Impact of College Students’ Learning Adaptation on Learning Conformity Behavior in Hengyang: Moderating Role of Peer Attachment

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Abstract This study explored the relationships among learning adaptation, peer attachment, and learning conformity behavior among college students in Hengyang, Hunan Province, China. A total of 704 questionnaires were collected from three universities in Hengyang through purposive sampling, and 650 valid questionnaires were obtained. Structural equation models were used to test the direct and moderating effects among the variables. The research indicated that good learning adaptation in Hengyang college students had a positive impact on learning conformity behavior and that college students’ peer attachments had a positive effect on their learning conformity behavior. Compared with students with low peer attachment, students with high peer attachment were better at learning and adapting; they engaged in learning conformity behavior more frequently. College students’ peer attachment positively moderated the relationship between learning adaptation and learning conformity behavior.

Keywords College students · Learning adaptation · Learning conformity behavior · Peer attachment

Introduction

Conformity behavior was first proposed by the psychologist Asch (1956) to explain the majority effect in the face of group pressure or when the stakes are high. In these cases, individuals are less likely to rely on their own beliefs and judgments, signifying that, even when the majority’s claim is wrong, an individual may still follow the majority’s opinion. From the 1990s, scholars in the marketing and finance fields invested in this theory (Bhanot & Williamson, 2020; Bikhchandani & Sharma, 2000; Gong et al., 2022; Mowen & Minor, 1995; Teng & Liu, 2014; Wilkie, 1994; Yan et al., 2012); however, few studies have been conducted on this topic in the education field. Some results indicated that female adolescents outperform male adolescents in education from the perspective of gender conformity pressure (Egan & Perry, 2001; Heyder et al., 2021; Vantieghem et al., 2015), and Asch (1956) experimentally found college students showcased conformity behavior in comparing bus routes. Adults are more likely to conform when there are financial incentives to be collected (Bhanot & Williamson, 2020); therefore, the incentive for college students to apply for a job or enter graduate school after they obtain a degree may also motivate them to adopt conformity. Thus, exploring what factors will affect college students’ conformity learning behavior is a topic worthy of further study in the field of education.

Relatively little attention has been focused on college students’ learning conformity behavior, especially in the China context. China is a typical country of collectivism culture; from birth, its people are integrated into strong, cohesive in-groups (Hofstede, 2011). In particular, with the trend of internationalization of higher education in China, in recent years, China has become the world’s largest source country for international students and one of the world’s largest
destination countries for international students (Yang et al., 2022). In order to adapt to the foreign learning environment more quickly students are more likely to manifest conformity behavior. Although some researchers suppose that conformity behavior would impede creativity (Van Hook & Tegano, 2002), there is no doubt that the great majority of students today largely manifest conformity, a pattern that has characterized students in the past in intellectual involvement and learning processes (Trent & Craise, 1967). Such conformity behavior during the learning process is called learning conformity behavior.

The literature on conformity behavior among college students during the learning process indicates that learning adaptation significantly affects the negative behavior of college students (Yuan et al., 2017). Chagnon (2017) revealed that learning adaptation, a dynamic interaction between individual students and the school environment, is significantly and positively related to conformity behavior. Response behavior in this process helps students to improve their learning ability, satisfaction, and self-realization; maintaining good interpersonal relationships with teachers and classmates and fostering harmony between them and their schools. Individuals engage in conformity behavior when adapting to their environments during the learning process (Piaget, 1964), and learning from the crowd is a type of conformity behavior.

In addition, attachment is an important factor in determining behavior (Buist et al., 2004). Smith et al. (1999) reported that attachment affects behavioral responses in other individuals and the group’s response. Studies have noted a certain correlation between individual attachment traits and interpersonal behavior, and also that people with different attachment traits behave differently. Compared with other traits, people with a secure attachment style are more harmonious with others during their interactions, and more satisfied with their interpersonal relationships (Feeney & Noller, 1990; Hazan & Shaver, 1987; Levy et al., 1998; Main et al., 1985; McCormack et al., 2005). In addition, the hope is to reduce the attrition rate of college students in STEM fields in the U.S., and good peer relationships can also increase college students’ commitment to their majors (Carrell et al., 2009; Rask, 2010). As mentioned in Bowlby’s attachment theory, individuals’ cognition and emotions in attachment relationships have a crucial influence on behavioral responses (Collins, 1996). When a peer relationship is established, individual college students can study hard with their peers, resulting in learning conformity behavior. This, in turn, leads to good academic achievement and commitment to the profession.

