locus of control or between academic satisfaction and emotional stability. The results also found that CSE had a significant relationship with self-esteem as well as CSE having a significant relationship with self-efficacy and emotional stability. Results did not however find a significant relationship between CSE and locus of control.

Relationship between psychological measures

A pearson's correlation was run. The mean scores for CSE was 41.90 (SD = 7.40). For self-esteem the mean was 21.19 (SD = 5.387). For self-efficacy the mean was 31.12 (SD = 4.54). For Locus of Control the mean was 6.76 (SD = 2.23) and for emotional stability the mean was 32.44 (SD = 7.83). A pearson correlation coefficient found that there was a strong positive significant relationship between CSE and Self-Esteem ($r(86) = 0.84, p < .01$), between CSE and Self-Efficacy ($r(86) = 0.66, p < .01$), between CSE and Emotional Stability ($r(87) = 0.68, p < .01$). There was no significant relationship between CSE and Locus of Control ($r(81) = 0.29, p = .007$).

Relationship between psychological measures and academic satisfaction.

Non parametric correlations were run. A spearman's rho correlation was used in order to determine the relationship between academic satisfaction and the five

psychological measures previously tested. There was a strong positive correlation between academic satisfaction and CSE and it was statistically significant ($r_s(89) = 0.40, p < .01$). There was also a strong positive significant relationship between academic satisfaction and self-esteem ($r_s(89) = 0.35, p = .001$). There was no significant relationship between academic satisfaction and self-efficacy ($r_s(89) = 0.32, p = .002$). There was a negative relationship between academic satisfaction and Locus of Control that was not significant ($r_s(84) = -.036, p = 0.74$). There was also a weak positive relationship between academic satisfaction and emotional stability that was not significant ($r_s(90) = 0.16, p = 0.13$).

Table 2: *Correlation table*

Variable	Satisfaction	CSE	Self-Esteem	Self-Efficacy	Locus of Control	Emotional Stability
Satisfaction						
CSE	0.405**					
Self-Esteem	.348**	.833**				
Self-Efficacy	.322**	.668**	.705**			
LOC	-.036	.312**	.291**	.209		
Em. Stability	.162	.709**	.621**	.445**	.393**	

** correlation is significant at .01 level (2-tailed).

Relationship between psychological measures and estimated degree classification.

A spearman's rho was run in order to determine the relationship between estimated degree classification and the five psychological measures. There were no significant relationships found. Prediction of academic outcome and CSE ($r_s(87) = 0.19, p = .081$). Prediction of academic outcome and self-esteem ($r_s(87) = 0.22, p = .040$).

Prediction of academic outcome and self-efficacy ($r(87) = 0.12, p = 0.27$). Prediction of academic outcome and locus of control ($r(82) = -0.03, p = 0.78$). Prediction of academic outcome and emotional stability ($r(88) = 0.06, p = 0.58$).

Is CSE a predictor of Academic Performance?

Using Simple Regressions it was found that CSE, was not a predictor of average grade ($F(1, 85) = 5.55, p = .021, R^2 = .05$)(CSE, $\beta = .25, p = .02$) Confidence limits were wide showing that there is 95% of confidence that the population slope is between .053 and .624.

Another simple regression test found that CSE did not predict student's estimated degree classification ($F(1, 85) = 3.26, p = .07, R^2 = .02$)(CSE, $\beta = .19, p = .08$). Confidence limits were also wide showing that there is 95% of confidence that the population slope is between -.002 to .036.

Are Self-Esteem, Self-Efficacy, Locus of Control and Emotional Stability predictors of Academic Performance?

A multiple regression was used to test whether self-esteem, self-efficacy, locus of control and emotional stability were predictors of average grade result. The results indicated that the predictors explained 4% of the variance ($R^2 = .04, F(4,75) = 1.89, P = .12$). it was found that self-esteem ($\beta = .17, p = .32, CI = -.32 \text{ to } .97$) did not significantly predict average grade result nor did self-efficacy ($\beta = .19, p = .22, CI = -.25 \text{ to } 1.09$) or locus of control ($\beta = .15, p = .23, CI = -.42 \text{ to } 1.75$) or emotional stability ($\beta = -.19, p = .19, CI = -.61 \text{ to } .13$).

