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Examining Teaching Charisma and Its Relation to Student Engagement

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Abstract

This study focuses on the factor of teaching charisma which comprises four key constructs: knowledge, character traits, teaching techniques, and humor. Participants were collected from 17 regular education classrooms within 6 colleges or universities in central Taiwan. The results revealed that the Inventory of Teaching Charisma in the College Classroom (ITCCC) is a psychometrically valid instrument which can accurately assess students' perceptions of the quality of a teacher's teaching in a professional course. Furthermore, a strong positive relationship between teacher's charisma and student engagement was found and three factors of the teaching charisma can jointly predict student engagement in the professional subject. The importance of the teacher's charisma in enhancing student engagement is confirmed.

Key words: Teaching charisma; Student engagement; Inventory

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INTRODUCTION

Studies have highlighted the significant role that affective factors can play in learning, having particular emphasis on student engagement (e.g., Chapman, 2003; Klem & Connell, 2004; Kuh et al., 2006). Student engagement has been found as a robust predictor of student achievement and behaviours in school (Finn & Rock, 1997; Voelkl, 1995; Wellborn, 1991). High levels of engagement are associated with higher attendance and test scores, even performance improvement (Klem & Connell, 2004). In contrast, students with low levels of engagement are at risk of disruptive behaviours in class, absenteeism, and dropping out of school (Lee, Smith, & Croninger, 1995). It is important to further explore what are the factors that increase students to engage in learn and what educators can do to enhance student engagement.

Student engagement is complex; it includes many factors that interact in multiple ways to enhance engagement such as students and teachers (Zepke & Leach, 2010). It is believed that the teacher has a strong impact on their students (Bryson & Hand, 2007; Mearns, Meyer, & Bharadwaj, 2007; Huang & Lin, 2014; Laird & Kuh, 2005; Reason, Terenzini, & Domingo, 2006); in particular, a teacher's charisma is often recognized as an important factor of effective teaching in classroom (Huang & Lin, 2014). Understanding the role teaching charisma plays in enhancing student engagement will help teacher to progress in their teaching. However, how the teacher's charisma influences college students learning engagement has not been well researched. To address the issues, we constructed a case study in the accounting course, a professional course in a commercial college, and concentrated attention on teachers' classroom behaviours. The Inventory of Teaching Charisma in College Classroom (ITCCC), proposed by Huang and Lin (2014), is validated with a sample of Taiwanese college students. The relationships and prediction of teacher's charisma on students' learning engagement in the specialized subject are subsequent analyzed.

A. Student Engagement

Skinner and Belmont (1993) described engaged students as:

> They select tasks at the border of their competencies, initiate action when given the opportunity, and exert intense effort and

> concentration in the implementation of learning tasks; they show generally positive emotions during ongoing action, including enthusiasm, optimism, curiosity, and interest (p.572).

Following this perspective, student engaged in school refers to student showed sustained behavioural involvement and accompanied with positive emotion in learning activities. Specifically, student engagement can be considered as students' cognitive investment in active participation such as attending classes, submitting required work, and following teachers' directions in class and in emotional commitment to their learning (Chapman, 2003).

In school settings, the significance of student engagement is always emphasized. Skinner et al. (1990) concentrated upon elementary and middle school students and Klem and Connell (2004) focused on elementary school students, both research concluded that students who are more engaged in school do in fact earn higher grades, score higher on tests of achievement, and show better adjustment to school. Similarly, Kuh et al. (2006) examined the relationships between student engagement, pre-college experiences, college grades, and persistence to the second year of study for about 11,000 first-year and senior students. They found that engagement has positive, modest effects on grades and persistence for students from different racial and ethnic backgrounds, even after controlling for key pre-college variables. In contrast, Lee, Smith and Croninger (1995) studied on a sample of 9,570 high school students for investigating student engagement and achievement in mathematics, science, history, and reading. Results revealed that students with low levels of engagement are at risk of disruptive behaviours in class, absenteeism, and dropping out of school. Thus, student engagement is associated with performance in learning.

