

# The Effect of Personality, Situational Factors, and Communication Apprehension on a Blended Communication Course

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## Abstract

**Background/Objectives:** This study was to explore the influence of personality types and situational factors on public speaking. Also, it examined the effect of communication apprehension on students' academic achievement in a blended learning environment. **Methods:** A total of 182 participants who enrolled in a blended communication course were administered questionnaires that assessed the Big Five personality traits (openness, conscientiousness, extroversion, agreeableness, and neuroticism), situational factors (previous experiences, immediacy, level of rehearsal, and motivation) and level of communication apprehension. **Results:** According to regression analysis, the predictors among the personality traits affecting speech performance were extroversion and openness, and among the situational factors, only the level of rehearsal was found to be a predictor. Also, academic achievements were not affected by Communication Apprehension in a blended learning environment, which does not comport with the findings in traditional face-to-face classes. Implications for theory and pedagogical practice are discussed.

**Keywords:** Blended Learning, Communication Apprehension, Personality, Situational Factors, Speech

## 1. Introduction

Blended learning is one of the methods currently being used to try to compensate for the defects of the traditional classroom and to improve the learning environment by providing flexibility and active learning<sup>1</sup>. Many scholars have turned their attention toward e-Learning and blended learning environments and integration of technology based learning into classroom<sup>2</sup>. As technology-based learning is being expanded in higher education, more studies about its application and practices, perspectives, and effects on education and learning are required. One study regarding research trends and patterns in technology-based learning showed that non-specified and engineering/computer sciences were the most selected learning domains in the last decade<sup>3</sup>. Thus, it would be useful for teachers and institutions to examine a wider scope of learning domains. The present study aims to

explore effects of personality traits, situational factors and communication apprehension on a blended communication course. That is, there is a need to consider how the effects of situational factors and personality types on speech performance have changed in fluid social and pedagogical environments. Given the findings of previous research that the effects of technology-based learning greatly depend on personal differences in the psychology and personality of individuals, it would be promising to investigate how situational factors, personality traits, and communication apprehension affect learning outcomes in blended learning contexts.

Meanwhile, research dealing with public speaking has attempted to explore effective predictors of speaking performance. The variables influencing the quality of speaking performance can broadly be sorted into two kinds - situational factors on the one hand, and predispositional factors on the other. There has been some

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debate about the effects of these two kinds of factors on people's behavior. Actually, neither personality traits nor situational factors taken separately are good predictors of behavior. Instead, the interplay among these two kinds of variables provides adequate behavior predictions<sup>4</sup>. However, based on perspectives drawn from communicative behaviors, some studies purport to show that the impact of inherent personality traits on communication apprehension or speech performance is limited or marginal<sup>5</sup>, whereas other researchers argue that personality traits have a significant impact on communication behavior<sup>6</sup>. That being said, such studies have mostly been conducted in conventional face-to-face communication circumstances, and more studies of this kind in different communicative settings are needed at this point as our modes of communication are constantly expanding and changing across a variety of media. Therefore, the purpose of this study is two fold: (i) to explore the influence of situational and predispositional factors on speaking performance, (ii) to review the impact of CA on academic achievement in a blended learning environment.

## 2. Literature Review

### 2.1 Situational and Predispositional Factors

There are many predictors of public speaking. In regard to demographic predictors of speech performance, one study found that females earned significantly higher grades on their speeches than males<sup>7</sup>. Motivation to learn can be conceptualized either as a trait or state orientation. Trait motivation reflects a person's disposition toward learning. On the other hand, state motivation can be affected by situational factors such as the teacher or the classroom culture<sup>7</sup>. These motivations are related to academic performance<sup>8</sup> and successful speech abilities<sup>9</sup>.

Positive and constructive feedback from instructors, as well as an instructor's genuine interest in students and their learning, positively affect students' motivation<sup>10</sup>. Specifically, teachers' immediacy influences motivation and learning. Immediacy is an affect-based construct and is defined as "the degree of perceived physical and/or psychological closeness between people"<sup>9</sup>. Students are most motivated by, and learn more from, teachers who are perceived to be highly immediate, credible, and clear<sup>11</sup>. Several studies have provided evidence of a causal link which indicates that immediacy leads to higher cognitive and affective learning outcomes<sup>12</sup>. Undoubtedly,

practice is the most frequently cited remedy for speech anxiety because practice helps develop skill<sup>13</sup>. Several studies explored the relationship between time spent in preparation activities and overall speech grade averages and revealed that overall preparation time correlated significantly with higher speech grades<sup>14</sup>.