A multiple regression was used to test whether self-esteem, self-efficacy, locus of control and emotional stability were predictors of estimated degree classification. The results of the regression indicated that the predictors explained 4% of the variance ($R^2 = .04$, $F(4, 75) = 1.89$, $p = .120$). It was found that self-esteem (Beta = .35, $p = .04$, 95% CI = .00 to .08) did not significantly predict estimated degree classification nor did self-efficacy (Beta = -.14, $p = .34$, 95% CI = -.07 to .02) or locus of control (Beta = -.09, $P = .44$, 95% CI = -.10 to .05) or emotional stability (Beta = -.04, $p = .76$, 95% CI = -.03 to .02).

Discussion

The aim of the present study was to observe if there was a relationship between CSE and academic satisfaction as well as the relationship between self-esteem, self-efficacy, locus of control and emotional stability and academic satisfaction.

Another aim of the study was to find if CSE was a predictor of academic performance as well as if self-esteem, self-efficacy, locus of control and emotional stability were also predictors of academic performance.

The final aim of this study was to investigate the validity of the Core Self-Evaluation Scale and if the CSE total scores have a strong relationship with the scores of self-esteem, self-efficacy, locus of control and emotional stability.

Results found that there was a strong positive correlation between academic satisfaction and CSE. However there was only a strong positive significant relationship between academic satisfaction and self-esteem. It was found that there was no significant relationship between academic satisfaction and self-efficacy, there was a non-significant negative relationship between academic satisfaction and locus of control and there was a non-significant weak positive relationship between academic satisfaction and emotional stability.

Results also found that CSE as well as self-esteem, self-efficacy, locus of control and emotional stability were not predictors of academic performance or estimated degree classification.

The study also found that there was a strong positive significant relationship between CSE and self-esteem, between CSE and self-efficacy and between CSE and emotional stability. However there was no significant relationship between CSE and

locus of control.

These findings are both inconsistent and consistent with the 3 hypotheses.

In relation to the first hypothesis, there were only two variables that had a significant relationship with academic satisfaction (CSE and self-esteem). These two variables were found to be consistent with the first hypothesis. However, the remaining variables were not found to have a significant relationship with academic performance, which is inconsistent with the first hypothesis.

None of the psychological variables were found to be a predictor of academic performance, which does not support the second hypothesis.

The findings of this study also partially support the final hypothesis. Results showed that there was a strong positive significant relationship between CSE and self-esteem, between CSE and self-efficacy and between CSE and emotional stability. These findings support the final hypothesis. However there was no significant relationship found between CSE and locus of control, which does not support the final hypothesis.

Regarding the first hypothesis the findings are generally inconsistent with previous research; however this study shows new evidence to suggest that there is a relationship between self-esteem and academic satisfaction. Studies have suggested a strong link between self-esteem and academic performance (Kugle, Clements and Powell, 1983; Whitesell, Mitchell and Spicer, 2009) but not between self-esteem and academic satisfaction. These particular findings are part of a small number of studies investigating self-esteem and academic satisfaction. Also little research has been conducted in European countries in relation to self-esteem and academic satisfaction. The present study could be suggested to strengthen the link between both variables.

Self-efficacy has been found to have a strong link with academic satisfaction (Ojeda, Flores and Navarro, 2011). However, the findings of the present study were inconsistent with previous research as no significant relationship between self-efficacy and academic satisfaction was found. This is very unusual as self-efficacy is part of CSE, and the CSE scores were found to have a significant relationship with academic satisfaction in this study.

The present study also found that there was a non-significant negative relationship between locus of control and academic satisfaction. This is contrary to previous research as there is a large amount of studies suggesting a link between the two variables (Gilmor and Reid, 1978; Findley and Cooper, 1983; Parent, Forward, Canter and Mohling, 1975). Similarly to self-efficacy, these findings are unusual as locus of control is part of CSE.

There was no significant relationship between emotional stability and academic satisfaction. This is not entirely surprising as a small number of studies have found a link between emotional stability and academic satisfaction (McAbee and Oswald, 2013). However these findings do raise some questions as CSE (which contains emotional stability) was found to have a significant relationship with academic satisfaction.