The most common approach to measure student engagement is through information reported by students themselves. In Taiwan, Lin and Huang (2012), with 1,644 college students, constructed the Learning Engagement Scale for College Students (LESCS) for assessing levels of student engagement. The LESCS, assessing student engagement from both behaviour and emotion in learning activities, contains 20 items with 5 subscales: Skills, Emotion, Performance, Attitude, and Interaction. According to the Lin and Huang (2012), with 548 college students, the Cronbach α coefficients for each dimension were ranged from .712 to .794. After performing a series of analyses including exploratory factor analysis, confirmatory factor analysis, and cross-validation on 3 independent groups of collected data, they concluded that the LESCS is a practical tool with scores having good reliability, validity, and stability. Thus, in the current study, the LESCS was used to measure participants' engagement.

B. Teaching Charisma

It is apparent that students like to attend some teachers' class because of certain characteristics of the teachers. There may be some reasons make teachers welcome or popular and deeply attracts students. It is called teaching charisma. That is, we define the teaching charisma as the positive behaviours of teacher, in the college classroom, which can deeply appeal students to learn.

A charismatic teacher is not only good for students' perception but has appealed for students (Huang & Lin, 2014). Huang and Lin (2014) reviewed literatures about the teaching behaviours good teachers have in common and identified four merits that deeply attract students. They considered that these indicators are essential for a charismatic or a popular teacher. First, a charismatic teacher should be knowledgeable (Huang & Lin, 2014) since teaching requires an interweaving of many kinds of specialized knowledge (Koehler & Mishra, 2009). Second, a charismatic teacher should have positive character traits such as friendliness, approachability, patience and enthusiasm (Huang & Lin, 2014) since teachers are expected to be good role models for the students and they should perform what a teacher should have (Chou, 1997). The teachers' behaviours, attitudes, appearance, and character may affect the feeling students perceive, and may even influence the interaction between teacher and students (Hsiao, 2009). Third, a charismatic teacher should attach importance to teaching methods (Huang & Lin, 2014). The teachers should possess teaching skills and to be able to choose the most suitable teaching method from a variety of teaching tools. Finally, a charismatic teacher should have a good sense of humor (Huang & Lin, 2014) since students prefer listening to teachers who incorporate humor into the lecture (Minchew, 2001; Neumann, Hood, & Neumann, 2009). On the basis of these indicators: knowledge, character traits, teaching techniques, and humor, Huang and Lin developed the instrument, Inventory of Teaching Charisma in the College Classroom (ITCCC), to measure teacher's teaching charisma.

According to the findings of Huang and Lin (2014), studied with 1,078 Taiwanese college students, the ITCCC is a valid and reliable tool to measure the teacher's charisma in college classroom. However, Huang and Lin's conclusions were limited to the domain of math. Specifically, the ITCCC was validated with students taking the calculus course, so that the obtained scores were representative of the teachers teaching fundamental course, even only for calculus teachers. Less is known about the validity and reliability of ITCCC used to measure teaching charisma outside the fundamental course. As Huang and Lin noted in their study limitations, the measurement invariance of their scale across different subjects needs to be examined. How is the ITCCC when applied to students in professional subject—accounting? It is unknown to what extent these findings can be generalized to other domains, thus, this issue is one of the objectives we want to examine in this study.

Furthermore, a classroom environment can influence students' motivation and engagement (Bryson & Hand,

2007; Deci & Ryan, 2002; Kuh et al., 2006; Reason et al., 2006). While the teacher is perceived to be approachable, well prepared and sensitive to student needs, students are committed to work harder (Mearns et al., 2007). Students are more likely to be receptive to learning under supportive social climate in the classroom. The teacher plays important role in developing such environment and has a strong impact on their students (Huang & Lin, 2014; Rotgans & Schmidt, 2011; Yeh, 2011); and further, after extensive literature review, Kuh et al. (2006) suggested teaching and teachers are the heart of student engagement. Clearly teaching and teachers deserve to be valued and acknowledged within institutions for their contribution. However, how the teacher's charisma influence college student engagement has not been well researched. To address important issues involved with enhancing engagement in learning, it is necessary to achieve a clearer understanding of the specific role teacher's charisma plays as motivator of student learning. Therefore, the other important objective of this research is to identify contributions of teacher's charisma to the level of student engagement triggered by teacher.