Hengyang, the second biggest city in Hunan Province, is located in the south of China with 10 colleges and universities certified by the Ministry of Education. Each school attaches great importance to students’ learning and adaptation from the beginning of enrollment, holding tutoring workshops and organizing dormitory activities to encourage students to establish good emotional connections with their peers and learn together. Therefore, this study takes university students as research objects in Hengyang to explore the relationships between three variables, learning adaptation, peer attachment, and learning conformity behavior, to provide a reference for future research.

Literature Review

Learning Adaptation and Learning Conformity Behavior

Based on the theory of cognitive development, adaptation is the process of changing an individual’s original basic behavioral patterns to suit the environmental requirements (Piaget, 1964). Adaptation can occur through two methods: assimilation and/or accommodation. These two complement each other and constitute the cognitive learning process (Flavell, 1985). In this study, learning adaptation refers to individuals’ self-adjusting learning behavior with awareness of the internal and external environment during the learning process, which helps to maintain a harmonious and interactive relationship with the environment (Tian & Lu, 2018). Learning conformity behavior refers to the behavior of individuals being consistent with that of the group during the school learning process as a result of the group’s influence. The conformity influence factor model proposed by Lascu and Zinkhan (1999) suggests that group factors, like interdependence and interactions among members, group attractiveness and previous success, influence conformity. Kriflik and Mullan (2007) noted that the ideal group would encourage students from different backgrounds and skills to learn from each other and also encourage individual responsibility in relation to the group. Thus, college students prefer to choose a group that is conducive and motivating to their own learning, developing good adaptability, and enhancing their learning related to assimilation. Learning behavior that cannot adapt to the teaching model during the learning process and change one’s learning approach is considered an adjustment (Piaget, 1964).

Research by Collie et al. (2017) indicated that college students’ learning adaptation positively affects positive behavior with their findings showing that college students’ learning adaptation has a positive effect on conformity behavior (Xiang, 2018). This leads to the development of Hypothesis 1:

H1 College students’ learning adaptation has a significant and positive effect on learning conformity behavior.
Peer Attachment and Learning Conformity Behavior

Collins (1996) reported that, according to Bowlby’s attachment theory, individuals’ cognition and emotions in attachment relationships have an important influence on behavioral responses. Positive interaction with friends is a significant determinant of college satisfaction (Fass & Tubman, 2002). Combining relevant research on peer attachment and learning conformity behavior has revealed that attachment is a key factor in determining behavior (de Guzman & Carlo, 2004; Oldfield et al., 2015; Walters, 2020). Many researchers have verified that peer attachment is a predator of misconduct: Gentina et al. (2018) revealed that the attachment of young peers in France and China had a significant and negative impact on dishonest consumer behavior, while Demanet et al. (2012) suggested that peer attachment is a predictor of problem behavior among Belgian youths. The extant studies have also indicated that peer attachment is the strongest predictor of misconduct (Heyder, et al., 2021; Lee & Park, 2017; Levey et al., 2019). However, peer attachment is also associated with positive adolescent adjustment in academic efficacy (Laible et al, 2000). To college students, perceived attachment to peers is a component of wider patterns of social competence and adjustment, such as participation in college and the achievement of academic success (Fass & Tubman, 2002). In this study, Chinese college students were expected to establish a favorable dependency relationship with their hard-working peers, which would result in conformity behavior. Therefore, Hypothesis 2 is proposed:

H2 College students’ peer attachment has a significantly positive effect on learning conformity behavior.