Regarding the second hypothesis, none of the variables were found to be significant predictors of academic performance. In relation to previous research this is very inconsistent as various studies have found the psychological variables to be predictors of academic performance (Gilmor and Reid, 1978; Kugle, Clements and Powell, 1983; Majer 2009; McAbee and Oswald, 2013; Morrison, Thomas and Weaver, 1973; Richardson, Abraham and Bond, 2012; Whitesell, Mitchell and Spicer, 2009).

Regarding the final hypothesis, very little research has investigated the validity of the use of the CSE scale. There is some evidence to suggest that it is a valid measure (Albrecht, Paulus, Dilchert, Deller, and Ones, 2013). However despite those findings, the CSE scale has not been met without extensive criticisms (Johnson et al., 2008). The findings in this study adds to the questioning of the validity of the CSE scale as CSE had a significant relationship with self-esteem, self-efficacy, emotional stability but not with locus of control. Also based on the findings of the first hypothesis, there are further questions in relation to the validity of the CSE scale. For example, CSE was found to have a significant relationship with academic satisfaction, however only self-esteem was also found to have a significant relationship with academic satisfaction (self-efficacy, emotional stability and locus of control were not found to have a significant relationship with academic performance). It must be emphasised that self-efficacy, emotional stability and locus of control are viewed as components of CSE. The findings are therefore very unusual and could contribute to the criticisms of the validity of the CSE scale found in previous research.

However possible causes for inconsistencies with previous studies could be found in the statistical analysis. Very few studies used the exact tests as the present study (simple/multiple regression, Pearson's correlation, Spearman's rho). The different approaches could have caused inconsistencies with previous research. Also, the studies mentioned in the introduction analysed the individual traits of CSE separately and not simultaneously. The studies previously mentioned were simply used as evidence to suggest that the individual traits of CSE have a link with academic satisfaction and academic performance, and therefore it would be logical to suggest that there is a link between academic satisfaction and academic performance and CSE as a whole construct.

In relation to locus of control, it should be acknowledged that the participants of the current study were university students, the majority of which were under the age of 25. Previous research did not entirely focus on undergraduate students. It could be argued that undergraduate students, living at home and being financially dependent on parents or guardians, do not have as many responsibilities as working adults raising families. This could have affected the results of locus of control as Rotter's locus of control scale largely assesses how an individual views the amount of control in one's life.

It is important, however, to acknowledge limitations of the study. An obvious limitation of the study would be the large gap of research investigating and applying CSE to areas outside of job satisfaction and job performance. With very little guidance (from previous research) in applying CSE to academic satisfaction and academic performance there was a particular challenge approaching the study appropriately.

Another possible limitation could be the type of tests run. The previous studies mentioned did not use multiple regressions and instead used various other tests. The psychological variables (self-esteem, self-efficacy, locus of control and emotional stability) were tested individually and in separate studies. Grouping the variables all together and measuring the variables simultaneously may have caused the results to be inconsistent with previous research.

There may have been a cultural influence as well. For example the majority of the research mentioned in this study was from American studies. The fact that the participants of the present study were from an Irish university may have influenced results as culture can be hugely influential.

Also a large number of the participants of this study were first year students. It

would not be unusual for first years to be unfamiliar with the degree classification system (first class honours, second class honours etc.). This could have impacted results as some students did not answer the item asking for an estimated degree classification that the participant will receive.

Another limitation could have been the inclusion criteria. The only requirement for participants to take part in the study was that they were attending an undergraduate degree. This resulted in a wide variety of participants. If the inclusion criterion was narrower (for example, “Irish undergraduate business and arts students attending Dublin Business School aged between 18 and 24”) the results may have been different.

Future research can benefit from these findings and continue to analyse CSE in more depth. For example it is particularly interesting that CSE scores had a significant relationship with academic satisfaction however, when examining CSE’s traits separately and individually, only self-esteem had a significant relationship with academic satisfaction. These findings raise questions regarding the validity of the CSE scale. If future research could replicate these findings then a re-evaluation of the CSE scale could be suggested.

It is rather concerning that CSE (and self-esteem, self-efficacy, locus of control and emotional stability) were not predictors of academic performance. This raises questions about the application of CSE. If future studies continue to find that CSE and CSE’s traits do not predict academic performance, then this could suggest that the use of CSE is only appropriate when applied towards academic satisfaction, as opposed to academic performance. Using other methods could also prove to be beneficial for future research. For example the use factor analysis or SEM techniques

may be more appropriate and could possibly allow a better understanding of the CSE construct.