C. Study Purpose

Assisting students in learning is one of educators' duties. In order to gain further insight into students' perspectives of teaching charisma and to understand what factors might increase students' investment in their learning; we concentrated attention on teacher's charisma and aimed to explore its correlation with student engagement. Specifically, in this study, we empirically verified the ITCCC, which originally proposed by Huang and Lin (2014) and validated at the fundamental course in the professional subject "Accounting", and examined the effects of teacher behaviour on student engagement over the course.

1. METHOD

1.1 Participants and Procedure

Participants were 602 college students enrolled in accounting classes from 17 regular classrooms within 6 colleges or universities in central Taiwan. We obtained approval to conduct the research investigation at these schools. We explained the purpose of the study of the target students and obtained consent to participate in the study. Students completed questionnaires during April-June of the 2013 school year. Questionnaires were administered to students in their normal classrooms by trained assistants and taken about 25 minutes. The entire data set was scrutinized to detect missing values, invalid values and outliers. Of the valid participants, 76 came from public and general college, 111 from private and general college, 245 from public university of science and technology, 170 from a private university of science and technology. Of these, 39.9% (n = 240) were male and 60.1% (n = 362) are female.

1.2 Measures

Data for this study were collected by using self-report measures including: a demographic questionnaire (It asked participants to answer questions regarding their school, age, gender, and major), an instrument to assess participants' learning engagement in the accounting course, and a measure of student's perception of teaching behaviour about his/her teacher (for the accounting course).

1.2.1 Inventory of Teaching Charisma in the College Classroom (ITCCC) (Huang & Lin, 2014)

The study used the ITCCC, which is developed by Huang and Lin (2014) to measure the students' perceptive degree of teaching charisma from their teacher in the accounting course. The wording of the questions was slightly altered to reflect the specific course. The ITCCC consists of 23 items, comprising four subscales: Character Traits, Knowledge, Humor, and Teaching Techniques. The "Character Traits" subscale, having 6 items, concerns with the teacher's performance with respect to behaviours and morals (e.g., my teacher has good moral characteristic). The "Knowledge" subscale, having 7 items, concerns with the professional knowledge and pedagogical knowledge which the teacher possesses (e.g., my teacher can solve all of the course-related problems.). The "Humor" subscale, having 6 items, concerns with the teacher's humorous style in the classroom (e.g., my teacher is a humorous teacher). The "Teaching Techniques" subscale, having 4 items, concerns with teacher's teaching techniques (e.g., my teacher uses some teaching materials that are new and interesting). Students rated each item on the extent to which they agreed with each statement using Likert-scale responses (ranging from 1= never true to 5= always true). The higher the score is, the better the degree of teaching charisma.

1.2.2 Learning Engagement Scale for College Students (LESCS) (Lin & Huang, 2012)

The study used the LESCS developed by Lin and Huang (2012) to assess student engagement levels in the accounting course. The scale, consisting of 20 items, tapped students' engagement from 5 facets: Skills, Emotion, Performance, Attitude, and Interaction. The "Skills engagement" subscale consists of 4 items and concerns with the learning strategy student adapted in order to perform well in the specific course (e.g., I can mark the important elements of the curriculum). The "Emotional engagement" subscale consists of 5 items and concerns with the emotional reactions to the learning environment (e.g., School is one of my favorite places). The "Performance engagement" subscale consists of 4 items and concerns with students' effort, attention, and persistence during the initiation and execution of learning activities (e.g., I am seldom late for school). The "Attitude