Learning Adaptation, Peer Attachment, and Learning Conformity Behavior

Collins’ (1996) attachment theory model states that, once the internal working model is activated, it directly affects an individual’s cognitive and emotional responses. Cognitive and emotional reactions interact with each other and determine individuals’ behavioral responses; thus, the effect of internal working models on behavior is regulated by cognitive and emotional processing. The internal working model represents various efforts made by individuals to obtain comfort and security; it shows the interactions between individuals and the environment (Bretherton & Munholland, 2008). The Dynamic-Maturational Model of Attachment and Adaptation shows that there is close connection of the DMM diagnostic classifications to observed behavior, which is unique to the developmental experience of each person (Crittenden and Spieker, 2018)). Corresponding to learning adaptation, in this study attachment represents cognition and emotions (You & Guo, 2008). Thus, learning as a developmental experience is related to attachment and adaption to the crowd, which is a conformity behavior. Apart from that, the influence of college students’ learning adaptation on learning conformity behavior is moderated by peer attachment.

By examining related research and discovering that different attachment traits have a moderating mechanism, La Flair et al. (2015) reported that anxiety-based attachment has a significantly positive moderating effect on intimate violence when people are experiencing depression. Busuito et al. (2014) noted that avoidant attachment after childhood abuse has a positive moderating effect on traumatic emotional expression disorders in adulthood. Lavy (2017) indicated negative associations of attachment insecurities (anxiety and avoidance) with students’ self-reported functioning in higher-education project groups, and with their satisfaction from their group’s functioning, which, in turn, indicates that high-level attachment has a positive effect on learning in-groups. Lopez and Fons-Scheyd (2008) showed that avoidant attachment among college students has a significant and negative moderating effect on role balance during periods of depression. Role balance as an “internal work model” is a manifestation of the adaptability of an individual’s inner life (Marks & MacDermid, 1996). Therefore, attachment has a moderating effect on individuals’ adaptation to the environment and their behavior. In summary, this study suggests that peer attachment has a moderating role between college students’ learning adaptation and learning conformity behavior. Compared with low peer attachment, when an emotional connection between individuals’ subjective cognition and that of a peer is established, individuals’ learning adaptability improves, and learning conformity behavior may develop more easily. This inference has led to the formation of Hypothesis 3:

H3 College students’ peer attachment has a moderating role between learning adaptation and learning conformity behavior.

According to the theoretical basis, purpose, and literature review of this study, a hypothetical model is proposed (Fig. 1) in which learning adaptation and peer attachment are considered influencing factors of learning conformity behavior, and peer attachment is considered the moderating variable between learning adaptation and learning conformity behavior.

Methods

Participants

In 2019, the proportion of the number of college students was 17.37% in Hengyang, which provided numerous college
student samples. Considering that random sampling requires more time, planning, and funding, and purposeful sampling has the advantages of good subject cooperation and high questionnaire recovery, this study selected three undergraduate colleges by using purposive sampling, the total population of students accounting for 66.37% in Hengyang, with engineering, medical care, science, literature, law, business, and education management majors. The majors were carefully selected from among the prestigious top ones awarded by the Ministry of Education of China. The investigation adopted the stratified sampling method, with a class of students in each grade, from freshmen to seniors, in the various majors selected to participate. The investigation was carried out in December 2019 with the participants’ consent. Participation was voluntary, and all data were handled confidentially. Finally, 705 questionnaires were distributed online, with 650 valid questionnaires obtained. Among the respondents, 50.2% were female and 49.8% male. Freshmen accounted for 28.4% of participants, sophomores 28.0%, junior students 21.4%, and senior students 22.2%. Participants without siblings accounted for 64.0%, and participants with siblings for 36.0%.

Research Tools

The questionnaire used in this study consisted of three parts. All 18 items were adopted and revised from relevant literature with relatively good reliability and validity, and presented in the form of a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), which is described as follows:

**Learning Adaptation Scale**

The learning adaptation scale by Feng et al. (2006) was suitable in the study because the scale was previously measured among college students. There were five dimensions in the scale; the environmental factor dimension was deleted in the confirmatory factor analysis because three of the four questions of environmental factors factor loadings were less than 0.50 (Bagozzi & Yi, 2012; Fornell & Larcker, 1981), perhaps caused by the ambiguity of the questions. For example, the question “university living conditions have a great impact on learning” confused the students about the exact reference of “living condition.” Regarding “The future employment situation will seriously affect my studies,” freshmen still have a vague concept of employment. Chen et al. (2016) revealed that the environmental factors of the scale were unsuitable in their research too. The remaining four dimensions were learning motivation (reverse scoring of 3/4/5 questions), teaching mode (reverse scoring), learning ability, and learning attitude (reverse scoring). In total, 25 questions were used, such as “I feel that I can adapt to university study” and “I can’t adapt to the college’s work and rest time.” Forward and reverse question types were used to measure learning adaptation.