Results of the current study generally suggest significant relationships between CSE and the traits of CSE (with the exception of locus of control). It would be advisable for future research to explore in more depth the relationship between CSE and self-esteem, self-efficacy, emotional stability and in particular locus of control. A replication of these results could allow a better understanding of the relationship between CSE and the individual traits. If locus of control continues to have a non-significant relationship with CSE, this could allow researchers to re-evaluate the inclusion criteria of CSE traits.

Perhaps future research should continue to observe CSE's relationship with other areas of satisfaction (such as life satisfaction). As CSE was found to have a significant relationship with academic satisfaction, but was not a predictor of performance, the findings could suggest that the use of CSE is only appropriate when measuring "satisfaction". However researchers should acknowledge that only one of the 4 traits of CSE were found to have a significant relationship with academic satisfaction when analysed individually, which continues to raise questions about the validity of CSE.

In conclusion, the present study's main findings were that CSE has a significant relationship with academic satisfaction, as does self-esteem. CSE, self-esteem, self-efficacy, locus of control and emotional stability were not found to be predictors of academic performance or estimated degree classification received. The study also found that CSE has a significant relationship with self-esteem, self-efficacy and emotional stability but not with locus of control. The findings in relation to the first two hypotheses were generally inconsistent with previous research. Future research

aiming to replicate these findings is advised in order to gain a better understanding of the application of the CSE construct outside of job satisfaction/performance. The results also suggested possible problems regarding the validity of the measurement of CSE, particularly due to CSE scores having a significant relationship with academic satisfaction but out of the individual traits of CSE only self-esteem showed a significant relationship with academic satisfaction. If future research continues to replicate these findings, the application of CSE towards academic satisfaction and academic performance may not be appropriate for the construct.

References

Albrecht, A., Paulus, F. M., Dilchert, S., Deller, J., & Ones, D. S. (2013). Construct- and criterion-related validity of the German Core Self-Evaluations Scale: A multi-study investigation. *Journal Of Personnel Psychology, 12*(2), 85-91. doi:10.1027/1866-5888/a000070

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191– 215.

Bohrnstedt, G. W., & Felson, R. B. (1983). Explaining the relations among children's actual and perceived performances and self-esteem: A comparison of several causal models. *Journal Of Personality And Social Psychology, 45*(1), 43-56. doi:10.1037/0022-3514.45.1.43

Findley, M. J., & Cooper, H. M. (1983). Locus of control and academic achievement: A literature review. *Journal Of Personality And Social Psychology, 44*(2), 419-427. doi:10.1037/0022-3514.44.2.419

Gilmor, T. M., & Reid, D. W. (1978). Locus of control, prediction, and performance on university examinations. *Journal Of Consulting And Clinical Psychology, 46*(3), 565-566. doi:10.1037/0022-006X.46.3.565

Holt, N., Bremner, A., Sutherland, E., Vlieg, M., Passer, M., & Smith, R. (2012). *The Science of Mind and Behaviour* (2nd ed.). London: Mcgraw-Hill Higher Education.

Johnson, R. E., Rosen, C. C., & Levy, P. E. (2008). Getting to the core of self-evaluation: A review and recommendations. *Journal Of Organizational Behavior*, 29(3), 391-413. doi:10.1002/job.514

Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal Of Applied Psychology*, 86(1), 80-92. doi:10.1037/0021-9010.86.1.80

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2003). The Core Self-Evaluations Scale: Development of a measure. *Personnel Psychology*, 56(2), 303-331. doi:10.1111/j.1744-6570.2003.tb00152.x

Kugle, C. L., Clements, R. O., & Powell, P. M. (1983). Level and stability of self-esteem in relation to academic behavior of second graders. *Journal Of Personality And Social Psychology*, 44(1), 201-207. doi:10.1037/0022-3514.44.1.201

Majer, J. M. (2009). Self-efficacy and academic success among ethnically diverse first-generation community college students. *Journal Of Diversity In Higher Education*, 2(4), 243-250. doi:10.1037/a0017852

McAbee, S. T., & Oswald, F. L. (2013). The criterion-related validity of personality measures for predicting GPA: A meta-analytic validity competition. *Psychological Assessment*, 25(2), 532-544. doi:10.1037/a0031748

