

COLLEGE STUDENTS' POSITIVE STRATEGIC SNS INVOLVEMENT AND STRESS  
COPING IN THE UNITED STATES AND CHINA

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## ABSTRACT

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As young people are increasingly dependent on Social Networking Site (SNS) to socialize, seek information, and self-broadcast, their SNS involvement was found to be associated with social capital and social support in a positive way, especially among individuals with low social psychological assets. Based on three audience-centered media use theories and review of literature, a positive social media involvement model is proposed to study college students' Facebook use and how their positive strategic involvement in certain online activities is related to users' social psychological well-being. More specifically, the goals of the study are threefold: First, to find out whether positive strategic SNS involvement is associated with adaptive coping and adjustment; second, to identify characteristics of SNS users who benefit most from positive strategic SNS involvement; third, to test the mediating roles of social support, social learning, and emotional status on the relationship between positive strategic SNS involvement and adaptive coping. Lastly, this study extends understanding of social media uses and social psychological effects in cross-cultural settings.

This study is based on a self-administered online survey of undergraduate students in a public university in the Midwest of the United States and a public university in Southern China between November 2013 and April 2014. A total of 265 survey responses were received from Chinese participants and 262 survey responses were received from American participants.

Results show that American student users' positive strategic SNS involvement to a certain extent assisted in their adaptive coping and adjustment. The positive effect of positive strategic SNS involvement was not found as an adaptive coping strategy among Chinese student respondents. Specifically, self-efficacious American student users and users with more online

social capital were more likely to positive strategically involve in Facebook to cope with stress adaptively. Perceived support from friends on Facebook was the key connecting positive strategic SNS involvement and adaptive coping. The findings suggest that the quality time each user spent on Facebook could be transferred to positive power that is psychologically rewarding for individual users and socially beneficial for one's online community when Facebook is taken as a channel to learn from each other, to provide and receive support, as well as to convey positive emotions. Theoretical and practical implication of this research is discussed.

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## CHAPTER I. INTRODUCTION

College is a major life transition for students. The challenges not only exist in academic expectations, but also in their social life and psychological adjustment to independent living and being away from home. Research found decreased social support and prevalence of avoidance coping strategies among college students (Brougham et al., 2009; Chao, 2011). Hence, there is a concern about college students' effective coping and psychological well-being. In spite of their high stress and limited resources, spending time on Social Networking Sites (SNSs) is an indispensable part of students' college life in both United States and China. The popularity of using SNSs has been explained by a variety of needs, including information seeking, socialization, and self-broadcasting. Empirical study showed that SNSs were used to cope with negative emotions and enhance social support (Zhang, Tang, & Leung, 2011). This study aims to explore college students' social media SNS involvement in relation to their social psychological well-being.

### **Background of the Research**

#### *Stressful College Life and Coping Styles*

As young people leave their families and go to college, they enter a new environment characterized by greater freedom, more opportunities for growth as well as higher stress accompanied by the need to accomplish developmental tasks in their emerging adulthood. Typical college students are in the developmental stage identified as "emerging adulthood", "a time of life... when little about the future has been decided for certain, when the scope of independent exploration of life's possibilities is greater for most people than it will be at any other period..." (Arnett, 2000, p.469). Developmental psychologists refer to challenges or expectations that a culture has for individuals in different life phases as developmental tasks.

According to Havighurst (1972), “a developmental task is a task that arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks.” In this developmental state of emerging adulthood, where aspects of identity and worldview are in vague, college students face two important developmental challenges: identity achievement and the development of intimacy (Erikson, 1963). To achieve these tasks, they may encounter numerous academic, financial, or social stressors, like concerns about grades, struggling for independence, and problems with roommates or friends (Arnett, 2004; Dusselier et al., 2005). Failure to accomplish these developmental tasks may result in poor psychological well-being in terms of lower life satisfaction, anxiety, and depression (Chao, 2011; Mahmoud et al., 2012; Newman & Newman, 2008).

Previous research indicates that contexts such as peers, families, and schools mediate how youth cope with the developmental issues (Subrahmanyam & S̃mahel, 2011). Established associations among stress, social support and effective coping indicated that individuals with high level of perceived stress could make better adjustment with adequate support and knowledge of effective coping strategies (Hong, & Lei, 2011; Lazarus & Folkman, 1984). In the transactional coping model proposed by Lazarus and Folkman (1984), coping is defined as the “constantly changing cognitive and behavioral efforts to manage specific external or internal demands”. Empirical research indicated that certain coping strategies facilitate psychological well-being better than others (Chao, 2012; Kausar, 2010; Zuckerman & Gagne, 2003).

Accordingly, coping can be categorized into adaptive and maladaptive coping. Adaptive coping refers to thoughts or actions leading to resolving stressful situations, while maladaptive coping refers to efforts to escape from stressors, which results in failure to solve problems. Adaptive or

functional coping strategies include self-help (e.g.: seeking support), approach (e.g.: defining the stressful situation and reflecting on possible solutions) and accommodation (e.g.: cognitive reinterpretation). Conversely, dysfunctional or maladaptive coping strategies include avoidance and self-punishment. Previous research has generally reached a consensus that dysfunctional coping intensifies the negative effect of stress on well-being (Ben-Zur, 2009; Billings & Moos, 1981; Carver et al., 1989; Kausar, 2010); while adaptive coping strategies, especially the problem-focused coping, are associated with better physical and psychological well-being among students (Aspinwall & Taylor, 1992; Ben-Zur, 2009; Holahan & Moos, 1987; Kausar, 2010; Sasaki & Yamasaki, 2007).

#### *Social Media as an Emerging Social Context for College Students*

A relatively new change on college campuses is the heightened role of technology. For almost all college students, the Internet has become an increasingly important factor in the academic and social realms of life on campus. The popularity of SNS has now become one of the Internet's most visible and intriguing phenomena in the US and worldwide. Social networking sites are the latest online communication tools that allow users to create a public or private profile to interact with people in their networks (Boyd & Ellison, 2007). Boyd and Ellison (2007) defined SNS as “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system”. The first social networking site was founded back in the 90s but the success of the sites was obtained with the rise of MySpace, Facebook, and Twitter. According to the Alexa Global Traffic Rankings (2012), the top five US-based SNSs are Facebook, Twitter, LinkedIn, MySpace, and Google +. As of August 2015, there are more than a million people connected on

Facebook. In China, SNS also attracted online users' attention. According to the China Internet Network Information Center (CNNIC, 2013), the number of Internet users had reached 591 million by June, 2013. Almost half of the whole Internet population, 288 million online users, involve in SNS activities. In a 2011 report, the top five most popular China-based SNSs were Ozone, Renren, Pengyou, Sina Weibo, Kaixin and 51.com (Lukoff, 2011). By 2014, the number of Renren (Chinese counterpart of Facebook) users totaled more than 223 million (Statista, 2015). Young people have been at the forefront of SNS and spending time on social networking sites appears to be part of most U.S. young adults' daily activities (Ellison, Steinfield, & Lampe, 2007; Pew Research Center, 2010). As of December 2012, 86% of Internet users between the ages of 18 and 29 used Facebook (Pew Research Center, 2012). A study of 2,359 college students found that they spent almost two hours daily on Facebook (Bosker, 2013). As the largest online users group in China, adolescents under 25 accounted for 46.3% of 457 million online users by December 2010 (CNNIC, 2011b). Specifically, 86.4% Chinese college students reported using SNS, which is 35% higher than the general online population (CNNIC, 2011b). The popularity of SNS can be explained from its unique attributes and capability of satisfying diversified needs. The author of this study summarizes five major and unique SNS attributes contributing to its popularity among college students: richness, sociability, publicness, participatory, and archivability.

*Richness.* Richness refers to the rich functions of SNS to satisfy diversified needs. As a popular mediated communication channel with both attributes of mass media and interpersonal communication technologies, SNS not only serves as a multimedia platform providing traditional media content like news, picture, audio, or video, but also offers a combination of computer-mediated communication tools like instant messaging, blog, interest groups, bulletin boards,

email, and close friend networks. Therefore, information and interaction in social network as well as various entertainments are easily accessible through SNS. With many utilities in one, SNS can be used to gain information, maintain social connection and adjust emotional status conveniently in daily life.

*Sociability.* As the most important attribute, SNS enables a many-to-many interactive communication model among SNS users and serves as a virtual social place for relationship initiation, maintenance, and development (Rafaeli, 1998). Facebook's friend list, as a fundamental SNS component, displays users' social connections. Other major SNS features, like searching, personal profile, instant messaging, and bulletin boards posting facilitate interpersonal communication to an even greater degree (Ha & Hu, 2013; Tang, 2013). The unique sharing function enables users to send and receive media content or messages within their social networks and promotes the growth of a network of mutual friends that has potential for massive expansion (Ancu & Cozma, 2009; Ha & Hu, 2013).

*Publicness.* Although users can communicate privately within SNS, they can also communicate in ways that are visible to everyone else within the network (Hall, 2009). SNS is a virtual individualized public sphere, where people of similar interest get together to communicate, share, and discuss ideas (Boyd & Ellison, 2007; Raacke, & Bonds-Raacke, 2008). This attribute differentiates SNS from other interpersonal communication technology and brings the privacy issue up for discussion. On the other hand, users aware of this attribute may work on their SNS personal profiles to create and manage their public images strategically without being constrained by time or space (Rosenberg & Egbert, 2011), such as presenting themselves in favorable ways for jobs. Furthermore, the impression management use of SNS enables users greater levels of control of their identity construction (Roy, 2012).

*Participatory.* Web 2.0 enables different types of participation on SNS. The ease of use and user control features enable SNS users to receive greater gratifications from their SNS experience (Shao, 2009). Every SNS user can be a content producer, editor, as well as consumer (Ha & Yun, 2011). Besides creating content, SNS users can involve themselves in different socializing activities, such as online chatting, group discussion, sending and receiving virtual gifts, and clicking “like” or “share”. These activities enrich users’ socializing channels and enhance their sense of community.

*Archivability.* As the secondary fruits of SNS’ communicative architecture, the archival aspect refers to documentation of user-generated media content on SNS. With addition of the “timeline” function on Facebook, user-generated content are documented chronologically on personal pages. Users can interact with media content to both express themselves socially and document their thoughts and personal lives. SNS serves as a virtual place for users to curate individualized media fragments, including notes, messages, pictures, symbolic tokens, and snippets of meaningful items (Good, 2013). As a personal media archive, SNS documents and articulates users’ existing social networks, filters content from the expanding world of online information, and communicates users’ tastes and accumulated knowledge about society.

Based on the theory of the niche (Feaster, 2009), various media outlets compete to gratify users’ needs and obtain limited resources in terms of time, money, and attention. Social media with rich and unique attributes can satisfy young peoples’ diversified needs and thus dominate their daily life. As a popular interactive media, SNS brought college students’ social interaction into electronic worlds and serve as another social context for their development by connecting them to other contextual influences in their lives, such as connecting to peers and leisure activities online. Among adolescents, communication with peers is one of the most popular uses



of technology (Subrahmanyam & Greenfield, 2008). Subrahmanyam and S̃mahel (2011) argue that online communication forms, which combine peer interaction with a popular medium, may provide promising venues for adolescents to explore developmental challenges they face in their lives. For example, the advent of new media technologies has dramatically changed both the nature and number of mood-management devices making the large number of entertainment choices available to most college students. More specifically, newer digital media provide opportunities for adolescents to self-disclose to peers to deal with their developmental issues. However, the psychological implication of such availability is unclear: some research points out the positive benefits of social media use while others highlight the negative impact of addiction. Because the bulk of negative evidence for social media use has focused on addiction rather than average levels of use, it is still unclear whether and how normative social media use is influencing students' stress coping and adjustment in college settings.

### **Purpose and Research Problem**

The purpose of the study is to explore positive ways of using SNS among college students. The central research problem of this study was generated by a series of questions: Are there certain ways of using social media that are more psychologically beneficial? Can use of SNSs serve as an adaptive coping strategy for low self-efficacy users? What is a healthy social media diet like? Based on classic media use theories, a central hypothesis proposed in this study is that SNS users with high-perceived levels of stress who involve in SNS in a *positive* way can adaptively cope with stress and enhance social and emotional adjustment. One important construct proposed in this study is *positive strategic SNS involvement*, which refers to strategic involvement in entertaining, educational, and recharging SNS activities to positively motivate users' adaptive stress coping through mood optimization, social learning, and social support.

With positivity of SNS involvement employed as the independent variable and coping strategies serving as the dependent variable, this study explored moderations and mediations in the relationship between SNS involvement and adaptive coping strategies.