engagement" subscale consists of 4 items and concerns with the student's attitude toward the learning subject (e.g., I always concentrate on listening in class). The "Interaction engagement" subscale consists of 3 items and concerns with the behaviours student interact with teacher and classmates (e.g., I participate by asking questions in class). Students rated each item on the extent to which they agreed with each statement using a 5-point Likert-type scale, ranging from 1 (never true) to 5 (always true). The higher the score is, the better the degree of student engages on academic learning. In this study, the Cronbach α coefficient for each dimension was .800, .738, .811, .812 and .703 respectively, overall was .885.

1.3 Data Analysis

In this study, data were analyzed using LISREL 8.70 and SPSS 15.0. After the data was screened, the confirmatory factor analysis (CFA) was carried out by examining the factorial validity of the ITCCC. It includes the examination of measurement model, convergent validity, and discriminant validity. Then Pearson correlation analysis between teacher's charisma and student engagement was performed. Additionally, in multiple linear regression analysis, the relationship between the dependent variable, student engagement, and the four predictor variables, Character Traits, Knowledge, Humor, and Teaching Techniques, were tested.

2. RESULTS

2.1 Data Screening

Presented in Table 1 was the mean, standard deviation, skewness, and kurtosis of each item in the ITCCC; the Cronbach α coefficient for each factor was also included. The mean score ranged from 2.49 to 3.59 and all the standard deviations were about 1.00. No items showed a skew or kurtosis value greater than the cut-offs – absolute value of 3 or 8 respectively. The Cronbach α coefficient on the four ITCCC factors was between .839 and .893, and was .928 for the total score. It suggested the internal consistency in the scale was good (George & Mallery, 2003).

2.2 Confirmatory Factor Analysis

In order to test the quality of the measurement model of ITCCC, CFA was performed. Several fit indices to measure model fit as recommended by Hair, Black, Babin, and Anderson (2010), Harrington (2009) and Kline (2010) were adopted. These criteria were: (a) the χ^2/df ratio (ranging from 2 to 5) (Tanaka, 1993), (b) the

Table 1
Descriptive Statistics of the Items in the ITCCC

Factor/Item	Mean	*SD*	Skewness	Kurtosis
Character Traits (α=.854)	3.37	.738		
CT1. My teacher practices what he/she preaches, sets a good example for us.	3.37	.923	-.256	-.047
CT2. My teacher has good moral characteristic.	3.29	.976	-.154	-.522
CT3. My teacher is fair and objective in grading.	3.30	.994	-.538	.019
CT4. My teacher is very responsible.	3.50	.940	-.251	-.114
CT5. My teacher has a lot of patience.	3.42	.953	-.404	-.022
CT6. My teacher is very democratic and can accept students' different opinions.	3.34	1.034	-.379	-.175
Knowledge (α=.893)	3.46	.794		
K1. My teacher has a wealth of knowledge.	3.38	.992	-.282	-.438
K2. I admire teacher's high level of proficiency in this field.	3.56	1.017	-.343	-.468
K3. My teacher has a wide range of knowledge covering many fields.	3.55	.949	-.405	.069
K4. My teacher can solve all of the course-related problems.	3.59	.999	-.369	-.345
K5. My teacher applies simple teaching methods that help me to understand the curriculum.	3.33	1.047	-.318	-.352
K6. My teacher is an expert in this field.	3.45	1.122	-.527	-.353
K7. My teacher prepares rich materials for the lessons.	3.36	.988	-.310	-.258
Humor (α=.870)	2.80	.729		
H1. My teacher often shares funny stories with us.	2.73	.947	.211	-.369
H2. We are never bored in my teacher's class.	2.87	.975	.020	-.450
H3. My teacher is a humorous teacher.	2.72	.925	.135	-.332
H4. My teacher creates a fun and relaxed learning environment.	2.77	.907	.146	-.342
H5. My teacher teaches has fun teaching methods.	2.84	.927	.052	-.477
H6. My teacher's teaching is very exciting.	2.87	.935	-.037	-.440
Teaching techniques (α=.839)	2.64	.767		
TT1. My teacher uses some creative teaching techniques.	2.49	.929	.377	-.018
TT2. My teacher often uses some new and non-traditional methods in teaching.	2.67	.926	.083	-.517
TT3. My teacher is able to use new and creative ideas to stimulate our learning.	2.66	.908	.095	-.296
TT4. My teacher uses some teaching materials that are new and interesting.	2.76	.973	.114	-.323
Overall (α=.928)	3.12	.604		