**Peer Attachment Scale**

Kong’s (2017) Inventory of Parent and Peer Attachment-Revised tests the reliability and validity of samples involving college students. Its 24 questions involve three dimensions: communication, trust, and alienation (with reverse scoring). Examples of questions include “I can rely on friends to get rid of emotional difficulties” and “When I was with my friends, I felt lonely or distanced.” Forward and reverse questions are used to measure the level of peer attachment tendency.

**Learning Conformity Behavior Scale**

The learning conformity behavior scale employed herein was adapted from Liu et al. (2012). Nine questions and a single dimension were applied for questions on learning conformity behavior, such as “I can agree with the goal of classmates’ efforts”, “I will use the same learning methods as those of roommates or classmates”, “I have listened to the opinions of my classmates and chose a course and I am satisfied with”, and “I studied a course because I saw that my classmates or roommates were studying it.” These questions measure the frequency of learning conformity behavior.

Data Analysis

This study employed SPSS and AMOS for descriptive analysis, reliability and validity analysis, path analysis, and structural equation modeling (SEM) for multigroup analysis. Harman single factor analysis was used to test whether the research results were affected by common method deviations. Ten factors had unrotated feature roots greater than 1, and the explanatory variance of the first factor was 27.569%, which was less than 40%. Thus, no common method deviations occurred (Podsakoff et al., 2000).
Reliability and Validity Analysis

After testing, the skewness value of the learning adaptation scale was 0.451, and the kurtosis value was −0.575. SK was between −0.942 and 0.676, Mardia value was 21.499, which was smaller than P*(P + 2) = 675, (P was the number of observed variables). The skewness value of peer attachment scale was 0.133, and the kurtosis value was −0.917, SK was between −0.904 and 0.215, and Mardia value was 26.645, which was smaller than P*(P + 2) = 624. The skewness value of learning conformity behavior scale was 0.108, and the kurtosis value was −0.968, SK was between −0.887 and 0.213, and Mardia value was 14.503, which was smaller than P*(P + 2) = 99. All of these tests met reliability standards, which indicated that the data of the three scales had normal distribution (Kline, 1998; Mardia & Foster, 2007).

Through confirmatory factor analysis (CFA) of the detection and measurement model, the fit index of the model was $\chi^2/df = 2.806$, the standardized root mean square residual (SRMR) was 0.059, the root mean square error of approximation (RMSEA) was 0.060, the normed fit index (NFI) was 0.809, the comparative fit index (CFI) was 0.868, and the parsimony-adjusted CFI (PCFI) was 0.822. These results indicated that the model had good fit (Hair et al., 1998; Lomax & Schumacker, 2004).

The scales’ internal consistency in the present study was good; Cronbach’s alpha values were as follows: learning motivation 0.926, teaching model 0.930, learning ability 0.920, learning attitude 0.920, communication 0.948, trust 0.949, alienation 0.914, and learning conformity behavior 0.947.

The factor loading was greater than 0.5 (Bagozzi & Yi, 2012; Fornell & Larcker, 1981), the squared multiple correlation was greater than 0.3, the combined reliability values were all greater than 0.6, and the average extraction amount of each latent variable less than 0.5. These results indicated that the potential variable had good convergence validity (Hair et al., 2006), as indicated in Table 1.

Results

Path Analysis

To verify H1 and H2, a direct effect model was established. The CFA test model (learning adaptation and peer attachment → learning conformity behavior) fitness indices were as follows: $\chi^2/df = 3.844$, root mean square residual (RMR) = 0.075, SRMR = 0.066, CFI = 0.927, incremental fit index = 0.927, PNFI = 0.723, and PCFI = 0.741. These results showed that the model had a reasonable fit (Hair et al., 1998; Lomax & Schumacker, 2004).