More specifically, the goals of the study are threefold: First, to find out whether positive strategic SNS involvement is associated with adaptive coping and college students' social and personal-emotional adjustment; second, to identify characteristics of SNS users who benefit most from positive strategic SNS involvement; third, to test the mediating roles of social support, social learning, and emotional status on the relationship between positive strategic SNS involvement and adaptive coping. Lastly, this study extends understanding of social media uses and psychological effects in cross-cultural settings. As social media use is driven by social need and culturally dependent social interaction, cultural value may play a role in SNS uses and effects in a cross-cultural context (Lu et al., 2012). Thus, survey data were collected from college students in China and the United States, considering the comparable prevalence of SNS use and dramatically different cultural orientations in these two countries.

### **Significance of the Research**

Exploring empirical evidences of positive strategic SNS involvement among college students is important because of the large number of users and the substantial time they spend on social media. Established positive association between problematic online media use and addictive symptoms suggests the importance of limiting SNS use to a normative level on the one hand. On the other hand, it also indicates that we should explore specific uses of SNS that enhance users' social and psychological well-being to take advantage of their dependency on social media. It is expected that findings of this exploratory study provide empirical evidences related to positive strategic SNS involvement and contribute to a better understanding of the role

social media should play to enhance social psychological well-being in psychological counseling and intervention settings.

Despite the importance of finding out positive ways of using SNS among college students, it is a much-neglected area of research. The majority of literature on social psychological effects of college students' SNS use focus on excessive SNS use and consequential negative effects, including addictive symptoms, online bullying, and others. Although recent research provides some evidences about SNS use and positive social psychological well-being measured by enhanced social capital and increased access to information and support (Bessiere et al., 2008; Vadeboncoeur, 2005), whether a positive association exists between normative SNS use and social psychological well-being still deserves further examination. To provide a full explanation of how specific SNS uses are related to positive outcomes, an empirical study built on a theoretical framework based on established theories and social media's functionality is needed.

Due to an absence of literature in this area and a belief that research on positive effects of social media use is as important as research on their negative effects, the author of this study formulates a theoretical model based on media use theories to examine stress relevant SNS use and how it is related to coping and adjustment. Three classic media use theories are combined together to formulate a theoretical framework to explain positive strategic SNS involvement: uses and gratifications theory, mood management theory, and social cognitive theory. The proposed framework of stress related SNS involvement and effect includes two stages. The first stage is identified as stress related SNS use stage, in which perceived level of stress is associated with positive strategic SNS involvement. According to uses and gratifications and mood management theory, SNS users are motivated by mood adjustment need and selectively involve

in activities enhancing stress relief and mood optimization. The second stage is SNS effect stage. Social cognitive theory is incorporated to explain the role cognition plays in selective SNS involvement and social psychological outcomes. In this stage, associations between positive strategic SNS involvement and adaptive coping as well as relevant mediation and moderation effects are examined to explain whether or not positive strategic SNS involvement relates to adaptive coping and how it works.

The theoretical model explains the pathways for positive strategic SNS involvement among college students and extends prior research in three ways. First, adaptive coping and adjustment are tested as outcome variables and potential gratifications obtained from positive strategic SNS involvement. Although SNS use has been found to be positively associated with social capital (Ellison, Steinfield, & Lampe, 2007), emotional support (Zhang, Tang, & Leung, 2011), and informational support (Bessiere, Kiesler & Kraut, 2008; Ellison, 2011; Wright et al., 2013), this is the first study to the author's knowledge that measures social psychological effects by adaptive stress coping as a dependent variable and social-psychological adjustment as secondary outcome variables. In addition, previous research on social psychological effects of SNS use didn't fully examine mood management as a motive and outcome variable. Considering the variety of information and entertainment resource easily accessible on SNS, its mood-regulating function should be paid more attention and taken into consideration when studying positive effects of SNS involvement. Based on mood management theory, users' perceived level of stress is tested as an antecedent of positive strategic SNS involvement, and perceived emotional status while using SNS is examined as a mediator in the association between positive strategic SNS involvement and adaptive coping. Furthermore, social cognitive theory is adopted in this study to examine whether college students' adaptive coping is related to information

processed from online interaction, such as encouraging messages and role models' updates. Previous research suggested that SNS peer interaction could promote social learning and facilitate self-efficacy among individuals facing pressing health concerns (Ahn, 2011; Ballantine & Stephenson, 2011; Greene et al., 2011; Wohn et al., 2013; Yu et al., 2010). Examining student users' exposure to efficacy-boosting messages on SNS in relation to their adaptive coping provides another perspective to the study of positive use of SNS.

Findings of this study also provide some practical implications to promote healthy social media use with positive outcomes, especially for low self-efficacy users. Specifically, it is expected that low self-efficacy users are more likely to benefit from positive strategic SNS involvement through role modeling, seeking emotional and informational support, as well as adjusting moods on SNS based on the proposed theoretical model. A better understanding of components of positive strategic SNS involvement may contribute to knowledge of social media literacy and shed some light on intervention design for addictive SNS users in counseling settings. Parents, social workers and counselors can utilize the findings of this study to customize their communication and support to college students effectively.

### **Organization of the Dissertation**

The dissertation consists of six chapters. Chapter One describes the background, significance, purpose and research questions of the present research. Chapter Two analyzed related literature. The first section introduces three theories of media use and effects, uses and gratifications theory, mood management theory, and social cognitive theory, and proposes a theoretical model based on these theories. The second section summarizes previous studies regarding online media use and social psychological well-being. The third section discusses cultural differences in SNS use. Chapter Three introduces the research model, definitions of

concepts in the model, the mediation and moderation among the variables within this model, as well as proposed research questions and hypotheses. Chapter Four describes the method of the study and measurement of the concepts. Chapter Five presents an analysis of the data to answer research questions and test hypotheses. Chapter Six discusses the findings and provides the conclusion and suggestions for future research.

## **CHAPTER II. LITERATURE REVIEW**

The research literature on social psychological effects of media use can be summarized into positive vs. negative effects based on active vs. passive users assumption. Specifically, social psychological effects on passive audiences were more prevalent in traditional media effects research where media content was mostly conceptualized as universal and influential; while the effects on active audiences has gained more attention since the 1970s with the emergence of a series of theories employing the active user assumption. While early media effects research built on the passive user assumption more frequently reports findings of negative effects, recent studies based on the active users assumption suggest a potential for positive use to enhance social psychological well-being. This chapter covers a review of literature on negative social psychological effects of media use, ranging from TV, videogames, to online media. It also elaborates on the origin, evolution, and development of three active-audience theories. Lastly, this chapter summarizes recent research findings on the positive social psychological effects of social media use.

### **Negative Social Psychological Effects of Media Use**

Previous research indicated that excessive TV and videogame use could enhance negative self-perception among young people. A significant negative relationship was found between time spent on watching television and general self-esteem among 1027 third-to-fifth-grade girls in a quasi-experiment (Racine et al., 2011). Another survey of approximately 500 youth found that video game playing was associated with lower self-esteem (Jackson et al., 2010). Similarly, in 2011, a survey of 600 high school students in South Korea indicated a negative association between the degree of game addiction and offline social self-efficacy, but a positive association with online social self-efficacy (Jeong & Jim, 2011). The difference in online and offline social

self-efficacy suggests that videogame addicts were more confident socializing online rather than face-to-face. In addition to the amount of time users spent on TV and videogames, exposure to certain content has been found to relate to a lower level of self-esteem afterwards, such as ostracism content on TV (Coyne et al., 2011). Research on video games also showed that playing games emphasizing body image significantly lowers users' body esteem after playing when controlling for time spent playing video games and body mass index (Barlett & Harris, 2008). Both the amount of time spent using media and specific media content contribute to negative social psychological effects of media use.

The negative association between excessive media consumption and youths' self-perception can be explained by cultivation theory and social comparison mechanism. Cultivation theory posits that heavy media users are more likely to perceive the real world as a place full of people with ideal body images (Van Vonderen & Kinnally, 2012). Based on upwards social comparison mechanism, young people who are in a stage of building self-concepts are more likely to compare themselves to ideal role models and suffer from lowering their self-esteem. However, the negative effect is not universal among all social groups. Underprivileged social groups were more likely to experience low self-esteem or self-satisfaction after heavy TV consumption because of their underrepresentation and stereotypical portrayals on TV. Rivadeneyra and his colleagues (2007) found that greater exposure to popular primetime programs and deeper involvement were negatively associated with social esteem among 115 Latino undergraduate female students. In contrast, privileged social groups could gain self-esteem from TV consumption because they were more likely to perceive those ideal models on TV as attainable (Martins & Harrison, 2012). In a panel survey of 396 elementary school



children, TV exposure was found to be associated with lower self-esteem among white and black girls and black boys, but higher self-esteem among white boys (Coyne et al., 2011).

Research on Internet use indicated similar findings on young people's social psychological well-being when their Internet use is problematic. Scholars defined Problematic Internet use (PIU) as "use of the Internet that creates psychological, social, school or work difficulties in a person's life" (Beard & Wolf, 2001; Beutel et al., 2011). It has been argued that excessive use of the Internet to avoid negative emotion and offline face-to-face interaction is associated with poor social psychological well-being (Beutel et al., 2011; Kraut et al., 1998; Lanthier and Windham, 2004; Li et al., 2010; Valkenburg & Peter, 2007). For example, Kraut and his colleagues (1998) found in their HomeNet study that greater use of the Internet was associated with declines in participants' communication with family members in the household, decline in the size of their social circle, and increases in their depression and loneliness. Regarding whether the negative effect of PIU is more prominent among "rich" users (users with more social capital and social support) or "poor" users, previous scholars proposed two hypotheses: the "rich gets poorer" hypothesis and the "poor gets poorer" hypothesis. Scholars who agree with the "rich gets poorer" hypothesis argue that "rich" users are more likely to experience the negative influence. For example, in a longitudinal survey following up Kraut and his colleagues' research, Bessiere and his colleagues (2008) found that only people with higher or medium original social support levels showed high depression scores after using the Internet, while the depression levels of those with originally low levels of social support hadn't changed. Other scholars argue that "poor" Internet users, such as lonely individuals and adolescents with weak offline social connections were more likely to be involved in problematic online media use, which would result in negative life outcomes, like fewer face-to-face interactions and higher

levels of loneliness (Karaiskos et al., 2010; Kuss, & Griffiths, 2011). They pointed out the addictive nature of online media and indicated a vicious cycle in individuals' media use and psychological well-being. The negative social psychological effect of online media use among heavy users was explained by the significant amount of time displaced from their offline communicating with close social connections, like family members (Kraut et al., 1998).

While early research reporting negative social psychological effects of media use was mostly based on a passive user assumption and strong media effects theories, later research on positive social psychological effects of media use was better explained by media use theories based on the active audiences assumption, such as uses and gratifications theory, mood management theory, and social cognitive theory.

### **Emergence of Active-audience Theories**

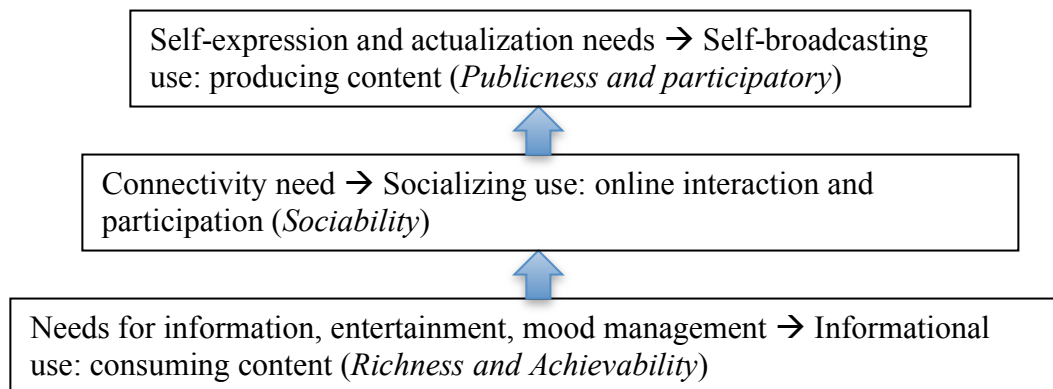
In 1970s, with an increase in empirical research on audiences' media use behavior, the uses and gratifications approach, an audience-centered media use approach was developed based on the active user assumption (Baran & Davis, 1995). Researchers started to focus on what people do with media rather than what media do to people. Contradictory to traditional source-dominated media use theories, which generally assumes audiences to be passive users directly influenced by media content, the uses and gratifications theory argues that users initiate selection of media content from an array of communication alternatives to satisfy their needs and desires and develop different patterns of media use (Katz, Blumler, & Gurevitch, 1974; Rosengren, 1974; Rubin, 2009). Consequently, media effects are not universal but socially and psychologically constrained by individual differences (Rubin, 2009).