Goodness of Fit Index (GFI≥.90) (Joreskog & Sorbom, 1996), (c) the Standardized Root Mean Square Residual (SRMR≤.08) (Hu & Bentler, 1999), (d) the Root Mean Square Error of Approximation (RMSEA≤.08) (Kline, 2010), (e) the Non-Normed Fit Index (NNFI≥.90) (Hu & Bentler, 1999), (f) the Comparative Fit Index (CFI≥.90) (Hu & Bentler, 1999), and (g) the **Critical N Index (CN>200) (Hoelter, 1983)**. In this study, except GFI was slightly smaller than the recommended value .90, the model fit was acceptable (χ^2/df = 1.668; GFI=.89; SRMR=.054; RMSEA=.069; NNFI=.97; CFI=.97; CN=202.36).

2.3 Convergent Validity

In assessing the convergent validity of the measurement items in relation to their constructs, item reliability of each item, composite reliability (CR) of each construct, and the average variance extracted (AVE) were examined, as proposed by Fornell and Larcker (1981). The item reliability of the items was assessed by its factor loading onto the underlying construct. As suggested by Hair et al. (2010), an item is significant if its factor loading is greater than .50. As reported in Table 2, the standardized factor loadings of all the items ranged from .59 (CT4) to .80 (H4) and were all statistically significant at the $p < .001$ level.

In addition, the CR values should be greater than .6, while AVE should be above .50 for the validity convergence (Hair et al., 2010). As shown in Table 2, the CR for the four factors ranged from .842 to .894 exceeded the critical value of .6. The AVE of all factors were near (AVE=.498 for the Character Traits factor) or exceeded the recommended value of .50. Thus, convergent validity is confirmed.

2.4 Discriminant Validity

The discriminant validity assesses the degree to which constructs differ from each other. It will be supported if the square root of AVE for each construct is larger than the inter-construct correlation (Hair et al., 2010). In Table 3, the inter-construct correlation matrix was presented. The diagonal elements have been substituted by the square roots of the average variance extracted.

Table 2
Summary of the Confirmatory Factor Analysis

Factor/Item	Standardized factor loadings	*t*-test	R^2	Average variance extracted (AVE)	Composite reliability (CR)
Character traits				.498	.855
CT1	.73	19.91	.54		
CT2	.77	21.43	.60		
CT3	.72	19.29	.51		
CT4	.59	15.03	.35		
CT5	.69	18.32	.47		
CT6	.72	19.53	.52		
Knowledge				.548	.894
K1	.75	21.07	.57		
K2	.79	22.35	.62		
K3	.74	20.57	.55		
K4	.76	21.24	.57		
K5	.68	18.17	.46		
K6	.75	20.76	.56		
K7	.71	19.25	.50		
Humor				.535	.873
H1	.62	16.14	.38		
H2	.68	18.27	.46		
H3	.76	21.46	.59		
H4	.80	22.73	.63		
H5	.76	21.07	.57		
H6	.76	21.19	.57		
Teaching techniques				.572	.842
TT1	.69	18.42	.48		
TT2	.79	22.00	.62		
TT3	.77	21.49	.60		
TT4	.77	21.23	.59		

Note. Fit statistics for confirmatory factor analysis:χ^2=857.10, *df*=224, p<.00; χ^2/df = 1.668, GFI=.89, SRMR=.054, RMSEA=.069, NNFI=.97, CFI=.97, CN=202.36.