Some studies have shown that personality traits are predictors of communication behaviors. For instance, a study found that extroversion and neuroticism were overall predictors of assertive communication traits<sup>15</sup>. Also, there is evidence showing that personality traits have the potential to influence one's speech production. That is, extravert bilinguals are more fluent than the introvert, especially in formal situations<sup>16</sup>. In regard to the Big Five personality traits, extraversion, openness, agreeableness, and conscientiousness are positively related to academic achievements and the level of neuroticism is inversely related to academic outcomes<sup>17</sup>.

Communication Apprehension (CA) is a major determinant of speech competence and defined as "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons"<sup>18</sup>. CA includes both state and trait dimensions. Trait apprehension is general anxiety with different types of oral communication; on the other hand, state apprehension is specific to a given communication situation such as having job interviews or formal speeches, etc<sup>19</sup>. Research on student CA in relation to learning has generated findings that quite consistently show that students with high CA do poorly in speech performance<sup>11,14</sup>.

It should be noted that prior research about situational and predispositional variables that might affect CA has given rise to contrary positions. For instance, some scholars propose that inadequate skills are the source of anxiety in communication situations and that these skills can be improved in supportive learning environments<sup>20</sup>. However, in the communibiological perspective, situational factors or environment are conceived as having only a trivial impact on the trait CA. The communibiologists have argued that there is a major role played by genetics in communication behaviors<sup>6</sup>.

### 2.2 CA, Academic Achievements and Blended Learning Environment

In the educational context, behaviors of students with high CA and students with low CA in regard to seating in the classroom, small group discussion, and speech course

are substantially different. For example, one study found that the effects attributable to CA were significant for college GPA scores<sup>21</sup>. All the scores of the high CA group were found to be significantly lower than those of the low CA group. It was also found that students with high CA favored large-scale lectures compared to students with low CA, and showed low levels of academic achievement in small classroom settings where students need to speak frequently. Other research confirmed a statistically significant negative correlation between CA and cognitive performance and found CA as a potential barrier to student academic success<sup>12</sup>.

Blended learning refers to an integrated environment that combines the advantages of e-Learning and traditional classroom teaching. There is a widespread belief that blended learning is an effective mode of education. A host of studies on the effects of blended learning on academic achievements showed that academic performance is greatly affected by psychological and cognitive traits of individuals (interest, motivation, self-efficacy, learning style), personality types (introversion or extraversion, feeling vs. thinking type), and demographic characteristics<sup>22-24</sup>. In this regard, it would be interesting to investigate how CA, which is largely affected by personality traits, influences students' academic achievements in a blended learning environment.

### 3. Research Questions

Research questions in this study based on the existing literature are as follows:

RQ1: Do situational factors (i.e., motivations, immediacy, practice, and previous experience) and personality traits (i.e., neuroticism, extraversion, openness, agreeableness, and conscientiousness) predict public speaking performance in a blended learning environment?

RQ2: Is there a significant difference in academic achievements among high, moderate, and low communication apprehensive in a blended learning environment?

## 4. Methodology

### 4.1 Participants, Procedure and Context

The participants for this study, excluding dropouts and those with unfinished questionnaires, were 182 undergraduate students (99 males, 83 females) enrolled in eight sections of a communication (speaking & writing)

course. The course combines face-to-face lectures with online lessons. Participants represented a cross-section of academic years of enrollment (58% freshmen, 29.1% sophomores, 23.1% juniors, 15.9% seniors) and majors because the course is a basic requirement class. The age of the students ranged from 18 to 26 with a mean of 21.29 (SD = 1.44). Data collection spanning both spring and fall semesters had been conducted in 2011 and in 2012.

The present study on blended learning was conducted at the Ulsan National Institute of Science and Technology in Korea. The blended learning course utilizes a self-driven and intensive learning support system based on the Blackboard system. For this blended course, students attend 75 minutes of offline class and one online session where they engage in independent study each week.