*Origins and Evolution of Media Uses and Gratifications*

In the early stage of theory development, research following the uses and gratifications approach was descriptive and focused on identifying motives of media use and developing typologies (Rubin, 2009). The theory was applied to study audiences' motives of using traditional media, such as radio (Herzog, 1944), newspapers and magazines (Payne, Severn, & Dozier, 1988), and television (McQuail, Blumler, & Brown, 1972). Later research was more systematic, and some investigators began to ask about consequences of media use. Motivations of media consumption were connected with effects, which established a basic model of "motivation – use – effect" for media effects research. Two concepts, gratification sought (GS) and gratification obtained (GO), proposed in uses and gratifications theory, help explain motivations to consume media content as well as outcomes of media consumption. According to Rubin, Palmgreen, and Sypher (1994), "gratifications sought (GS) represent motives for media exposure and are based on expectations about media content. Gratifications obtained (GO), on the other hand, are perceived personal outcomes" (p. 173). Although GS and GO don't determine each other, previous research suggests a positive relationship between gratification sought and gratification obtained (Mitchell, 1999). More recent research based on uses and gratifications theory further explored the moderating role of motivation in media uses and effects. For example, So (2012) proposed a theoretical model regarding the impact of audience motivation on risk perception. In the model, surveillance motivation was postulated to influence social risk perception, whereas enjoyment motivation was postulated to influence personal risk perception to a greater extent. The model also predicted that mixed motivation of surveillance and enjoyment will result in similar degrees of both social and personal risk perceptions.

### *Development of Uses and Gratifications in Social Media Context*

An increasing application of the uses and gratifications approach to the study social media generates new motives and typologies to categorize gratifications. For instance, emotional support has been included as one of six gratifications obtained from SNS in a factor analysis of an online survey among 437 students (Zhang, Tang, & Leung, 2011). Recent studies on SNS uses and gratifications generally indicate three major SNS uses among college students — socializing, information seeking, and self-broadcasting (Fang & Ha, 2011; Gonzales & Hancock, 2011; Hall, 2009; Mehdizadeh, 2010; Quan-Haase & Young, 2010; Ray, 2007; Shao, 2009; Smock et al., 2011; Sun, & Wu, 2012; Urista et al., 2009; Yartey, & Ha, 2013). Shao (2009) provided a comprehensive summary of three levels of SNS use in relation to different gratifications in a hierarchical model. At the first basic level, individuals consume SNS content to fulfill their information, entertainment, and mood management needs. At the second level, they participate through interacting with the content and other users to enhance social connections and build virtual communities. At the top level, users produce their own content for self-expression and actualization. Built on Shao’s hierarchical model, a hierarchical model of SNS attributes (details in Chapter 1), uses, and gratifications is shown in Figure 2.1.



**Figure 2.1. Motivations, SNS uses, user behaviors, and SNS attributes**

Adapted from Shao’s theoretical model (2009, p.15)

*Informational use.* Informational use refers to users' consumption of SNS news feeds and information from online social circles. As a popular mediated communication channel with both attributes of mass media and interpersonal communication technologies, social media not only serve as multimedia platforms providing traditional media content like news, picture, audio, or video, but also offers a combination of computer-mediated communication tools like instant messaging, blog, groups, bulletin boards, email, and close friend circles. It was found that SNS users devoted most of their time to either non-specific passive social browsing like reading newsfeeds or goal-oriented social searching such as viewing friends' profiles (Wise et al., 2010). Users spent more time on social searching than on social browsing on SNS. With many utilities in one, societal news and personal news are easily accessible through SNS.

*Socializing use.* As the fundamental function of social media, socializing use refers to users' online interaction with friends to initiate, maintain, or develop relationship. Although family members continue to play a crucial role in adolescents' well-being, peers' influence becomes increasingly important (Parker & Asher, 1993). Young people are increasingly dependent on SNS to socialize with friends to satisfy social connection and belongingness needs (Chen, & Marcus, 2012; Sheldon, Abad, & Hinsch, 2011). A vast majority of college students use SNS for making new friends and maintaining existing personal relationships (Chen, & Marcus, 2012; Ellison et al., 2007; Raacke & Bonds-Raacke, 2008). Sheldon, Abad and Hinsch (2011) found correlations between Facebook use and connectedness satisfaction and dissatisfaction. Based on experimental results, they concluded that dissatisfaction with existing connection is a motivation to use Facebook and satisfaction with Facebook connection is a gratification obtained. The fact that individuals with lower initial connectedness are less likely to reduce their Facebook use confirms connectedness as an important motivation for SNS social

use. A bunch of mediated communication tools on SNS enable users a greater level of interactivity within their social networks, including posting and replying on Wall, chatting, involving in SNS group and community building, etc.

*Self-broadcasting use.* Motivated by self-expression and actualization needs, users produce content on SNS to present and broadcast themselves (Shao, 2009). Matsuba (2006) found that college students with less clearly defined self-concepts were more likely to use online media. Researchers paid special attention to students' self-disclosure behavior on SNS (Chen & Marcus, 2012; Mansson, & Myers, 2011). Mansson and Myers (2011) identified 29 types of expressed affection in 214 undergraduate students' interaction with close friends through Facebook, including verbal, nonverbal, and social support messages. The publicness and participatory attributes of SNS enable users to produce their own content in terms of creating or changing personal profiles, updating status, and posting diaries, pictures or videos to present themselves publicly in their online social circles.

#### *Origins of Mood Management via Media Use*

Following the uses and gratifications approach, mood management theory claims that people are motivated to seek out media content to manage their mood, such as to alter disagreeable moods and to maintain pleasant moods. Derived in part from Festinger's (1957) theory of cognitive dissonance, positing that people are motivated to seek out information that is consistent with existing attitudes and avoid information that may produce cognitive dissonance, the mood management theory predicts connections between mood states and specific kinds of media content. Zillmann differentiated media content by four dimensions of mood-relevant characteristics: the excitatory potential, the absorption potential, semantic affinity, and the hedonic valence. The excitatory potential relates to media impact on arousal level. Specifically,

media stimuli with a high excitatory potential assists in maintaining viewers' moods associated with high levels of excitation, which can be disrupted by low excitatory media stimuli. The absorption potential refers to the strength of media content to interfere with a preexisting mood. Moods are effectively disrupted by strong stimulus intervention and maintained best when "their cognitive manifestations suffer the least interference" (Zillmann, 1988, p.331). However, Bryant and Zillmann (1977) found that the effect of absorption media stimuli on mood is interacted by the degree of semantic affinity between preexisting mood and media content, which is the third dimension. Given a high degree of similarity between mood and message, the absorption potential of messages can be severely reduced. Lastly, the hedonic dimension posits that people seek to experience the highest degree of pleasure attainable under given circumstances and explains stronger effects of pleasant media stimuli on changing the individuals' bad moods than unpleasant ones.

*Stress relief through traditional entertainment media use.* A fair amount of empirical work has focused on specific links between moods and selective exposure to types of traditional media content. Stress, usually identified as a bad mood resulting from overstimulation, received a lot attention from previous researchers (Zillmann, 1988). Tensions generated within adolescents' social contexts of home, school, and work settings have been found to relate to television and videogames use for mood management (Reinecke, 2009; Roe et al., 2005). It was found that trouble with parents among adolescents was associated with more use of TV for mood management (Roe et al., 2005). According to Reinecke (2009), level of work-related fatigue and exposure to daily hassles were positively associated with the use of games for recovery (Reinecke, 2009). According to mood management theory, people seeking to terminate stressed mood benefit most from exposing themselves to relieving and pleasant media stimuli with high

absorbing and low excitatory potential. As Bryant and Zillmann (1984) found in their experiment, stressed participants spent their waiting time on both soothing and stimulating TV programs, while bored participants barely watched relaxing TV content. As a result, arousal level increased significantly among bored subjects but decreased among stressed subjects. Besides, stressed people have been found to spend more time on TV entertainment (Anderson et al., 1996). Nabi and Krcmar (2004) suggested that media enjoyment might have psychological benefits associated with stress coping. They argue that to the extent that individuals are in positive states during enjoyment of media, the feelings of relaxation might reduce stress. Similarly, it was argued that by displacing anxious thoughts and negative affects with positive ones, watching TV could temporarily alleviate anxiety resulting from thinking about stressful life events (Anderson et al., 1996). However, previous scholars didn't reach a conclusion on whether mood deflecting TV viewing serves to enhance adaptive stress coping or merely to delay appropriate coping for the long-term due to its temporary distraction function (Anderson et al., 1996; Greenwood, 2010).

*Stress relief through interactive online media.* Compared to traditional media contexts, online media environments provide more diversified genre choices for media users' mood management, not only including information and entertainment, but also online social activities. The rich content and activities easily accessible through the Internet makes it an attractive channel for mood management. Mood management has been identified as a motivation of using online media in recent research. Negative moods, such as loneliness, stress, depression, were indicative of online media use (Ancu, 2012; Ranney & Troop-Gordon, 2012; Shao, 2009). It has been found that stressful users favored more relaxing content on the Internet than bored people and would selectively expose themselves to online activities enhancing mood optimizing and social integration. (Mastro, Eastin, & Tamborini, 2002). Moreover, Internet use to communicate



with supportive friends or people sharing similar experience has been found to buffer stress and enhance adjustment (Houston, Cooper, & Ford, 2002; Leung, 2006; Leung, 2010; Marziali, Damianakis & Donahue, 2006; Wright, 2000). In 2006, Leung found that children and adolescents exhibiting a high level of online social support were more likely to use the Internet to cope with stressful life events. Moreover, the higher levels of online social support they received, the less they found stressful life events upsetting. Specifically, those who were active in connecting with people and sharing with people facing similar problems experienced lower levels of stress after use. In a follow-up study, Leung (2010) further examined adolescents' social compensation and mood management motives as well as perception of loneliness in relation to their Internet using habits and perceived social support. Based on a telephone survey of 717 adolescents and children in Hong Kong, Internet use in isolation for entertainment, companionship, and recognition gaining has been found to be much more desirable when adolescents and children experience bad moods and strong desire to be alone. Findings also showed that individuals motivated by mood management and social maintenance are better able to access different types of social support to understand a situation and receive advice to solve personal problems. Specifically, showing love and affection, caring for others, giving encouragement, and comforting others in need on personal blogs or via email have been suggested to be beneficial for users' emotional well-being. As Leung argued, Internet use in solitude might help adolescents and children explore the private self and find someone who can help them cope with stress. Similar tendencies have also been found in studies about older adults, family caregivers, and depressed individuals' participation in online support groups and resulting stress alleviation and depression resolution (Houston, Cooper, & Ford, 2002; Marziali, Damianakis & Donahue, 2006; Wright, 2000). With social support being identified as a possible

positive outcome of online media use in recent studies, the mood adjustment assumption seems to gain some support in online media context.

### *Mood Adjustment via Media Use and the Role of Cognition*

Zillmann's fundamental propositions on mood management theory have obtained strong empirical support from various studies. However, the theory has difficulty providing explanations for individuals' enjoyment of negative-affect producing media content. Based on Zillmann's mood management theory, Knobloch (2003) advanced evidences in support of a mood adjustment approach to explain users' enjoyment of negative-affect producing media content. Individuals' media uses may be managed or adjusted not only depending on current moods but also anticipation of situational requirements or upcoming goals. Therefore, while the mood management approach argues that media use is motivated by mood optimization, the mood adjustment approach posits that moods will be optimized within constraints. The two approaches diverge when situations require regulation other than optimization, for example, music listeners who had worked on a task managed their mood by selecting cheerful music, but turned to calming music as the next task approached (Knobloch, 2003). While mood optimization motive well explains users' temporary selective exposure to media content, mood adjustment may serve as a long-lived motive depending on the upcoming activity. Therefore, as Knobloch (2003) argues, mood adjustment is a more general model with mood optimization as one goal of adjustment. Supplementing mood management theory with the mood adjustment approach contributes to a comprehensive theoretical framework for emotional use of media content.

Although Zillmann argues that selective exposure to mood-relevant media content oftentimes does not acquire much cognitive attention, cognitive changes in media users could happen simultaneously when users experience emotional changes. In Mares and Cantor's (1992)

study, they found that lonely viewers preferred and received a mood boost from watching lonely characters and explained that with self-enhancing downward social comparisons. Other previous research suggests that individuals exposed to mood reflecting media content seemed to provide positive cognitive reappraisals (Greenwood, 2010; Nabi et al., 2006). Specifically, Greenwood (2010) found that individuals induced into a happy mood showed a preference for viewing slapstick comedies and action adventures, whereas individuals induced in a sad mood showed a preference for viewing dark comedies and social dramas. Similarly, Nabi and his colleagues (2006) found that sad individuals preferred psychological dramas. They argue that media users may learn coping skills and obtain comfort and validation from media characters with relevant experience under similar conditions, such as a character suffering through a hard time with others' help (Nabi et al., 2006). According to these studies, media content may simultaneously change media users' mood and perceptions. The parasocial interaction between users and media characters seems to play a role in users' psychological adjustment process. Considering the importance of cognitive responses distinct from the emotional responses as a result of media exposure, the social psychological effect of social media use deserves further exploration. The social cognitive theory provides a useful perspective to understand media users' parasocial interaction with media characters and how it contributes to users' changes in perceptions.