Discriminant validity was apparently illustrated in Table 3 (The "Humor" factor almost reaches the criterion).

Table 3
Inter-Construct Correlations and Square Roots of Average Variance Extracted

Construct	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1 character traits	.71			
Factor 2 knowledge	.68**	.74		
Factor 3 humor	.40**	.53**	.73	
Factor 4 teaching techniques	.23**	.40**	.74**	.76

Note. The bold elements in the main diagonal are the square roots of average variance extracted. **$p < .01$.

2.5 Relationship Between Teaching Charisma and Student Engagement

2.5.1 Correlations

Table 4 shows the correlations between teacher's charisma and student engagement. From Table 4, we could find that except the pair of Techniques and Performance, a significantly positive relationship between teacher's charisma and student's learning engagement. Overall, the results of the correlation analysis suggested that the teacher's characteristics in teaching are significantly associated with student engagement. Relative to other coefficients, the factor of Techniques had obviously lower correlation with variables of student engagement.

2.5.2 Regression

Before performing the analysis of regression, the bivariate correlations, tolerance, and variance inflation values were examined and neither bivariate nor multivariate collinearity was found. By the stepwise regression method, as shown in Table 5, the results of the regression analysis showed that three factors of the ITCCC, including Character Traits, Humor, and Knowledge, were significantly and positively related to student engagement. The overall model explained 42% of the variance in student engagement. When the data has been normalized to eliminate the constant, the following equation better allows us to see the relative contributions of the independent variables.

Student engagement = (.477×Character Traits) + (.160×Humor) + (.111×Knowledge)

Table 4
Correlations Between Teacher's Charisma and Student Engagement

Factor	Performance	Interaction	Emotion	Skills	Attitude	Student engagement
Character Traits	.466**	.327**	.600**	.461**	.320**	.615**
Knowledge	.357**	.335**	.559**	.325**	.261**	.517**
Humor	.189**	.382**	.338**	.273**	.321**	.408**
Techniques	.043	.363**	.215**	.102*	.202**	.241**
Teacher's Charisma	.360**	.439**	.568**	.386**	.352**	.585**

Note. **$p<.01$, * $p<.05$

Table 5
Summary of Regression Analysis for Factors Predicting Student's Learning Engagement

Variable	Unstandardized coefficients		Standardized coefficients
	B	Std. error	Beta
Character Traits	.345	.031	.477***
Humor	.118	.027	.160***
Knowledge	.075	.031	.111*

Note. R^2=.42 v, *** $p<.001$, * $p<.05$

3. DISCUSSION

This study is intended to validate the ITCCC model, proposed by Huang and Lin (2014), across the professional course—"Accounting" and to examine the relationship between student engagement and teaching charisma. The results revealed that the ITCCC could be also considered as a psychometrically valid instrument that can accurately assess students' perceptions of the quality of a teacher's teaching in professional subject. The empirical results not only indicate a strong positive relationship between teacher's charisma and student's learning engagement in the classroom, but also show that the three factors of the teaching charisma including teacher's character traits, humor, and knowledge can jointly predict student engagement in the accounting course.

Using data from college students enrolled in the accounting classes, the results plainly indicated that the ITCCC worked equally well for students from different types of classes. It indicated that students perceived a charismatic teacher to be humorous, knowledgeable, having great teaching methods, and possessing positive personality traits (e.g., approachable, warm and patient). Consistent with the findings of Huang and Lin (2014) in the calculus class, the ITCCC data from the accounting class also formed the same four factors in the current study. The analyses have consistently provided evidence to support the validity and reliability of the ITCCC in order to measure the teacher's charisma in teaching. It concluded that, in students' perception, charismatic teachers seem to have the same characteristics no matter in fundamental or professional subjects. Thus, the ITCCC can be considered a valid, reliable indicator of students' perceptions of the quality of a teacher's teaching. This

study has provided useful evidence to support usage of this inventory for future studies in this area.