Accompanying traditional classroom lessons, the online sessions for the present study require students to perform the following tasks mostly via Blackboard: browse the Internet, view online lectures or streaming media content, read various learning materials, participate in asynchronous online discussions, take real-time online quizzes and tests, engage in group problem-solving and collaborative tasks, share content, submit written assignments and receive feedback for those assignments. The university provides free WiFi wireless technology on campus where most students reside. It is worth noting that blended learning for the present study is pedagogy-driven and targets students taking full-time courses, in contrast with cyber-universities where the course-delivery is technology-driven and targets part-time students.

### 4.2. Scales

#### 4.2.1 Communication Apprehension

CA was measured using PRCA-24 (Personal Report of Communication Apprehension) scales<sup>25</sup>. It uses a five-point Likert type format and includes 24 items such as "I have no fear of giving a speech," "I dislike participating in group discussions," and so on. The PRCA-24 was designed to assess feelings about communication in four contexts: group discussion, meetings, dyads, and public speaking. In this research, two types of CA scores were measured. First, scores on PRCA that combine all four communication contexts served as the operational definition of "general CA". The 24 items measuring general CA were administered in the first class of each semester. Then, in regard to "speaker CA," six items relating only to a public speaking context were adopted using the

PRCA measurement method. The reliability coefficient for general CA in this study (Mean = 68.44, SD = 14.47) was .90, and the reliability of speaker CA (Mean = 18.17, SD = 4.45) was .92.

#### 4.2.2 Personality Type

To measure students' personality traits, the Big Five Personality Test which is widely used for research was performed. This is usually administered as an overall personality test that measures the traits of neuroticism, extraversion, openness, agreeableness, and conscientiousness. The inventory of the Big Five personality is a 44-item, untimed, self-report inventory established by previous researchers<sup>26</sup>. At the Big Five personality test homepage, students provided answers to the Big Five inventory survey, and reported the results to a researcher. Means for the Big Five test result were 31.60 (openness, SD = 23.59), 50.41 (conscientiousness, SD = 23.06), 46.86 (extraversion, SD = 28.38), 47.09 (agreeableness, SD = 23.80), and 41.84 (neuroticism, SD = 22.18) respectively.

#### 4.2.3 Instructor's Immediacy

To avoid the fatigue of questionnaire completion, students answered the short version of immediacy scales pertaining to how they evaluate instructor's immediacy using Christophel's immediacy scale<sup>9</sup>. We originally selected 6 questions for this study in regard to items on verbal and nonverbal immediacy and satisfaction with feedback or class environment (e.g., "The instructor praises students' work or comments," "The instructor uses proper eye contact"). A confirmatory factor analysis was conducted to test the validity of the short version. After problematic item was

eliminated the validity of immediacy scales were confirmed with four fit indices ( $X^2 = 15.10$ ,  $p = .011$ , CFI = 0.96, TLI = 0.89, RMSEA = 0.087). The reliability coefficient of immediacy (mean = 19.65, SD = 2.64) was .76.

#### 4.2.4 Motivation

WPI (Work Preference Inventory) was adopted from Amabile et al's study<sup>27</sup> in order to determine how motivated the students were in their public speaking courses. The inventory was designed to assess intrinsic and extrinsic motivation. To reduce the burden on participants, we selected 5 items which are more related to this study and slightly modified them (e.g., "I am keenly aware of the goals I have for getting good grades," "It is important for me to develop speech skills"). The reliability coefficient for academic motivation (mean = 19.65, SD = 2.64) was .86. The confirmatory factor analysis used to test the validity of scales and supported by the following fit indices ( $X^2 = 1.92$ ,  $p = .383$ , CFI = 0.94, TLI = 0.91, RMSEA = 0.063).