#### *Media Use and Social Cognitive Theory*

The social cognitive theory (Bandura, 1986) was originally labeled social learning theory (Bandura, 1977). Both of these two social psychological theories were proposed to study human behavior within social environments, or how human behavior is influenced by social interaction. Human behavior is not only intrigued by inner motivations but learned through observation and modeling. Adapted from social learning theory, "social cognitive theory broadens the scope of

modeling influences and the functions it serves” (Bandura, 2012, p.351). Human behaviors are examined in a continuous reciprocal interaction between environmental, cognitive, behavioral determinants. According to social cognitive theory, human behavior is regulated by both external social environmental factors and internal cognitive factors. For example, social media users’ behavior can be interpreted as a product of users’ online social interaction and their motivations to use it. Furthermore, the self-efficacy concept, as a key element of social cognitive theory, serves to connect information processed from environment with consequential behavioral outcomes. Bandura (1986) defined self-efficacy as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (p.391) and summarized four sources of self-efficacy: enactive performance attainments, vicarious experiences of observing others’ performances, verbal persuasion, and physiological states. Firstly, performance attainment is the most influential source of efficacy information. Success raises self-efficacy; failure lowers it. In addition, self-efficacy perception can also be derived from observation of similar others’ performance. Visualizing peers’ successful achievement raises observers’ belief in their own ability to master comparable tasks, especially when people have little prior experience on areas they are evaluated (Bandura, 1986). Thirdly, self-efficacy beliefs can be influenced by the verbal messages and social persuasions individuals receive from others. These messages can help one to exert the extra effort and persistence required to succeed if envisioned success is attainable. Lastly, people evaluate their own capability partially based on their physiological status. Positive moods like optimism enhance self-efficacy, whereas negative moods such as depression; diminish it (Bandura, 1982).

Social cognitive theory provides a useful approach to analyze the effect of exposure to parasocial interactions between audiences and media characters on traditional media content.

Ho (2006) found that interactions between characters on TV, similarity between program content and real life situations, and entertainment were three important motivations for reality TV consumption, which suggests that reality TV viewers are motivated to learn from characters in similar life situations. Moreover, Stroman (1986) indicated that the positive manner black children have toward black television characters may account for the positive relationship found between television viewing and self-concepts among black children in grades 3 through 6. Based on the social cognitive theory, a possible explanation to this finding is that young people gained self-efficacy when they learned from those TV characters identified as similar and attainable role models.

As social interaction plays a more important role in social media use compared to traditional media use, social cognitive theory may serve as a useful framework to explain SNS users' cognitive and behavioral changes resulting from online social interaction. A few recent studies have paid attention to self-efficacy as a gratification obtained from SNS use (Ahn, 2011; Mauri, et al., 2011; Shao, 2009; Wohn et al., 2013). Some scholars suggested that SNS peer interaction could promote social learning and enhance users' self-efficacy (Ahn, 2011; Wohn et al., 2013; Yu et al., 2010). For example, Wohn and his colleagues (2013) argued that social media serves as a social learning platform for first-generation college students and provides them connections to successful role models from similar backgrounds. Besides, a few health communication scholars examined the association between social media use and coping self-efficacy among individuals facing pressing health concerns like obesity (Ballantine & Stephenson, 2011) and diabetes (Greene et al., 2011). However, in general, whether college students involve in observational learning through their online interaction hasn't been fully explored.

### **Positive Social Psychological Effects of Media Use**

Based on the above three active-audience theories, previous studies on TV, videogame, and online media use associated with positive social psychological outcomes suggested that normative media use in ways that facilitate social integration and mood adjustment could enhance users' psychology recovery and social well-being.

Watching TV has been found to assist viewers' mood adjustment and to buffer against their drop in self-esteem or self-efficacy (Derrick, Gabriel, & Hugenberg, 2009; Fowles, 1992; Tin et al., 2012). A moderate TV consumption has been found to associate with higher self-esteem among young people. A survey report of 70,210 grade 4 children's TV viewing hours and self-esteem in Hong Kong indicated that children who watched a moderate amount of TV between 1 and 2 hours per day had higher self-esteem scores than those watching less than 1 hour of TV per day and those watching more than 2 hours (Tin et al., 2012). Moreover, Derrick, Gabriel, and Hugenberg (2009) found in their study that active use of favored television programs could satisfy the need of belongingness, alleviate negative emotions of rejection in close relationships, and buffer against the drop in self-esteem, especially for those who have high belongingness needs or social interaction difficulty.

Similarly, videogame playing that associate with positive outcomes has been regarded as a mood relevant need satisfying activity (Przybylski et al., 2009; Reinecke, 2009). Przybylski and his colleague (2009) found that high levels of need satisfaction from video game playing were associated with more harmonious passion, game enjoyment, and energy following play, while low levels of basic need satisfaction were associated with more obsessive passion, higher amounts of videogame playing, greater tension following play, and low game enjoyment. Another study based on an online survey of 1614 participants showed that video games are

systematically used to cope with stressful situations and the recovery experience was a significant aspect of the game playing experience (Reinecke, 2009). Those participants experiencing higher recovery effects from game playing experience play more frequently after stressful situations.

Positive social psychological outcomes were also observed from people who use the Internet to obtain social support and strengthen their offline social interaction (Valkenburg & Peter, 2007). Research conducted on normative Internet use demonstrates a potential compensatory role of online communication for individuals who are unable to form or maintain satisfying face-to-face relationships, including solitary individuals, people with low self-esteem or high levels of social anxiety, as well as people experiencing increased stress under major life transitions (Amichai-Hamburger, Wainapel, & Fox, 2002; McKenna, Green, & Gleason, 2002; Ranney & Troop-Gordon, 2012). Cohen and Wills (1985) assert that the mental and physical impact of stressful life events is in fact buffered by one's degree of social support. In line with the buffering hypothesis, research found that Internet-based support groups could serve to reduce perceived stress and improve subjective well-being among disadvantaged groups of people. For example, older adult Internet users who were satisfied with social support received online more frequently involve themselves in online community activities and reported lower perceived life stress (Wright, 2000). Depressed people who more frequently involved themselves in Internet-based peer support groups were more likely to have resolution of depression during follow-ups (Houston et al., 2002). Additionally, online support groups have also been found to enhance well-being of family caregivers of ill family members in a six month intervention. Most caregivers indicated that the group helped them cope with the stress of care giving by providing a place to share feelings as well as to be understood and validated by similar others (Marziali,

Damianakis & Donahue, 2006). Furthermore, Internet use for online communication serves as a support for first year college students, who are in a stage of life transition (DeAndrea et al., 2012; Lanthier & Windham, 2004; Ranney & Troop-Gordon, 2012). Lanthier and Windham (2004) examined the links between Internet use and college adjustment and found that Internet use variables accounted for a statistically reliable portion of the variance in college adjustment (R square range .05 - .08) although hours spent online was unrelated to college adjustment. Specifically, social use was positively associated with college adjustment for male students. Ranney and Troop-Gordon (2012) found that when face-to-face friendship quality was low, first semester college students were more likely to communicate with distant friends online in order to cope with depression. Their study also showed that supportive and validating distant friendships could bolster adjustment. As Ranney and Troop-Gordon (2012) argued, it is important for new college students to learn to utilize computer and other online technologies to access supportive ties while disengaging from relationships detrimental to mental health and college adjustment. Similarly, DeAndrea and his colleagues (2012) indicated the positive potential of using student-centered social media site to enhance college adjustment prior to their arrival on campus.

### **SNS Use and Social Psychological Well-being**

As young people are increasingly dependent on SNS to maintain and develop relationships, more research has been conducted on social media use in relation to social psychological well-being. Based on recent research suggesting a positive trend of social psychological effects of SNS use, two tendencies can be summarized as: the “rich gets richer” pattern supported by social augmentation hypothesis (Baumeister & Leary, 1995) and the “poor gets richer” pattern explained by the social compensation hypothesis (Valkenburg, et al., 2005). According to the social augmentation hypothesis, online media enable users to connect with



individuals sharing similar interests and to build a supportive community (Parks & Floyd, 1996). Enlarged social networks with strengthened social ties contribute to higher levels of social capital among users (Ellison et al., 2007). Compared to socially and psychologically rich people, individuals with lower offline social psychological assets seem to benefit more from their online interaction on SNS. Research has shown that positive associations between SNS use and social capital are more prominent among minority students (Valenzuela, Park, & Kee, 2009) as well as individuals with lower self-esteem (Steinfeld, Ellison, & Lampe, 2008; Tazghini & Siedlecki, 2013) and life satisfaction (Ellison et al., 2007). Zywicka and Danowski (2008) found support for both hypotheses in their study and argue that “everyone gets richer” by using Facebook. Among those 614 college students, those more extroverted and with higher self-esteem are more popular both offline and on Facebook, while those more introverted and with lower self-esteem are less popular offline and try to look popular on Facebook. A review of literature on recent studies on SNS uses and social psychological effects covers four major outcome variables of SNS use: social capital, social support, physiological responses associated with emotion, and social psychological adjustment. Previous studies indicated both direct and indirect association between SNS use and these outcome variables.

### *SNS Use and Social Capital*

Social capital refers to the resources a person is allowed to draw from other members in his or her network. A differentiation of social capital into bridging and bonding social capital has been widely adopted in current social media research (Putnam, 2000). Bridging social capital are loose connections between individuals (weak ties) and is regarded as a source of informational support but typically not emotional support, while bonding social capital (strong ties) refers to connections between emotionally close relationships (Bessiere et al, 2008; Granovetter, 1973).

Students' SNS use has been found to be positively associated with social capital in general, and most obvious for bridging social capital (Ellison, Steinfield, & Lampe, 2007). The positive effect has been explained by low transaction cost interacting with both strong and weak ties via SNS (Ellison et al., 2010).

### *SNS Use and Social Support*

Built on studies on SNS social capital, review of emerging research on social support use of SNS suggests that SNS serves as a channel to broadcast support needs and to obtain emotional support (Bessiere et al, 2008; Kim & Lee, 2011; Wright, 2012) as well as informational support (Bessiere et al, 2008; Ellison, 2011; Wright et al., 2013). Self-broadcasting use of SNS via status updating lowers barriers to broadcast support needs, which directly contributes to received social support on SNS (Vitak & Ellison, 2013). In addition, SNS social capital in terms of network size, strong/weak tie preference, homophily, and network convergence have been found to be associated with social support received. An inverted U-shape curvilinear relationship between the number of Facebook friends and perceived social support suggests that the quantity of friends only partially explains support received (Kim & Lee, 2011). Strong tie-oriented homogeneous networks with high network convergence is associated with high emotional support (Bessiere et al, 2008; Wright, 2012), while weak tie-oriented heterogeneous networks tend to serve as useful sources of information and advice (Bessiere et al., 2008; Ellison, 2011; Wright et al., 2013). However, recent research suggests that weak ties can provide more than informational support. Wright (2012) found that online weak ties were regarded as being less risky to disclose information to, less judgmental, and more objective. Similarly, a recent panel survey found that communication with strong ties among Facebook users who lost their jobs actually increased their stress of unemployment, while communication with weak ties didn't (Burke & Kraut,

2013). Therefore, both strong ties and weak ties on SNS could be important support providers. The total social resource accumulated on SNS could be the indicator of social support available on SNS.

#### *SNS Use and Physiological Responses Associated with Emotion*

A few recent experimental research findings also suggested that SNS use, especially exposure to personal page and searching friends' information, leads to positive emotional reaction (Mauri et al., 2011; Qiu, Lin, Leung, & Tov, 2012; Wise, Alhabash, & Park, 2010). Rouis and his colleagues (2011) applied flow theory to study SNS use and found that Facebook use was well explained by the cognitive absorption ( $R^2 = 22\%$ ), which "refers to the appeal of the platform that the user surfs and the task performed on this platform" (p.975). The flow state users involve themselves in when they use Facebook evokes a positive emotional experience characterized by high positive valence and high arousal, which is significantly different from stress and relaxation (Mauri et al., 2011). Results from both self-report and observer rating consistently suggest that users are more likely to disclose positive emotional experiences on Facebook than in real life (Qiu et al., 2012). The positive association between time spent viewing personal page and positive affective states may be explained by positive emotional self-disclosure on SNS (Wise, Alhabash, & Park, 2010). Wise and his colleagues (2010) found that participants were happier during social searching than social browsing. Searching information related to friends is more emotionally satisfying than reading social news.