Teacher's charisma was found to have significantly positive relationships with students' engagement in learning. According to this result, the teaching charisma increases the engagement in student's learning. It is the evident support that teacher's teaching behaviours play an important role in students' learning. That is, the teacher has a strong impact on their students. The findings were generally consistent with prior research (Bryson & Hand, 2007; Mearns et al., 2007; Huang & Lin, 2014; Laird & Kuh, 2005; Reason et al., 2006). However, it is worthy to note, that the "Techniques" factor has relatively lower correlation with variables of student engagement. It indicated that the teacher's teaching method seems to make little effect upon students' learning engagement in the accounting class.

Moreover, student engagement in learning activities is predicted by their perceptions of teachers' teaching. Student engagement is primarily a function of student perceptions of teachers' certain teaching behaviours. Specifically, students who experience their teachers as possessing positive personality traits, a sense of humor, and rich knowledge are more likely to be more effortful, enthusiastic and persistent. The findings correspond to preceding argument; the teaching charisma was again proved to be important in enhancing student engagement. It is not surprising that the "Techniques" factor did not act as a predictor. This illustrated that, relative to teaching skill, teacher's other characteristics can more triggered student engagement.

The study contributes to enrich our knowledge of teacher's charisma in different contexts and make an important contribution to our understanding of student engagement in college, especially for the relationship between the two constructs. The results imply some suggestions for teachers. There is no denying that teaching and teachers are central to student engagement; except to attach importance to teaching methods, teachers may make more effort on some aspects for enhancing students to engage in learning. First, as Hsiao (2009) mentioned that the teachers' behaviours, attitudes, appearance, and character may influence both the feeling students perceive and the interaction between teacher and student in the classroom. Teachers should be good role models who exert positive influences on their students. Thus, teachers should pay more attention to their behaviour or performance. Second, students prefer listening to teachers who incorporate humor into the lecture (Minchew, 2001; Neumann et al., 2009); it would be beneficial to enhance student engagement to incorporate humor in the classroom. Third, students expect teachers to be knowledgeable (Hill, Lomas, & MacGregor, 2003), thus teachers should always pursue further knowledge to enrich him/her.

The current study also has some weaknesses that limit the generalizability of its results. First, the study was conducted on a district that is not necessarily representative of all schools in Taiwan, let alone internationally. It will be important to replicate this study with more diverse samples in terms of regional and academic majors. Second limitation is the engagement instrument. We measured the construct of engagement only through self-report. It is suggested for researchers to measure engagement from the perspective of teachers. Researchers may assess student engagement by asking teachers to act as expert raters for assessing their students' willingness to participate in school activities, as well as their emotional reactions to these activities. To investigate the issue from the perspective of students and teachers respectively will strengthen the validity of the findings and provide alternative perspectives on the results. Third, this conclusion might be limited to the academic domains. It is important to carry out further studies that include other domains, such as social or artistic skills. Finally, the potential limitation of these results is that the measures use self-report and thus referring basically to participants' ability to report on their own behaviours and thoughts.

CONCLUSION

This study provides the evidence that the ITCCC is a valid and reliable instrument, giving a comprehensive framework to measure the teacher's charisma in college classroom no matter in fundamental or professional subjects. The ITCCC provides measurable indices for assessing four aspects of teaching charisma: character traits, knowledge, teaching techniques, and humor. This study also provides the evidence that increasing teacher's charisma can increase student engagement, and thus, that some approaches can be used as strategies to help students more engage in learning activities. As there is continuing notice in the issue of student engagement, it is important to continue further understanding the nature of student engagement in other populations and age groups. Furthermore, the question that remains open is whether engagement measured through the ITCCC is invariant across culture. Finally, it is hoped that this study will benefit teachers to improve students' learning and future studies can refer our findings to further studies.

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