After the model was tested for fitness, the parameter values in the model were used to verify whether the direct effects of H1 and H2 were true. The results revealed that the path coefficient of learning adaptation to learning conformity behavior was 0.125, and the $t$ value was 2.015, which was significant ($p < 0.05$). Thus, H1 was supported, which indicated that college students’ learning adaptation could significantly and positively influence learning conformity behavior. The path coefficient of peer attachment to learning conformity behavior was 0.330, and the $t$ value was 5.031, which was significant ($p < 0.001$). Thus, H2 was supported, which indicated that the peer attachment of college students could significantly and positively influence learning conformity behavior (Table 2).

SEM Multigroup Analysis

This study hypothesized that, because of peer attachment, the relationship between college students’ learning adaptation and conformity learning behavior may be enhanced or weakened. College students’ peer attachment is a moderating variable. SEM multigroup analysis was used to verify

Table 1 The Cronbach’s alpha, Composite Reliability (CR), Average Variance Extracted (AVE), and correlation matrix in Learning Motivation (LM), Teaching Model (TM), Learning Ability (LA1), Learning Attitude (LA2), Communication (C), Trust (T), Alienation (A), and Learning Conformity Behavior (LCB)

|          | Cronbach’s alpha | CR  | AVE  | LM   | TM   | LA1  | LA2  | C    | T    | A    | LCB  |
|----------|------------------|-----|------|------|------|------|------|------|------|------|------|------|
| LM       | .926             | .905| .546 | .739 |      |      |      |      |      |      |      |      |
| TM       | .930             | .894| .547 | .546 | .739 |      |      |      |      |      |      |      |
| LA1      | .920             | .923| .668 | .419 | .479 | .817 |      |      |      |      |      |      |
| LA2      | .920             | .885| .659 | .368 | .598 | .400 | .812 |      |      |      |      |      |
| C        | .948             | .944| .680 | .281 | .338 | .319 | .345 | .825 |      |      |      |      |
| T        | .949             | .939| .613 | .207 | .281 | .306 | .334 | .716 | .783 |      |      |      |
| A        | .914             | .908| .624 | .096 | .284 | .165 | .348 | .435 | .535 | .789 |      |      |
| LCB      | .947             | .909| .529 | .212 | .245 | .214 | .169 | .408 | .238 | .169 | .727 |      |

The square root of the AVE of variables is shown on the diagonal, and the correlation coefficient of two variables is shown on the below diagonal.
whether the moderating effect, which concerned with H3, was established. Following Rodriguez et al. (2008) and Paulssen et al. (2014), score split on peer attachment was conducted, and high-score and low-score groups were divided into the restriction model (the high-score group’s path coefficient was equal to the low-score’s group path coefficient) and unrestricted model (freely estimating path coefficient). The high-score group refers to students who have good communication and trust relationship with their peers, while the low-score group exhibits the opposite (Raja et al., 1992). The chi-square values of the two models were compared for significant differences (Paulssen et al., 2014).

Taking the peer attachment average value of 2.937 with a standard deviation of 0.816, participants with an average value of equal to, or greater than, 2.938 were categorized into the high-score group, and those with an average value of less than, or equal to, 2.937 made up the low-score group. The two groups had 238 and 262 subjects, respectively. The independent sample t test was used to test the validity of the group. The test result revealed a t value of −33.042, which was significant (p < 0.001), indicating that the grouping had good discrimination (Qiu, 2013).

The results for unrestricted mode were as follows: χ²/df = 3.020, adjusted goodness of fit index (AGFI) = 0.836, NFI = 0.877, CFI = 0.913, relative fit index (RFI) = 0.845, and critical n (CN) = 219; all of these indicators were better than those for the restricted mode: χ²/df = 3.064, AGFI = 0.835, NFI = 0.874, CFI = 0.911, RFI = 0.843, and CN = 216. Thus, the model had good fit (Hair et al., 1998; Lomax & Schumacker, 2004). Table 3 indicates that the unrestricted mode has 124 degrees of freedom, and the χ² value was 374.510, while the restricted mode had 125 degrees of freedom, and χ² was 383.038. Because the difference in degree of freedom was 1, the χ² difference was directly compared. The χ² difference between the two modes was 8.528, which was greater than 6.64, and thus significant (p < 0.01), indicating a significant difference between the unrestricted and restricted modes. Thus, a comparison of the structural parameters between the default and test models was performed under different conditions through multigroup analysis (Paulssen et al., 2014; Rodriguez et al., 2014).

| Path | γ | t | Whether it is supported |
|------|---|---|-------------------------|
| LCB ← LA | .125 | 2.015** | H1 supported |
| LCB ← PA | .330 | 5.031*** | H2 supported |

If the chi-square difference of the two models reached significance, the test model of the equal path coefficients was rejected, which showed that the main effect had different path coefficients under different peer attachment levels from the default, as presented in Table 3. Therefore, the moderating effect of H3 was supported, and the attachment of college students to peers had a moderating effect between learning adaptation and learning conformity behavior.