#### *SNS Use and Social Psychological Well-being*

Past research has extensively examined the effects of general Internet use on social well-being. More recently, there has been an increasing interest in studying the uses and effects of SNS. Previous studies suggest that students are quite intentional about their Facebook use and

their Facebook involvement strengthens social adjustment when it is used effectively to connect with their peers and improve social networks (Gray et al., 2012; Kalpidou et al., 2011; Yang & Brown, 2013). Kalpidou and his colleagues (2011) found that the number of Facebook friends was positively related to social adjustment among upper-class students. Gray and his colleagues (2012) also found the number of Facebook friends who are fellow students was predictive of social adjustment. Interestingly, perceived “actual friends” in one’s Facebook network was a non-significant predictor of social adjustment. Similar results have also been gathered in Yang and Brown’s (2013) study on associations between patterns of Facebook activity, motives for using Facebook, and college students’ social adjustment. Students who are more inclined to use Facebook to maintain existing relationships are more likely to report better social adjustment scores and lower scores on the loneliness scale.

Some other studies also indicated psychological benefits of Facebook use (Manago et al. 2012; Rosen et al., 2013). Rosen and his colleagues (2013) examined Facebook use in relation to clinical symptoms of psychiatric disorders and found that general Facebook use and impression management use negatively predicted mania. More friends on Facebook predicted fewer signs of major depression and dysthymia. In addition, Facebook use for relationship maintenance may lead to the posting more messages about their whereabouts and activities, which may contribute to one’s likability and generate pleasant interactions (Manago et al. 2012). A positive association between SNS involvement and psychological well-being mediated by social support was also suggested in previous research. Honest self-presentation (Kim, & Lee, 2011) and self-disclosure on SNS (Vitak, & Ellison, 2013) have been found to be associated with subjective well-being indirectly through social support. Social support received from SNS use then buffers against stress and depression (Grieve et al., 2013; Wright et al., 2013) and contributes to life satisfaction

(Apaolaza et al., 2013; Grieve et al., 2013; Lee, Lee, & Kwon, 2011; Kim, & Lee, 2011).

Perceptions of attitude and background similarity and attraction of potential support providers were predictive of increased emotional support from Facebook, and further predictive of lower levels of perceived stress (Wright, 2012). Besides, positive self-presentation (Kim & Lee, 2011) and viewing personal profiles (Toma & Hancock, 2013) have direct effects on subjective well-being. Overall, different Facebook activities as well as different ways of using Facebook have different implications for college students' social psychosocial well-being (Yang & Brown, 2013). To get a better understanding of social psychological effects of college students' SNS use, effects of using specific activities should be investigated.

### **Differences in SNS Use in the United States and China**

In spite of the popularity of SNS in eastern and western countries, differences in SNS use have been found in previous studies. Culture has been defined as “a constellation of loosely organized values, practices and norms shared by an interconnected group of people in a given nation” (Chiu, Leung, & Hong, 2010). One of the most adopted dimensions of cultural variability is the distinction between individualistic and collectivistic values (Hofstede, 2001). Traditionally, the eastern culture, like Chinese culture, represents collectivistic culture, while the western culture, like American culture, has been regarded as individualistic culture. People in a collectivistic culture tend to value interdependence and think of themselves in reference to their group memberships and relationships with others. In contrast, people in an individualistic culture tend to define themselves as independent individuals and emphasize personal freedom. Users' offline cultures reflect their online cultures and practice on SNS. For example, Renren culture was perceived as more collectivistic than Facebook (Qiu et al., 2012). Users who are members of both Facebook and Renren more frequently engaged in in-group sharing on Renren but are

involved in more self-talk and self-interested behavior when they participated in Facebook (Qiu et al., 2012). Generally, the differences between western-based and eastern-based SNS use lie in the amount of time spent on SNS, network size, self-disclosure, and social capital development on SNS.

Eastern-based SNS users tend to have fewer but more intimate online friends and spent less time on SNS compared to western-based SNS users. Jackson & Wang (2013) found that American students reported being more motivated to use SNS and spending more time on SNS (51 minutes a day) than Chinese students (28 minutes a day). Rosen et al. (2010) indicated that users who identify with more individualistic cultures have larger networks of online friends than those who are less individualistic. Relatedly, research showed that Korean SNS users had fewer but more intimate friends than US users (Cho, 2010; Qiu et al., 2012). In a recent research, Chinese users also reported a significantly less average number of friends on SNSs (43 friends) than US users (487 friends, Jackson & Wang, 2013). Heavier SNS consumption among American students was explained by the importance of self in individualistic culture, while greater investment in family, friends and one's groups and stricter parental control in collectivistic cultures contributed to Chinese students' lesser involvement in SNS (Jackson & Wang, 2013).

Some studies focused on differences in the disclosure of personal information on Facebook and other country-specific sites and found users of western-based SNSs generally have a more direct communication style with bolder self-disclosure than users of Eastern-based SNSs. While Korean and Japanese SNS users tend to keep their public profile anonymous or use animal pictures as their profile pictures, American and European SNS users tend to provide full names, facial pictures, hometown and email addresses in their profiles (Cho, 2010; Marcus &

Krishnamurthi, 2009; Qiu et al., 2012; Taraszow et al., 2010). Korean SNS users tend to involve themselves in less but more intimate personal self-disclosure, while American SNS users who usually have more friends exhibit more frequent self-disclosure (Cho, 2010; Qiu et al., 2012). Specifically, American SNS users like to broadcast information about themselves by writing blogs and sharing personal pictures, whereas Korean SNS users prefer non-verbal communication such as sharing pictures with close friends (Chapman & Lahav, 2008; Qiu et al., 2012). To examine the cross-cultural differences in self-presented content on SNS, Chu and Choi (2010) identified three factors of self-presentation strategies in both Chinese and American young SNS users and found that both supplication and competence strategies were employed more frequently by Chinese users than their American counterparts, while American students more frequently adopted the Ingratiation strategy. Competence self-presentational strategy include showing abilities, accomplishments, and performance; supplication refers to appearing helpless and self-deprecatory; and ingratiation strategy is using statements of modesty, familiarity, and humor to be liked by others.

Other studies focused on the impact of cultural values on the formation and strength of social capital. Choi et al. (2008) found that Korean students' SNS use was more closely associated with bonding social capital, while American students' SNS use had more to do with bridging social capital. While bonding social capital offering emotional support is more relevant to group-orientated collectivistic cultures, bridging social capital associated with weak ties is more in line with the individualistic values of independence. However, Chu and Choi (2010) compared the nature of social relationships young people developed on SNS between China and America and found a greater level of bonding social capital among American young users, which

could be explained by the increasing individualistic value adopted by Chinese college students (Lu et al., 2012).

### **Summary**

The four sections in this Chapter analyze related literature and theories on both negative and positive social psychological effects of media use, with a focus on content related to positive use of online media. The first section reviews previous studies on excessive TV, video game, and Internet use in relation to negative social psychological well-being. The second section covers the origin, evolution, and development of three media use theories based on the active user assumption: uses and gratifications theory, mood management theory, and social cognitive theory. The third section organizes previous empirical research and evidences on media uses that are positively related to social psychological outcomes and reviews studies on SNS use and five indicators of social psychological well-being: social capital, social support, subjective well-being, physiological responses associated with emotion, and social psychological adjustment. The last section reviews literatures on differences in SNS use in eastern and western countries.



### CHAPTER III. RESEARCH FRAMEWORK

To study positive strategic SNS involvement and how it relates to college students' social psychological well-being, three theories are adopted to formulate a stress-relevant positive strategic SNS involvement model: uses and gratifications theory, mood management theory, and social cognitive theory. First, uses and gratifications theory helps establish connections between stress (relieve stress as gratification sought), SNS involvement (media use), and adaptive coping or adjustment (gratification obtained). Second, mood management theory can explain the link between a mood state (stress) and users' selective involvement in SNS activities. Third, social cognitive theory explains how online interaction with peer influences users' efficacy in dealing with stressful situations. Based on these three theories, it is expected that stressed individuals may selectively involve in SNS activities that enhance mood optimization and social integration to facilitate their adaptive stress coping and social psychological adjustment. With a variety of information and entertainment resource available on social networking sites, it is convenient for users to search for appropriate mood-regulating content in a timely manner. In addition, by bringing offline social interaction online, it is easier for users to access similar others' information and to gain peer support without time and physical constraint. According to social cognitive theory, people are more likely to learn from similar others than dissimilar others and observing successful vicarious experience can enhance observers' self-efficacy. Therefore, the model predicts that selective exposure to both mood adjusting SNS content and efficacy-boosting online interaction with similar others will result in better social psychological well-being among college students.



**Figure 3.1 Theoretical Framework**

As indicated in Figure 3.1, the stress-relevant positive strategic SNS involvement framework includes two stages. The first stage is identified as the stress-relevant SNS use stage, in which the perceived level of stress is associated with positive strategic SNS involvement. According to uses and gratifications and mood management theories, SNS users are motivated by the need to adjust their moods and involve themselves selectively in activities enhancing stress relief and mood optimization. The second stage is the effect stage. In this stage, emotional and cognitive outcomes are measured to see whether stress-relevant SNS use relates to adaptive coping or not and how they are related as indicated by mood adjustment theory and social cognitive theory.

### **Conceptualization**

#### *Independent Variables*

1) Perceived stress. Based on the mood management theory, perceived stress is examined as the antecedent of positive strategic SNS involvement. It refers to subjective identification of a situation with an imbalance between demands and resources available to meet demands (Lazarus & Folkman, 1984).

2) Positive strategic SNS involvement. Positive strategic SNS involvement is the key concept in this study and is examined as the independent variable in the research model. It is developed based on the concept of SNS involvement proposed by Ha and Hu (2012). Originally, SNS involvement refers to the degree to which SNS users indulge in social media and

indicates how active and motivated college students as SNS users. It combined activity and time dimensions together to examine SNS users. Adapted from SNS involvement, positive strategic SNS involvement describes users' selective involvement in SNS activities motivated by expected positive outcomes. In contrast, non-positive non-strategic SNS use describes users' spontaneous involvement in SNS activities motivated by expected negative outcomes. Specifically, non-positive social media activities are those identified as easily addictive by nature or associated with negative outcomes, such as playing games and sending bullying messages on social media. Positive strategic SNS involvement refers to users' selective engagement in emotionally and mentally recharging activities that facilitate their adaptive stress coping through mood optimization, social learning, and social support, including checking friends' updates, participating in SNS groups, self-disclosing in status updates, and viewing personal pages. Review of literature on SNS use in relation to young people's social and psychological well-being suggests that their involvement in the SNS activities mentioned above is positively related to users' social or psychological well-being. Specifically, participating in SNS groups has been shown to be positively related to social capital (Zuniga, 2012); self-disclosure on SNS has been shown to be positively associated with social support (Vitak & Ellison, 2013) and psychological well-being (Lee, Lee, & Kwon, 2011); viewing personal pages was found to be associated with positive emotional status (Wise, Alhabash, & Park, 2010). The frequency of clicking "like" on SNS is also considered as an element of positive strategic SNS involvement because it can be related to users' mood optimization habits.

### *Dependent Variables*

1) Adaptive coping. Adaptive coping is identified as the first level dependent variable in the research model. It refers to thoughts or actions resolving stressful situations (Zuckerman &

Gagne, 2003), including three specific categories: self-help (e.g., seeking social support), approach (e.g., defining the stressful situation and reflecting on possible solutions) and accommodation (e.g., cognitive reinterpretation).

2) Adjustment. Adjustment is identified as the second level dependent variable. It refers to students' social and personal emotional adjustment. Social adjustment refers to one's capacity to cope with societal demands, while the personal-emotional subscale measures the general sense of how a student feels physically and psychologically (Baker & Skryk, 1998).


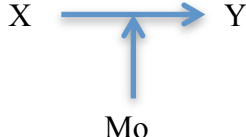
#### *Mediators and Moderators of Positive Strategic SNS Involvement and Adaptive Coping*

According to Wu and Zumbo (2008), mediator and moderator are third variables that serve to explain causal associations. A mediator is a temporary and transitory state of mood, behavior, or process, which links two associated variables, and partially or completely explains the relationship. A mediator is often a transitory cognitive, affective, physiological, or motivational state (Hoyle & Robinson, 2003; Wu & Zumbo, 2008). A moderator is a relatively stable trait, which alters the strength or directions of the relationship between the independent variable and dependent variable. As indicated in Table 1, differences between mediator and moderator can be summarized in the following domains (Baron & Kenny, 1986; Wu & Zumbo, 2008).