Morrison, T. L., Thomas, M., & Weaver, S. (1973). Self-esteem and self-estimates of academic performance. *Journal Of Consulting And Clinical Psychology, 41*(3), 412-415. doi:10.1037/h0035337

Nord, W. R., Connelly, F., & Daignault, G. (1974). Locus of control and aptitude test scores as predictors of academic achievement. *Journal Of Educational Psychology, 66*(6), 956-961. doi:10.1037/h0021541

Ojeda, L., Flores, L. Y., & Navarro, R. L. (2011). Social cognitive predictors of Mexican American college students' academic and life satisfaction. *Journal Of Counseling Psychology, 58*(1), 61-71. doi:10.1037/a0021687

Parent, J., Forward, J., Canter, R., & Mohling, J. (1975). Interactive effects of teaching strategy and personal locus of control on student performance and satisfaction. *Journal Of Educational Psychology, 67*(6), 764-769. doi:10.1037/0022-0663.67.6.764

Payne, R. W., Davidson, P. O., & Sloane, R. B. (1966). The prediction of academic success in university students: A pilot study. *Canadian Journal Of Psychology/Revue Canadienne De Psychologie, 20*(1), 52-63. doi:10.1037/h0082929

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin, 138*(2), 353-387. doi:10.1037/a0026838

Trapmann, S., Hell, B., Hirn, J. W., & Schuler, H. (2007). Meta-analysis of the relationship between the Big Five and academic success at university. *Zeitschrift Für*

Psychologie/Journal Of Psychology, 215(2), 132-151. doi:10.1027/0044-3409.215.2.132

Whitesell, N., Mitchell, C. M., & Spicer, P. (2009). A longitudinal study of self-esteem, cultural identity, and academic success among American Indian adolescents.

Cultural Diversity And Ethnic Minority Psychology, 15(1), 38-50. doi:10.1037/a0013456

Wolfe, R. N. (1972). Perceived locus of control and prediction of own academic performance. *Journal Of Consulting And Clinical Psychology*, 38(1), 80-83.

doi:10.1037/h0032442

Wu, C., & Griffin, M. A. (2012). Longitudinal relationships between core self-evaluations and job satisfaction. *Journal Of Applied Psychology*, 97(2), 331-342.

doi:10.1037/a0025673

Appendices

Consent Form

An investigation of the relationship between Core Self-Evaluation and academic satisfaction/performance among college students.

I have read and understood the attached Information Leaflet regarding this study.

I understand that I am free to withdraw from the study at any time without giving a reason.

I agree to take part in the

study: Tick here

Gender : Male Female

Age:

Type of course: Full Time Part Time

Course of study: _____

Year of study:

The Core Self-Evaluations Scale (CSES)

Below are several statements about you with which you may agree or disagree. Using the response scale below, indicate your agreement or disagreement with each item by placing the appropriate number on the line after that statement.

Response scale

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

1. I am confident I get the success I deserve in life. _____
2. Sometimes I feel depressed. _____
3. When I try, I generally succeed. _____
4. Sometimes when I fail I feel worthless. _____
5. I complete tasks successfully. _____
6. Sometimes, I do not feel in control of my work. _____
7. Overall, I am satisfied with myself. _____
8. I am filled with doubts about my competence. _____
9. I determine what will happen in my life. _____
10. I do not feel in control of my success in my career. _____
11. I am capable of coping with most of my problems. _____
12. There are times when things look pretty bleak and hopeless to me. _____

Rosenberg Self Esteem Scale (Rosenberg, 1965)

Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle **SA**. If you agree with the statement, circle **A**. If you disagree, circle **D**. If you strongly disagree, circle **SD**

- | | | | | |
|---|----|---|---|----|
| 1. On the whole, I am satisfied with myself. | SA | A | D | SD |
| 2. At times, I think I am no good at all. | SA | A | D | SD |
| 3. I feel that I have a number of good qualities. | SA | A | D | SD |
| 4. I am able to do things as well as most other people. | SA | A | D | SD |
| 5. I feel I do not have much to be proud of. | SA | A | D | SD |
| 6. I certainly feel useless at times. | SA | A | D | SD |
| 7. I feel I'm a person of worth at least on an equal plane with others. | SA | A | D | SD |
| 8. I wish I could have more respect for myself. | SA | A | D | SD |
| 9. All in all, I am inclined to feel that I am a failure. | SA | A | D | SD |
| 10. I take a positive attitude towards myself. | SA | A | D | SD |

Generalised Self Efficacy Scale

Using the response scale below, indicate how true you find each statement by placing the appropriate number on the line after that statement.