The interference path coefficient results revealed the following: both the low and high groups could significantly and positively affect the relationship between learning adaptation and learning conformity behavior. The high group was higher than the low group by 0.005, as presented in Table 4. The peer attachment of college students positively enhanced the moderating effect on the influence of learning adaptation on the learning conformity behavior.

**Conclusion and Suggestions**

**Discussion**

This study validated H1: learning adaptation has a positive effect on learning conformity behavior. Thus, better learning adaptation in college students results in more learning conformity behavior, which was consistent with the following research results. Chagnon (2017) noted that adaptation affects conformity behavior, while Yuan et al. (2017) stated that college students’ psychological adaptation could affect their behavior, Collie et al. (2017) reported that college students’ learning adaptation has a positive effect on behavior and Xiang (2018) found that the social adaptation of college students affects conformity behavior. Furthermore, Piaget’s (1964) cognitive theory posits that adaptation involves changing an individual’s basic behavioral pattern, which includes assimilation and/or accommodation, and that the two complement each other. Therefore, college students choose a learning environment that is conducive to their developing good adaptability and improving their learning. The learning environment

| Path | Low group γ | High group γ |
|------|-------------|--------------|
| LCB ← LA | 0.163** | 0.168*** |

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here refers to the place where the teaching and learning process occurs (Molang, 2021), one that is conducive to their developing good adaptability and improving their learning, which is regarded as assimilation (Piaget, 1964) and learning adaptation. When learning, if the students cannot adapt to the learning, they change their own learning method by exploring and learning from peer learning methods employed; these are considered to be adaptation and can be regarded as learning conformity behavior. These two types of behavior (learning adaptation and learning conformity behavior) influence each other. During school learning, if college students can better adapt to their learning environment, they will improve their learning motivation and ability, establish a good learning attitude, and improve their learning efficiency.

This study validated H2: peer attachment has a significantly positive effect on conformity learning behavior. Thus, greater peer attachment in college students results in more conformity learning behavior, which is consistent with the following studies: Neuhaus et al. (2020) showed that attachment can affect behavior and Wang (2017) reported that peer attachment can affect risk-taking behavior, while other studies have revealed that peer attachment can affect youth behavior (de Guzman & Carlo, 2004; Oldfield et al., 2015; Walters, 2020). Furthermore, Collins’ (1996) attachment theory model posits that individuals’ cognition and emotions in attachment relationships are critical influences on behavioral responses. The closer the attachment relationship, the more frequent conformity learning behavior, and vice versa. Positive peer relationships, serving as a secure base, may inspire individuals to strive toward goal orientations (Jin et al., 2019). If a group of college students hold the same or similar goals, they are more likely to generate learning conformity behavior.

This study validated H3. Compared with students with low peer attachment, better learning adaptation was noted in students with high peer attachment, which resulted in more frequent conformity learning behavior. Peer attachment positively enhanced the moderation between learning adaptation and conformity learning behavior. College students with high peer attachment had stronger learning adaptability and greater learning conformity behavior. For students with low peer attachment, although they had stronger learning adaptability, they had limited learning conformity behavior frequency. Stronger attachment relationships between peers results in more students caring about peers’ expectations and opinions; norms are internalized, and individuals thus engage in appropriate behavior (Connor-Smith et al., 2000). Therefore, when college students and peers have established high-intensity friendships, mutual companionship speeds up adaptation in learning. In learning together, students restrain each other and produce frequent learning conformity behaviors (Zhang & Guo, 2018). In this paper, individuals without siblings accounted for 64.0% of participants, which is nearly twice that of individuals with siblings. According to Wang (2015), students without siblings get along well with their peers and integrate into the learning environment quickly after they enter college. However, some studies have indicated that people without siblings are more distrustful, less competitive, and avoid responsibility in dealing with others (Cameron et al., 2013). Establishing emotional relationships with peers is not easy. Therefore, the performance of students without siblings tends to be polarized in establishing friendships with peers.