**Table 3.1**

#### Distinction between Mediators and Moderators

	<b>Mediator</b>	<b>Moderator</b>
<b>Definitions</b>	A third variable that links a cause and an effect	A third variable that modifies a causal effect
<b>Nature of the variable</b>	A temporary and transitory state of mood, behavior, or process	A relatively stable trait, enduring process, or unchangeable background

<b>Introduced when</b>	When relationship is found; the relationship is strong	When relationship is found or not found; the relationship is unexpectedly weak or inconsistent
<b>Function</b>	Addresses questions of how and why cause leads to effect	Address questions of whom and when cause and effect occurs
<b>Roles</b>	Dependent variable for X, Independent variable for Y	Auxiliary independent variable for Y
<b>Sequence of variables</b>	Follows independent variable and precedes dependent variable	Precedes both independent variable and dependent variable
<b>Relationship with the independent variable</b>	Correlated with the independent variable	Uncorrelated with the independent variable
<b>Relationships between three variables</b>		

A mediator is a third variable that links a cause and an effect, while a moderator modifies the strength or direction of a causal effect (Wu & Zumbo, 2008). Moderators are introduced when a relationship is found or not found and the relationship is unexpectedly weak or inconsistent; mediators are introduced when a relationship is found and the relationship is strong (Baron & Kenny, 1986; Wu & Zumbo, 2008). Mediation explains how and why a relationship happens by identifying the intermediary process that leads from the independent variable to the dependent variable. Moderation effect explains when and for whom an independent variable most strongly causes or relates to a dependent variable (Wu & Zumbo, 2008). While mediators have dual roles, an outcome variable for the independent variable and an independent variable responsible for the outcome effect, a moderator is simply an independent variable (Wu & Zumbo, 2008). Moderators and independent variables are at the same level in regard to their role as causal variables antecedent or exogenous to effects. Therefore, moderator variables always

function as independent variables, whereas mediators shift roles from effects to causes, depending on the focus of the analysis (Baron & Kenny, 1986). While a mediator follows independent variable and precedes dependent variable, a moderator precedes both independent variable and dependent variable. A mediator is correlated with the independent variable, but a moderator is typically uncorrelated with the independent variable (Wu & Zumbo, 2008).

The above distinction between mediator and moderator indicates that they are different in nature, function, and in roles playing in associations. This provides basic guidelines to determine whether a third variable should be tested as a mediator or a moderator. For example, demographic variables, based on its nature, cannot be mediators. So they can only be tested as potential moderators. However, some psychological variables, like life satisfaction, cannot be identified merely based on their characteristics. “In the case when a third variable doesn’t have clear characteristics of a mediator or moderator, appropriate conceptualization and operationalization is necessary to determine the role it plays. In principle, the same operationalized variable should not be tested for both mediation and moderation effects” (Wu & Zumbo, 2008).

In this study, self-efficacy and SNS social capital are introduced as two moderators in the relationship between positive strategic SNS involvement and adaptive coping. According to the definition, a moderator precedes both independent variable and dependent variable and it serves as an auxiliary independent variable for Y. The establishment of a moderator should be based on theories or previous research literature. In this study, *SNS social capital* is defined as social resources available to the individual through Facebook/Renren and are measured by a few networking characteristics, including network size, homophily, media multilexity, centrality, density, tie strength, and reciprocity. According to the definition, SNS social capital is a

relatively stable trait that precedes both positive strategic SNS involvement and adaptive coping. Moreover, previous studies suggest that users with more social resources on SNS are more likely to obtain social support and benefit socially or psychologically after using SNS (Bessiere et al., 2008; Ellison, 2011; Wright, 2012; Wright et al., 2013). Therefore, it is expected that the positive association between positive strategic SNS involvement and adaptive coping is more likely to be found or more prominent among users with high SNS social capital. Hence, SNS social capital is hypothesized as a moderator. In addition, *perceived self-efficacy* is introduced into the research model as another moderator. It refers to “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p.391). As a personality trait, it also precedes both positive strategic SNS involvement and adaptive coping. According to social compensation hypothesis, positive associations between social media use and social capital are prominent among individuals with lower self-esteem and life satisfaction (Ellison et al., 2007; Steinfield, Ellison, & Lampe, 2008; Tazghini & Siedlecki, 2013). In line with the social compensation hypothesis, it is hypothesized that low self-efficacy users benefit more from their positive strategic SNS involvement compared to high self-efficacy users. Online media lower barriers to interaction and encourage more self-disclosure among users. Therefore, online media are especially attractive for lonely, anxious, or depressed people (Tidwell & Walther, 2002). Furthermore, emotional stability was identified as a negative predictor of social media use controlling for socio-demographics and life satisfaction (Correa et al., 2010). Low self-efficacy users, who usually experience more negative and unstable emotions in daily lives, are more likely to depend on social media to socialize and adjust their moods. If positive strategic SNS involvement is a good indicator of healthy social media use, it is very

likely that the relationship between positive strategic SNS involvement and adaptive coping is more prominent among low self-efficacy users based on the compensation hypothesis.

In this study, the relationship between positive strategic SNS involvement and adaptive coping is still under exploration, so there is a chance that the association is weak or not found. The moderator can be introduced when the relationship between the original independent and dependent variable is found, not found, or unexpectedly weak, while a mediator is introduced when there is an existing or hypothesized relationship between the independent variable and outcome variable, and usually a moderate or strong one. Therefore, two moderators are introduced first. After introducing SNS social capital and self-efficacy, survey respondents will be categorized into four groups: high SNS social capital and high self-efficacy, high SNS social capital and low self-efficacy, low SNS social capital and high self-efficacy, low SNS social capital and low self-efficacy. If a positive relationship between positive strategic SNS involvement and adaptive coping is found in any of the above four groups, the following three mediators will be incorporated to explain how positive strategic SNS involvement is related to adaptive coping: 1) SNS social support, 2) emotional status while using SNS, and 3) role modeling on SNS. *SNS social support* refers to the amount of informational or emotional support received from Facebook/Renren. *Emotional state* is users' perceived emotions while using Facebook/Renren. *Role modeling on SNS* refers to the extent to which users follow their role models on Facebook/Renren. Role models are defined as individuals whose attributes or characteristics are looked up to or aspired to be liked by others.

As the definition indicates, a mediator should follow independent variable X and precedes outcome variable Y. Also, it should serve as an outcome variable for X and independent variable for Y. Therefore, in this study, theories or a review of literature in support of



associations between positive strategic SNS involvement and adaptive coping, SNS involvement and three proposed mediators, three proposed mediators and adaptive coping should be presented to justify these three variables as mediators. First, based on the theoretical framework in Figure 1, it is expected that people who are more likely to normatively be involved in social media activities that optimize their mood states or enhance social integration are more likely to have better stress coping strategies and adjusting skills. The relationship between positive strategic SNS involvement and adaptive coping is established based on uses and gratifications, mood management theory, and social cognitive theory. In addition, the review of literature on social media use and social psychological well-being establishes the associations between social media use and users' perceived social support as well as the one between social media use and physiological responses associated with emotion. It has been suggested that SNS may be seen as a channel to broadcast support needs and to obtain emotional support (Bessiere et al, 2008; Kim & Lee, 2011; Wright, 2012) as well as informational support (Bessiere et al, 2008; Ellison, 2011; Wright et al., 2013). A few recent experimental research findings indicate that SNS use, such as exposure to personal account and searching friends' information, leads to positive emotional reaction (Mauri et al., 2011; Qiu, Lin, Leung, & Tov, 2012; Wise, Alhabash, & Park, 2010). Although the role modeling behavior on SNS hasn't received much empirical investigation, a positive relationship between SNS involvement and social learning was implied in a pilot study (Fang, 2013). More than 60% of college student respondents reported learning something useful from others at least once a month. The author of this study argues that positive strategic SNS users are more likely to make use of social media to connect with their role models. By following their role models' on SNS, users may receive emotional support and become motivated to cope with difficulties. Thus, it is argued that these three mediators are expected outcome variables of

positive strategic SNS involvement. Furthermore, associations between three mediators and adaptive coping are established based on statements about sources of self-efficacy indicated in social cognitive theory. According to Bandura (1986), personal achievement, vicarious experience, encouragement, and physiological responses associated with emotion are four contributors of self-efficacy. Besides experiencing personal success, individuals' perceived self-efficacy can also be boosted by observing achievements of similar others (e.g.: role models), receiving encouragement (the emotional support) from others, or experiencing positive emotions. According to the definition of self-efficacy (Bandura, 1986), high self-efficacy people are those who are more likely to actively and effectively cope with difficulty. Therefore, it is argued that SNS role modeling, social support received from SNS, as well as users' emotional status while using SNS positively relate to their adaptive stress coping.

### **Research Models and Hypotheses**

Based on the theoretical model (indicated in Figure 3.1), review of literature, as well as justification of including mediators and moderators in this study, two research models consisting of research questions and hypotheses are proposed.

#### *Basic Model*

Based on a literature review on stress coping, the associations between perceived stress, coping strategies, and psychological well-being have been established (Lazarus & Folkman, 1984). As indicated in Figure 3.2, users with higher levels of perceived stress are more likely to engage in coping behaviors. The adaptive stress coping strategies, including self-help, approach (problem-solving), and accommodation, mediates the relationship between the perceived level of stress and users' psychological well-being. Positive strategic SNS involvement is examined as an adaptive coping strategy in this study.

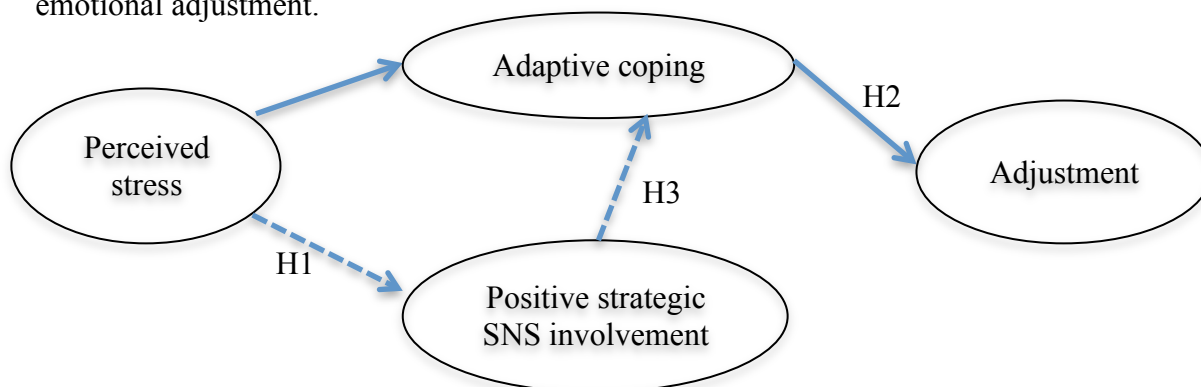
Based on the theories of uses and gratifications, mood management, and social cognitive theories, it is hypothesized that users with higher levels of perceived stress are more likely to make positive strategic use of social media to manage their stress and maintain psychological well-being. Therefore, the first hypothesis is proposed as follows:

**H1:** Perceived stress is positively related to positive strategic SNS involvement.

Based on the definition of adaptive coping (Lazarus & Folkman, 1984) and previous studies indicating a positive relationship between adaptive coping and adjustment among college students (Aspinwall & Taylor, 1992; Ben-Zur, 2009; Holahan & Moos, 1987; Kausar, 2010; Sasaki & Yamasaki, 2007), it is hypothesized that adaptive coping is positively associated with college students' social adjustment and personal-emotional adjustment.