## 5. Findings

### 5.1. Correlation and Regression Analyses

Partial correlations controlling demographics among the variables are reported in Table 1. As expected, there was a significant and inverse relationship between general CA ( $r = -.43$ ,  $p < .001$ ) and speaker CA ( $r = -.45$ ,  $p < .001$ ), and speech performance rating. General CA and speaker CA significantly affected the speech quality. As indicated in Table 1, neuroticism ( $r = -.35$ ,  $p < .001$ ) was negatively correlated with speech rating. In addition, openness ( $r = .40$ ,  $p < .001$ ), extraversion ( $r = .47$ ,  $p < .001$ ),

**Table 1.** Partial correlations controlling demographics among variables

Variables	O	C	E	A	N	M	I	PH	LR	GCA	SCA	SR
Openness (O)	–	.11	.47*	-.05	-.24*	.11	.25*	.04	.14	-.42*	-.37*	.40*
Conscientiousness (C)		–	.04	.23*	-.29*	-.00	.06	.19*	.12	-.14	-.08	.12
Extroversion (E)			–	.11	-.34*	.33*	.33*	-.09	.27*	-.46*	-.55*	.47*
Agreeableness (A)				–	-.16*	.01	.03	-.00	.04	-.14	-.08	-.03
Neuroticism (N)					–	-.13	-.14	.02	-.29*	.39*	.43*	-.35*
Motivation (M)						–	.08	.01	.25*	-.04	-.19*	.23*
Immediacy (I)							–	.10	.32*	-.22*	-.27*	.29*
Prior history (PH)								–	.13	.03	.05	.03
Level of rehearsal (LR)									–	-.17*	-.24*	.38*
General CA(GCA)										–	.71*	-.43*
Speaker CA (SCA)											–	-.45*
Speech rating (SR)												–

Note. \* $p < .05$ , two tailed.

motivation ( $r = .23$ ,  $p < .01$ ), immediacy ( $r = .29$ ,  $p < .001$ ), and level of rehearsal ( $r = .38$ ,  $p < .001$ ) correlated significantly with speech rating.

Subsequently, a multiple regression analysis was performed in order to identify the predictive power of each variable. The multiple regression analysis accounted for 37.5% of the variance in public speaking ratings. Step-wise regression revealed that extraversion ( $F = 51.12$ ,  $p < .001$ ), level of rehearsal ( $F = 36.64$ ,  $p < .001$ ), speaker CA ( $F = 30.56$ ,  $p < .001$ ) and openness ( $F = 26.39$ ,  $p < .001$ ) predicted the speaking grade (Table 2). In conclusion, this research found that personality traits such as extraversion and openness variables, plus the amount of practice among situational factors, were effective predictive variables in blended speech learning environments.

## 5.2. Analysis of Variance (ANOVA)

The purpose of RQ2 was to identify whether there were any differences in academic achievements between a high CA group and other groups in blended learning classes. Analysis of the data from three measures of academic achievement (i.e., speech rating, writing score, and course grade) for this study produced only one significant effect attributable to CA (Table 3). The low CA group showed a higher speech rating ( $F = 21.89$ ,  $p < .001$ ) than moderate and high CA groups. However, the differences among the average writing scores and overall course grade of

**Table 2.** Variables and speech rating: hierarchical regression results

Variable	R	Rs <sup>2</sup>	F	P
Extroversion	.47	.22	51.12	.001
Level of Rehearsal	.54	.29	36.64	.001
Speaker CA	.58	.34	30.56	.001
Openness	.61	.38	26.39	.002

**Table 3.** Means of academic achievement among three CA groups

Academic Achievement	High CA group (N = 61)	Moderate CA (N = 70)	Low CA group (N = 51)	F-ratio
Speech rating	10.16	11.01	12.07	21.89***
Writing score	18.28	18.20	17.84	< 1 (NSD)
Overall course grade	56.84	57.37	57.33	< 1 (NSD)

Note. \*\*\* $p < .001$ , two tailed.

low, moderate and high CA groups were statistically insignificant in a blended learning environment. In other words, although students' academic achievements were affected by CA scores in conventional face-to-face classes, the present research suggests that the effect of CA on academic success is limited or nonexistent in a blended learning class.

## 6. Discussion

This investigation examined the links among the Big Five personality traits, situational factors, CA, and speech performance. As a result, predictors affecting speech scores among personality traits were extraversion and openness, and among the situational factors, only the level of rehearsal was found to be a predictor. Moreover, in terms of total variance (Table 2), personality traits were stronger predictors of speech rating than situational factors, with the two personality variables (i.e., extraversion and openness) being more influential than the situational variable (i.e., level of rehearsal). These findings indicate that personality was more influential on speech performance than situational factors. In this respect, the present study reinforces the communibiological perspective.