This study found that, if students have better learning adaptation and can establish good communication and trusting relationships with their peers in college, it results in more learning conformity behavior. They may become more capable of dealing with academic difficulties, are more likely to express increased confidence, and to complete academic tasks on time. However, today’s Chinese society is full of the phenomenon of the public blindly following investment and Internet celebrities driving excessive consumption. For educational practitioners, conformity behavior may not lead to good performance at all. Just as Asch (1956) proposed, when faced with group pressure or high-risk learning situations, individuals are less reliant on their own beliefs and judgments, and instead follow the wrong decisions of the majority, which, in turn, reduces learning independence and produces excessive peer attachment. Fortunately, college students are still on campus, and their ability to think independently is one of the core competencies of talents in the twenty-first century (Prensky, 2014; Silva, 2009; Tirri, 2016). Schools can design appropriate activities and use appropriate teaching strategies to teach students to have the ability to think independently and to achieve a balance between peer dependence and uniqueness.

Implications

The results of this study found that college students’ peer attachments and good learning adaptation had a positive effect on their learning conformity behavior; college students with high peer attachment had stronger learning adaptability and greater learning conformity behavior. The findings of the current study can provide some valuable insights into cultivating talents and designing activities in Chinese colleges. First, interest can be cultivated, and college students encouraged to establish good relationships with their classmates from the emotional and behavioral sides, and study together with their classmates, which can not only improve their academic achievement, but also reduce transfers (Carrell et al., 2009; Rask, 2010). Second, educational administrators should regularly hold cooperative peer activities, like dormitory design competitions, tug-of-war activities, and civilized class construction. Students with insecure
attachment relationships with peers will need assistance in developing supportive relationships with their peers at college, thereby aiding their academic performance (Holt et al., 2018). Third, college teachers are encouraged to use varied models of peer learning to fit their instructional goals for students, such as group discussion and workshop seminars, whether in the classroom or on the Internet, because any form of instruction accommodating learners’ individual needs can be considered adaptive, whether it is delivered face-to-face or in a technology-based format (Akbulut & Cardak, 2012). It’s worth noting that assessing the outcomes from group learning is highly necessary so as to avoid peer dependence on dominant vocal individual students and the ignorance of unexpressed students. Furthermore, teachers also need to help students to reflect on group activities and group learning to understand their learning performance in the group. Students can use this to understand whether they are a follower of no opinion or a good partner with ideas and achievements.

Limitations and Further Research

Although the current study broadens the existing literature by documenting the associations of peer attachment, learning adaptation, and learning conformity behavior in Chinese colleges, it has several limitations. First, the sample colleges were limited in Hengyang City, Hunan Province because of the outbreak of Covid-19 in China. Thus, future studies could cover a wider range of Chinese colleges and various majors to verify the difference between college students and their learning. Second, while the multidimensional learning adaptation and peer attachment might influence students divisively, this study did not distinguish them clearly because of the complexity. Thus, future studies could unpack the dimensions and analyze those variables more precisely. Third, this study is limited by a single quantitative methodology approach, which is potentially influenced by social desirability or common method bias (Podsakoff et al., 2003). Thus, future studies can adopt multiple methods, such as qualitative method, to improve the credibility of the research results and deepen the breadth of the research.

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Data Availability Due to confidentiality agreements, supporting data can only be made available to bona fide researchers subject to a non-disclosure agreement. Details of the data and how to request access are available from the corresponding author, Chia-Ching Tu, upon reasonable request.

Declarations

Conflict of interest This study did not accept any sponsorship funds. All authors (Chuang Xu and Chia-Ching Tu) state that there are no conflict of interest.

Ethical approval The design of this study was reviewed and approved by the institutional review board International College of Kirek University. All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975 (in its most recently amended version). The participants had the study purpose explained to them first, and then they were asked to provide written informed consent. Participation was voluntary, and all data were handled confidentially.

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