**H2a:** There is a positive relationship between adaptive coping and college students' social adjustment.

**H2b:** There is a positive relationship between adaptive coping and college students' personal-emotional adjustment.

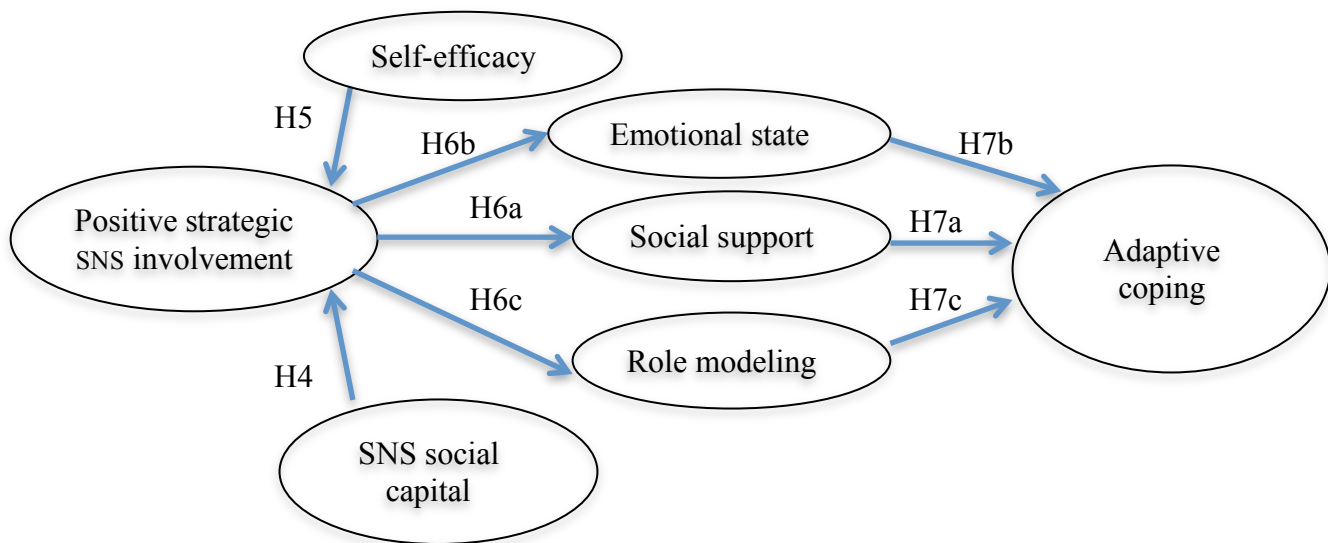


**Figure 3.2 Basic Research Model**

*Expanded Research Model*

As indicated in Figure 3.3, an expanded version of the research model is proposed to examine moderators and mediators between positive strategic SNS involvement and adaptive

coping. College students' perceived self-efficacy and their SNS social capital are adopted as two moderators in the relationship between positive strategic SNS involvement and adaptive coping. The emotional state, perceived social support received on SNS, as well as online role modeling behavior, are tested as three mediators to explain the pathway of positive strategic SNS involvement in relation to adaptive coping.



**Figure 3.3 Expanded Research Model**

Based on justification of moderators and mediators indicated in p. 44 - 48, the following hypotheses are proposed:

**H3:** College students' positive strategic SNS involvement is associated with adaptive coping with stress.

**H4:** The association between positive strategic SNS involvement and adaptive coping is more prominent among users with high SNS social capital.

**H5:** The association between positive strategic SNS involvement and adaptive coping is more prominent among users with low self-efficacy.

**H6a:** There is a positive association between positive strategic SNS involvement and SNS social support.

**H6b:** There is a positive association between positive strategic SNS involvement and emotional status.

**H6c:** Positive strategic SNS involvement is associated with role-modeling behavior on SNS.

**H7a:** There is a positive association between SNS social support and adaptive coping.

**H7b:** There is a positive association between emotional status and adaptive coping.

**H7c:** Role-modeling behavior on SNS is associated with adaptive coping with stress.

Based on a review of literature on SNS use in western and eastern countries, Chinese students are expected to spend less time, involve in less open self-disclosure, and keep a smaller but closer network compared to American students. Considering that self-disclosure and social capital on SNS are both related to perceived social support from social media use, three hypotheses are proposed to examine differences in social support received from Facebook/Renren between American students and Chinese students and how it relates to their adaptive coping.

**H8:** There are differences in perceived social support from Facebook/Renren between American students and Chinese students.

**H9:** There are differences in the relationship between positive strategic Facebook/Renren involvement and perceived social support between American students and Chinese students.

**H10:** There are differences in the relationship between positive strategic Facebook/Renren involvement and adaptive coping between American students and Chinese students.

## CHAPTER IV. METHOD

This chapter covers justification of the adopted survey mode and sampling method, discusses the procedures of a pilot survey and the formal study, and operationalizes variables and the demographic profile of sample.

### Survey

A cross-sectional survey was adopted as the data collection method because it enables the researcher to include a wide range of variables and to explore relationships among variables. After comparing the advantages and disadvantages among three major quantitative research methods, survey, experiment, and content analysis (Vogt et al., 2012; Wimmer, & Dominick, 2011), the survey method is selected due to the following considerations: First, compared to experiment, survey enables access to a variety of research subjects and derives answers for more variables, which can provide a rich database for this exploratory study. Due to the exploratory nature of this study, rigorous causal relationship establishment is not a requirement. Secondly, survey is more effective in collecting respondents' self-perception data compared to content analysis and experiment, which also made it a better research method for this study. Quite a few variables investigated in this study are related to respondents' self-perceptions, including self-efficacy, adaptive coping, and perceived social support on SNS. Despite the limitation of self-reporting data, survey is the best method to approach social media users' self-perception. Therefore, after comparing and contrasting among the three commonly used quantitative research methods, survey was adopted as the data collection method for this study.

A self-administered online survey is regarded as the most appropriate survey mode for this study mainly due to practical concerns relating to expense and quality of answers. In this study, a cover letter with a link to an online survey is hand delivered to recruit survey

participants in the United States and China. Two versions (one for the U.S. participants and the other for Chinese participants) of questionnaire are published on specially designed SurveyMonkey web pages. The adoption of online survey mode greatly reduced the cost of data collection. As Singleton and Straits (2005) indicated, the web survey saves expense in paper, postage and requires less time to implement compared to mail or telephone surveys. In addition, self-administered online survey offers the researcher more flexibility to collect data (Wimmer & Dominick, 2011). With the self-administered online survey, it is possible for the researcher to recruit undergraduate students in a quota sample that minimizes the sampling error. The researcher paid special attention to the distribution of respondents' gender and class standing during the data collection process and adjusted recruitment of participants accordingly. Lastly, the online survey gives respondents more time to fill out questions requiring more consideration at their convenience. According to Dillman and his colleagues (2009), effort and consideration taken to involve respondents can lead to higher response rates.

### *Sampling*

College student samples are considered as appropriate for this study because the targeted populations are college students in the United States and China. Although a probability sample is desirable for generalization, it is less indispensable when the goal of the research is to investigate variable relationships (Wimmer & Dominick, 2011). For this explanatory study, findings based on non-probability college student samples can illustrate associations between Facebook involvement and concerned social psychological effects, which can shed light on the general student population. In addition, the difficulty in obtaining a sampling frame in Chinese universities made adoption of probability sampling method unfeasible for this comparative study.

### *Pilot Study*

A pilot study was conducted to explore SNS involvement in relation to college students' perceived self-efficacy change after using SNS based on a secondary data analysis of 394 undergraduate students in a Northwest Ohio state university in September 2012 (Fang, 2013). Survey questions employed in this pilot study are part of a Northwest Ohio media study conducted by School of Media and Communication Emerging Media Research Cluster at Bowling Green State University. The project survey study includes two sampling frames: 1) Northwest Ohio resident database, and 2) college students in the Northwest Ohio state university. The pilot study was based on the student sample of 394 student respondents from 36 small general education and two large introductory lecture classes. Student respondents were asked their opinions about media use, perception of themselves and different aspects of college lives, and demographic information.

According to the pilot study results, student respondents reported spending an average of 25.81 hours on SNS, including 9.64 hours on Facebook, 8.39 hours on Twitter, 5.42 hours on Youtube, 0.1 hour on LinkedIn, and 3.1 hours on other SNS in a typical week. Most students (67.5%) indicated updating their SNS once to several times per week. Among 394 student respondents, 143 students (45.3%) reported an increase in academic self-efficacy (feeling more confident and capable in completing tasks); 255 (80.7%) reported an increase in social self-efficacy (feeling more confident and capable in socializing); and 187 (59.4%) reported an increase in political self-efficacy (feeling more confident and capable of being involved in public issues) after using SNS. Furthermore, it was found that active SNS users were more likely to receive emotional support (receiving encouraging messages from others on SNS) and to involve themselves in social learning on SNS (learning something useful from others on SNS), which



explains their reported increase in self-efficacy afterwards. Also, the positive association between SNS involvement and reported self-efficacy change after using SNS is more prominent among low self-efficacy users with small network sizes and less diversified types of friends on SNS.

Besides the above major findings, the pilot study also provides some theoretical implications, which serve as the base of the theoretical framework in the formal study. Firstly, the empirical data supports self-efficacy change as a gratification obtained from SNS involvement especially among low self-efficacy users. That low self-efficacy users, who potentially have a higher need to increase their perceived self-efficacy, are more likely to gain social support and obtain self-efficacy via their SNS involvement supports the uses and gratifications theory. Although the self-efficacy concept has been suggested as a gratification obtained from SNS use in previous studies (Ahn, 2011; Mauri, et al., 2011; Shao, 2009; Wohn et al., 2013), the pilot study was the first one that takes it as the dependent variable and provides empirical support. In addition, the positive associations between social support and social learning behaviors on SNS and self-efficacy increase under social media settings supports Bandura (1982)'s social cognitive theory on sources of self-efficacy perception. Therefore, both uses and gratifications theory and social cognitive theory are adopted in the theoretical framework in the formal study.

Moreover, improving from results of the pilot study, the researcher formulates the formal study in the following aspects. *To begin with*, positive strategic SNS involvement, rather than SNS involvement, is adopted as the independent variable for the purpose of investigating positive ways of using SNS among college students. The weak but positive association between student respondents' SNS involvement and their perceived self-efficacy change after using SNS

suggested a positive potential for becoming involved in certain SNS activities to enhance general self-efficacy among American college students. After adopting positive strategic SNS involvement as the independent variable, which refers to students' involvement in SNS activities enhancing mood optimization and social integration, it is expected that the positive association between positive strategic SNS involvement and perceived self-efficacy increase after using SNS will be stronger in the formal study. *Secondly*, adaptive stress coping (first level dependent variable) and social psychological adjustment (second level dependent variable) were used as dependent variables in the formal study. The adaptive coping scale and adjustment to college scales are perceived as more objective measures of users' gratification obtained from their SNS experience compared to perceived self-efficacy change after using SNS. *Thirdly*, besides network size and diversity, the formal study also includes other networking characteristics as items of the social capital measure, including network centrality, density, tie strength, reciprocity (Mesch & Talmud, 2010). *Fourthly*, social learning via SNS is measured by the product of the number of role models on SNS and users' frequency of paying attention to role models in the formal study, rather than just "the frequency of learning something useful from others on SNS". Bandura (1986) argues that diversified modeling is superior to exposure to the same performances by a single model. Therefore, it is expected that SNS users who pay more attention to more diversified role models report higher adaptive coping scores in the formal study. *Lastly*, perceived stress (antecedent of positive strategic SNS involvement) and emotional status while using SNS (mediator in the association between positive strategic SNS involvement and adaptive stress coping) were added to the positive strategic SNS involvement model based on the mood management theory.

### *Formal Study Operationalization*

Based on the pilot study, the research model was revised to include nine variables, including two dependent variables, two independent variables, two moderators, and three mediators.

*Dependent variables.* 1) Adaptive coping. Adaptive coping was measured by reported likelihood of adopting coping strategies including approach, self-help, and accommodation based on the revised-COPE scale (Zuckerman & Gagne, 2003). The scale includes five subscales and 40 items. Three of the five subscales (self-help, approach, and accommodation) are adaptive coping measures; the other two (self-punishment, avoidance) are maladaptive coping measures. This scale was adopted because it provides comprehensive categories for adaptive coping and has good validity. It has been found that the three subscales of adaptive coping served as predictors of adjustment and well-being (Zuckerman & Gagne, 2003). Approach, the problem-focused coping, was also found to relate to better health and adjustment among students of higher education (Kausar, 2010; Sasaki & Yamasaki, 2007). The researcher eliminated 3 items for each subscale (15 items in total) to simplify the stress coping scale to 25 items. The respondents were asked to indicate whether or not they follow each of those 25 statements to cope with stress (see Appendix I for the items in the question).

2) Adjustment. The social and personal-emotional adjustment subscales in Baker and Skryk's (1998) student adaptation to college scale are adopted to measure social media users' social and emotional adjustment. The social adjustment subscale includes seven items, such as "I am very involved with social activities in college". The emotional adjustment subscale contains six items, like "I haven't been able to control my emotions very well lately." The respondents

were asked to indicate how well each statement represents themselves based on a scale from 1 (not at all true) to 4 (exactly true).

*Independent variables.* 1) Perceived stress. Perceived stress was measured by Chao's (2012) 10-item Perceived Stress Scale (PSS) to assess the degree to which individuals perceive their lives as stressful. The PSS showed adequate coefficient alphas (.85) and has been found to be positively correlated with life-event scores, depressive and physical symptomatology, social anxiety, and maladaptive health-related behaviors. The respondents were asked about their frequencies of feeling as each statement indicates in the past month on a scale from 1 (never) to 5 (very often).

2) Positive strategic SNS involvement. Positive strategic SNS involvement was measured by respondents' total time spent on Facebook/Renren (hours per week) and the sum of reported frequency of involving in recharging activities. Five recharging activities were examined in this study: 1) checking friends' updates, 2) participating in SNS groups, 3) self-disclosing in status updates, 4) viewing personal pages, and 5) clicking "like". The respondents were asked to indicate their frequencies of involving in these five activities on Facebook/Renren on a scale from 1 (never) to 5 (almost daily), so their frequency scores in recharging activities range from 5 to 25.