However, given the findings showing the direct impact of level of rehearsal on speech performance, and findings of this study as shown in Table 1, situational factors should not be ignored. According to the intermediary role of CA revealed by this study, CA is not only playing an intermediary role between personality and speech scores, but is also a directly determining factor of speech performance. Though CA was found to be correlated with introversion and extraversion in previous studies<sup>28</sup>, this research additionally discovered that two personality traits among the Big Five – extraversion and openness – were related to CA and speech performance.

Next, the present study explored the effect of CA on students' academic achievement in a blended learning environment. Even though low communication apprehensives were more successful in speech performance than high communication apprehensives, it was found that CA has no impact on overall course grade and writing scores. The findings in this study are not congruent with previous research<sup>11,21</sup>. This finding is probably linked to certain distinctive features of the blended learning environment. Introvert students preferred blended learning to conventional face-to-face learning<sup>29</sup>, and it is highly likely that blended learning might have provided a more comfortable

learning environment to high CA students as it allowed students to have more time for reflection or to study more independently, compared with conventional classes. In this regard, future research might further probe the impact that a blended learning environment has upon CA.

This study gives some pedagogical implications. Firstly, in regard to learning outcomes, new class strategies or a new course design targeted at each group of students with varying degrees of CA and personality traits in speech classes may be necessary. Given the finding of this study, it suggests that students in a blended learning environment experiencing high CA are not at a distinct disadvantage when compared to their low and moderate counterparts. Therefore, instructors can provide several options to learners in class activities. One possible solution is adopting blended learning. As blended learning classes designed for achieving such goals can provide more student-oriented curriculums and class management, bespoke education design is possible, while allowing instructors to make use of diverse strategies when designing speech or communication classes.

Second, CA and personality traits that have a negative impact on speech performance should be controlled in an appropriate manner. As CA and personality traits are difficult to transmute in reality, instructors must focus on creating a more supportive learning environment for students rather than focusing on changing their individual traits. For example, more attention and personalized instruction can be provided to students who are in need of special attention by conducting a simple test designed for identifying personality types. Accordingly, it is pivotal to provide a learning environment appropriate for enhancing the immediacy of instructors, students' motivation, and the amount of practice. Though the big impact of inherent traits on CA was revealed by previous studies and this study alike, the presence of a manageable portion, acknowledged even by commubiologists, were also evident. Instructors' appropriate and clear responses to students would give a fillip to students' motivation to learn and practice. It is not difficult to find success stories in which instructors' encouragement and students' efforts combined to breed small successes, and where experiencing such small successes helped students to overcome CA through an increase in self-efficacy.

Results indicate that personality traits and situational factors account for 37.5% of the variance in speech performance. Yet, approximately 60% of the variables have remained untapped. Overall, the correlation analysis

performed in this study showed weak to moderate relationships (spanning from .16 to .47) between speech scores and variables. Thus, further studies on more variables affecting speech skills are required. Avoiding sampling bias is vital in blended learning and communication courses, especially because there have been a series of studies on high CA students who are apt to forego public speaking classes, and introverted students were more in favor of attending blended learning classes<sup>29</sup>. Given the findings of those studies, what makes this research stand out is that it targeted students in all majors and grade levels.

## 7. References

1. Masie E. The blended learning imperative. In: Bonk CJ, Graham C, editors. *The handbook of blended learning: global perspectives, local designs*. San Francisco, CA: Pfeiffer Publishing; 2006. p. 22–6.
2. Kim JY. A study on learners perceptual typology and relationships among the learner's type, characteristics, and academic achievement in a blended e-Education environment. *Comput Educa*. 2012; 59(2):304–15.
3. Hsu et al YC. Research trends in technology-based learning from 2000 to 2009: A content analysis of publications in selected journals. *Educ Technol Soc*. 2012; 15(2):354–70.
4. Magnusson D, Endler NS. *Personality at the crossroads: current issues in interactional psychology*. Hillsdale, NJ: Lawrence Erlbaum; 1977.
5. Daly JA, Stafford L. Correlates and consequences of social-communicative anxiety. In: Daly JA, McCroskey JC, editors. *Avoiding communication: shyness, reticence and communication apprehension*. Beverly Hills, LA: Sage publications; 1984. p. 125–43.
6. Beatty MJ, Valencic KM. Context-based apprehension versus planning demands: communibiological analysis of anticipatory public speaking anxiety. *Comm Educ*. 2000; 49(1):58–71.
7. Pearson JC, Carmon AF, Child JT, Sendlak JL. Why the range in grades? An attempt to explain the variance in students public speaking grades. *Comm Q*. 2008; 56(4):392–406.
8. Goodman et al S. An investigation of the relationship between students' motivation and academic performance as mediated by effort. *S Afr J Psychol*. 2011; 41(3):373–85.
9. Christophel DM. The relationships among teacher immediacy behaviors, student motivation, and learning. *Comm Edu*. 1990; 39(4):323–40.
10. Ellis K. The impact of perceived teacher confirmation on receiver apprehension, motivation, and learning. *Comm Edu*. 2004; 53(1):1–20.
11. Chesebro JL, McCroskey JC. The relationship of teacher clarity and immediacy with student state receiver