Response scale

1 = *Not at all true*, 2 = *Hardly true*, 3 = *Moderately true*, 4 = *Exactly true*.

1. I can always manage to solve difficult problems if I try hard enough _____
2. If someone opposes me, I can find the means and ways to get what I want. _____
3. It is easy for me to stick to my aims and accomplish my goals. _____
4. I am confident that I could deal efficiently with unexpected events. _____
5. Thanks to my resourcefulness, I know how to handle unforeseen situations. _____
6. I can solve most problems if I invest the necessary effort. _____
7. I can remain calm when facing difficulties because I can rely on my coping abilities. _____
8. When I am confronted with a problem, I can usually find several solutions. _____
9. If I am in trouble, I can usually think of a solution. _____
10. I can usually handle whatever comes my way. _____

Rotter's Locus of Control Scale

For each question, circle the statement that best describes how you feel. You can only circle one statement per question.

1. a. Children get into trouble because their parents punish them too much.
1. b. The trouble with most children nowadays is that their parents are too easy with them.
2. a. Many of the unhappy things in people's lives are partly due to bad luck.
2. b. People's misfortunes result from the mistakes they make.
3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
3. b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run people get the respect they deserve in this world.
 4. b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he/she tries.
5. a. The idea that teachers are unfair to students is nonsense.
 5. b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. a. Without the right breaks, one cannot be an effective leader.
 6. b. Capable people who fail to become leaders have not taken advantage of their opportunities.
7. a. No matter how hard you try, some people just don't like you.
 7. b. People who can't get others to like them don't understand how to get along with others.
8. a. Heredity plays the major role in determining one's personality.
 8. b. It is one's experiences in life which determine what they're like.
9. a. I have often found that what is going to happen will happen.
 9. b. Trusting fate has never turned out as well for me as making a decision to take a definite course of action.
10. a. In the case of the well prepared student there is rarely, if ever, such a thing as an unfair test.
 10. b. Many times, exam questions tend to be so unrelated to course work that studying is really useless.
11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
 11. b. Getting a good job depends mainly on being in the right place at the right time.
12. a. The average citizen can have an influence in government decisions.
 12. b. This world is run by the few people in power, and there is not much the little guy can do about it.
13. a. When I make plans, I am almost certain that I can make them work.
 13. b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

Emotional Stability Scale (10 items taken from the Big-Five 50 item inventory)

Below are several statements about you with which you may or may not find accurate. Using the response scale below, indicate how accurate you feel each item is by placing the appropriate number on the line after that item. Describe yourself as you generally are now, **not** as you wish to be in the future. Describe yourself as you honestly see yourself.

Response scale

1 = Very Inaccurate, 2 = Moderately Inaccurate, 3 = neither Accurate nor Inaccurate, 4 = Moderately Accurate, 5 = Very Accurate.

1. Get stressed out easily _____
2. Am relaxed most of the time _____
3. Worry about things _____
4. Seldom feel blue _____
5. Am easily disturbed _____
6. Get upset easily _____
7. Change my mood a lot. _____
8. Have frequent mood swings. _____
9. Get irritated easily. _____
10. Often feel blue _____

Self reported questions on satisfaction and performance

How satisfied are you with your results to date? (Please circle answer)

very unsatisfied unsatisfied neutral satisfied very
satisfied

Can you give a rough percentage of your average grade for this year? (Optional)

If you were to estimate the degree classification you will be awarded when you graduate, which classification do you believe you will receive? (Please circle answer)

First class honours (1st)

Second class honours, upper division (2:1)

Second class honours, lower division (2:2)

Third class honours (3rd)

Contact Details

If you have any further questions about the research you can contact:

Researcher:

Supervisor:

If you found any of the questions in any way distressing please do not hesitate to call one of the numbers below.

Samaritans: 1850 60 90 90

Aware: 1890 303 302

Thank you very much for taking the time to complete this survey.