- apprehension, affect, and cognitive learning. *Comm Edu.* 2001; 50(1):59–68.
12. Messman SJ, Jones-Corley J. Effects of communication environment, immediacy and communication apprehension on cognitive and affective learning. *Comm Monogr.* 2001; 68(2):184–200.
  13. Page WT. Helping the nervous presenter: research and prescriptions. *The J Bus Comm.* 1985. 22(2):9–19.
  14. Menzel KE, Carrell LJ. The relationship between preparation and performance in public speaking. *Comm Edu.* 1994; 43(1):17–26.
  15. Wahba JS, McCroskey JC. Temperament and brain systems as predictors of assertive communication traits. *Comm Res Rep.* 2005; 22(2):157–64.
  16. Dewaele J, Furnham A. Personality and speech production: a pilot study of second language learners. *Pers Individ Differ.* 2000; 28(2):355–65.
  17. Lounsbury JW, Sundstrom E, Loveland JM, Gibson LW. Intelligence, Big Five personality traits, and work drive as predictors of course grade. *Personality Pers Individ Differ.* 2003; 35:1231–9.
  18. McCroskey JC. Oral communication apprehension: Summary of recent theory and research. *Hum Comm Res.* 1977; 4:78–96.
  19. Finn AN, Sawyer CR, Behnke RR. A model of anxious arousal for public speaking. *Comm Edu.* 2009; 58(3):417–32.
  20. Daly JA, Vangelisti AL, Weber DJ. Speech anxiety affects how people prepare speeches: a protocol analysis of the preparation processes of speakers. *Comm Monogr.* 1995; 62(4):383–97.
  21. McCroskey JC, Andersen JF. The relationship between communication apprehension and academic achievement among college students. *Hum Comm Res.* 1976; 37(1):73–81.
  22. DiTiberio JK. Education, learning styles and cognitive styles. In: Hammer AL, editor. *MBTI applications: a decade of research on the Myers-Briggs Type Indicator.* Palo Alto, CA: Consulting Psychologists Press; 1996. p. 123–66.
  23. Komarraju M, Karau SJ, Schmeck R, Avdic A. The big five personality traits, learning styles, and academic achievement. *Pers Individ Differ.* 2011; 51(4):472–7.
  24. Landers RN, Lounsbury JW. An investigation of big five and narrow personality traits in relation to Internet usage. *Comput Hum Behav.* 2006; 22(2):283–93.
  25. McCroskey JC. *An introduction to rhetorical communication.* Englewood Cliffs, NJ: Prentice-Hall; 1982.
  26. John OP, Srivastava S. The big five trait taxonomy: history, measurement, and theoretical perspectives. In: Pervin LA, John OP, editors. *Handbook of personality: theory and research.* New York: Guilford Press; 1999. p. 102–38.
  27. Amabile TM, Hill KG, Hennessey BA, Tighe EM. The work preference inventory: assessing intrinsic and extrinsic motivational orientations. *J Pers Soc Psychol.* 1994; 66(5):950–67.
  28. Dwyer KK, Cruz AM. Communication apprehension, personality, and grades in the basic course: are there correlations? *Comm Res Rep.* 1998; 15(4):436–44.
  29. Macgregor C. Does personality matter: a comparison of student experiences in traditional and online classrooms. *Dissertation Abstracts International.* 2000; 61(5-A):1696.