*Moderators.* 1) SNS social capital. SNS social capital was measured by seven dimensions in this study, including 1) network size, 2) network homophily, 3) network density, 4) network centrality, 5) communication reciprocity, 6) tie strength and 7) network multiplexity. 1) Network size was measured by the number of friends respondents reported on their Facebook/Renren. 2) Network homophily was measured by reported percentage of SNS friends of the same gender, ethnicity, city, as well as age. 3) Network density was measured by the extent to which

respondents' online friends know each other on a scale from 1 (they don't know each other at all) to 5 (more than 75% of my Facebook friends know each other). 4) Network centrality was measured by self-identified level of centrality on SNS network from a total score of 10. 5) Communication reciprocity was measured by respondents' perceived communication reciprocity on Facebook/Renren on a scale from 1 (none of the communication on my Facebook is reciprocal) to 5 (more than 75% communication on my Facebook are reciprocal). 6) Network centrality was measured by respondents' self-identified level of centrality in their Facebook/Renren networks from 0 (I am a disconnected node) to 10 (I am a hub). 7) Tie strength was measured by the percentage of SNS friends perceived as close friends. 8) Lastly, network multiplexity was measured by the types of media content used to interact with friends on SNS, including text, photo, audio, and video. The researcher calculated the social capital index by adding up z-scores of above seven variables. Users with a z-score higher than average were categorized as high SNS social capital users, while those with equal or lower than average z-score were categorized as low SNS social capital users.

2) Self-efficacy status. A 10-item self-efficacy scale was adopted in the study from Schwarzer and his colleagues (1997) to measure perceived self-efficacy. The respondents were asked to check how well each statement represented themselves on a scale from 1 (not at all true) to 4 (exactly true). Users with a self-efficacy scores higher than average were identified as high self-efficacy users, while those with equal or lower than average scores were identified as low self-efficacy users.

*Mediators.* 1) SNS social support. SNS social support was measured by frequency of receiving encouraging messages and useful information on Facebook/Renren. The respondents were asked to report their frequencies of receiving emotional support (e.g.: encouragement or

validation) and obtaining useful information (such as: advice) from their Facebook/Wechat friends on a scale from 1 (never) to 5 (almost daily).

2) Emotional state. Emotional state was measured by respondents' reported feelings when using Facebook/Wechat most of the time in the past month, including positive emotional states, happy or relaxed, and negative emotional state, sad or nervous.

3) Role modeling on SNS. Role modeling on SNS was measured by the product of the number of role models on Facebook/Wechat and the frequency of paying attention to their role models. The respondents were asked to indicate the numbers of role models (people with attributes that they look up to and aspired to be like) they have on Facebook/Wechat and frequencies of paying attention to their role models on a scale from 1 (never) to 5 (almost daily).

### *Implementation*

Two versions (English and Chinese) of survey questionnaires were designed following the Tailored Design Method by Dillman and his colleagues (2009) and published on surveymonkey.com. The survey questionnaire was originally developed in English and then translated into Chinese. All translations were then compared for accuracy. Both Chinese and English questionnaires were designed with the same background color and format to maintain equivalence in outlook of the online survey. The consent forms were included in the first pages of survey questionnaires. Survey participants were informed that they indicated their consent to participate in the research study by completing and submitting the survey. The formal survey questionnaire consisted of three sections. The first part of the questionnaire focused on questions about participants' SNS using habits and online network characteristics. In the second section of the questionnaire, respondents were asked about their perceived stress, coping styles, and social

emotional adjustment. Information on respondents' demographic characteristic was obtained in the last section of the questionnaire.

After receiving Human Subject Review Board's approval in mid November 2013, a pretest was conducted in an introductory Communication class with 22 students. A short oral introduction, a cover letter, and a small gift were offered to recruit them to participate in this pretest. Four students filled out the online survey pretest within required time duration. Questionnaire design and wording were refined based on their feedbacks. The researcher started collecting data in China in late November 2013. A total of 450 cover letters were distributed at libraries and dining halls at Xiamen University in Xiamen, China. The cover letter mainly includes the link to the online survey and some basic information about the purpose and significance of the study, importance of participants' responses, the questionnaire, and researchers' contact information. Students who indicated their interest in this study were then provided with a short oral introduction while showing them the online survey on a laptop. They were also asked to write down their email addresses in an excel document for the ease of sending them email reminders. Each student participant was offered a small gift (a post card or a folder) as a token of appreciation. A similar data collection procedure went through at Bowling Green State University in Ohio, America, in between December 2013 and April 2014. A total of 500 cover letters were distributed at the library and the student union. Participants were asked to complete the online survey within a week. Three email reminders were sent out to reach participants in five days, ten days, and two weeks. To make sample size in both countries comparable, 97 undergraduate students in the public university Telecommunication Department were also recruited in this online survey and offered extra credits as an incentive in April 2014.

A total of 265 survey responses were received from Chinese participants and 262 survey responses were received from American participants.

### **Summary**

Chapter IV describes the research method and research procedures. The researcher explained the appropriateness of adopting the self-administered online survey mode for this exploratory study, reported pilot study findings and how it contributed to the instrumentation of the formal study, and reported comparative preliminary data analysis results. The sample profile already shows some cross-cultural differences in college students' demographics. In the next chapter, in-depth explanatory data analysis results will reveal more interesting findings related to students' social media use and social psychological well-being in a research model.



## CHAPTER V. RESULTS

In this chapter, descriptive and explanatory analysis results of American and Chinese student samples are presented, including 1) sample demographic profiles; 2) comparative data analysis results of key variables in these two samples; 3) assumption test results; and 4) path analysis findings to address the proposed questions and hypotheses.

### Demographic Profile of Samples

#### *U.S. Student Sample*

Among the 262 American undergraduate students who participated in this survey study, male respondents accounted for 44.6% (n = 107) and female respondents accounted for 55.4% (n = 133). Their average age is 20.3 (n = 240). Among those respondents who reported their class standings (n = 240), there are 52 freshmen (21.7%), 56 sophomores (23.3%), 75 junior students (31.3%), and 57 (23.7%) senior students. The majority of student respondents (83.7%, n = 200) reported that the university was in their home state. The attended 56.3% student respondents (n = 135) live on campus. In addition, 45.4% (n = 108) respondents reported having a part-time job. American student participants reported an average number of two siblings (n = 239, SD = 1.77). Among the 230 respondents who reported their total household income before taxes for the most recent calendar year, 30.4% (n = 70) reported “under \$30,000”, 15.7% (n = 36) reported “\$30,001 - \$60,000”, 25.7% (n = 59) reported “\$60,001 - \$90,000”, 18.3% (n = 42) reported “\$90,001 - \$150,000”, and 10% (n = 23) reported “over \$150,000”.

#### *Chinese Student Sample*

A total of 265 Chinese undergraduate students participated in this comparative survey study. Male respondents account for 48.1% (n = 115) and female respondents account for 51.9% (n = 124). Their average age is 20 (n = 239). Among those respondents who reported their class

standing (n = 241), there are 58 freshmen, 86 sophomores, 59 junior students, and 38 senior students. 39.5% student respondents (n = 96) reported going to an in-province college. Almost all (99.6%, n = 241) student respondents live on campus. Only 18.1% (n = 44) respondents reported having a part-time job. Chinese student participants reported an average number of one sibling (n = 239, SD = 6.42). Among 240 respondents who reported their total household income before taxes for the most recent calendar year, 25.4% (n = 61) reported “under 30,000 yuan”, 24.2% (n = 58) reported “30,001 yuan - 60,000 yuan”, 17.9% (n = 43) reported “60,001 yuan - 90,000 yuan”, 19.2% (n = 46) reported “90,001 yuan - 150,000 yuan”, and 13.3% (n = 32) reported “over 150,000 yuan”.

Overall, there is no obvious difference in demographic compositions in gender, age, and class standing between American and Chinese student respondents. However, compositions of these two samples differ in the following aspects: 1) the number of American student respondents at Bowling Green State University who reported attending an in-state college is about twice the number of Chinese student respondents at Xiamen University who reported attending an in-state college; 2) almost all Chinese student respondents live on-campus, while about half of American student respondents live off-campus; 3) about half of American student respondents reported having a part-time job, which is about twice the number of Chinese student respondents who reported having a part-time job; 4) American student respondents reported having an average of two siblings, while Chinese student respondents averagely don't have a sibling. The data presents that more American student respondents go to in-state/province college, live off-campus, have a part-time job, and have a sibling than Chinese student respondents.

**Table 5.1**

## Demographic Profiles of U.S. and Chinese Samples

<u>Categorical Variables</u>	<u>%</u>	
	U.S. Sample (N = 262)	Chinese Sample (N = 265)
Gender	(n = 240)	(n = 239)
Male	44.6	48.1
Female	55.4	51.9
Year in College	(n = 240)	(n = 241)
Freshman	21.7	24.1
Sophomore	23.3	35.7
Junior	31.3	24.5
Senior	23.7	15.8
Total Household Income	(n = 230)	(n = 240)
Under 30,000	30.4	25.4
30,001- 60,000	15.7	24.2
60,001- 90,000	25.7	17.9
90,001-150,000	18.3	19.2
Over 150,000	10	13.3
Location of College	(n = 239)	(n = 243)
In state/province	83.7	39.5
Out of state/province	16.3	60.5
Living on Campus	(n = 240)	(n = 242)
Yes	56.3	99.6
No	43.7	0.4
Part-time Job	(n = 238)	(n = 243)
Yes	45.4	18.1
No	54.6	81.9

<u>Continuous Variables</u>	Median, Mean (n, SD)	
	U.S. Sample	Chinese Sample
Age	20, 20.3 (240, 1.98)	20, 19.98 (239, 1.41)
Number of Siblings	2, 2.24 (239, 1.77)	.5, .73 (238, .92)

### **Comparative Data Analysis Results of Key Variables**

Differences in central tendency of ten key variables are examined based on independent sample t-test analysis results (as shown in Table 5.1). American student respondents perceived higher levels of stress than Chinese student respondents. Their time spent on Facebook was about triple the time Chinese students spent on Renren per week. Additionally, they were more involved in recharging SNS activities and role modeling behaviors, and reported significantly higher social adjustment scores than Chinese students. In contrast, Chinese student respondents reported higher adaptive coping scores. There is no significant difference in emotional adjustment scores, emotional status while using SNS, and perceived social support in these two samples. Detailed comparison of each specific variable is presented below.

**Table 5.2**

Differences of Key Variables in American and Chinese Samples

Variables	Mean (n, SD)		Independent Sample T-test
	US (n = 262)	China (n = 265)	
1. Perceived Stress	27.8 (n = 224, SD = 6.6)	26.7 (n = 230, SD = 5.1)	t = 2.0, p = .05
2. Time Spent on SNS	7.4 (n = 237, SD = 8.5)	2.8 (n = 234, SD = 3.4)	t = 7.8, p < .001
3. Positive Strategic SNS Involvement	15.4 (n = 249, SD = 4.5)	12.2 (n = 243, SD = 4.3)	t = 8.2, p < .001
4. Social support received from SNS	4.7 (n = 255, SD = 1.7)	4.6 (n = 240, SD = 1.7)	t = .5, p = n.s.
5. Emotional status	3 (n=218, SD = .6)	3 (n=206, SD = .4)	t = .5, p = n.s.
6. Number of Role models on SNS	7.5 (n =247, SD = 15.5)	2.7 (n = 241, SD = 8.5)	t = 4.2, p < .001

7. Frequency of paying attention to role models	2.5 (n = 257, SD = 1.3)	1.9 (n = 244, SD = 1.1)	t = 5.3, p < .001
8. Adaptive coping	11.1 (n = 235, SD = 3.4)	12 (n = 233, SD = 2.7)	t = -3.1, p = .002
9. Social adjustment	22 (n = 230, SD = 4.1)	18.2 (n = 232, SD = 3.3)	t = 4.4, p > .001
10. Emotional adjustment	17 (n = 229, SD = 4.8)	17 (n = 233, SD = 3.5)	t = -.1, p = n.s.
11. Self-efficacy	8.3 (n = 236, SD = 2.4)	6.4 (n = 233, SD = 2.6)	t = 8.0, p < .001
12. Network size	744.9 (n = 250, SD = 880.9)	145.7 (n = 232, SD = 151.2)	t = 10.6, p < .001
13. Percentage of SNS friends of the same gender	3.6 (n = 256, SD = .7)	3.6 (n = 242, SD = 1.0)	t = .1, p = n.s.
14. Percentage of SNS friends of the same ethnicity	4 (n = 256, SD = .9)	4.5 (n = 242, SD = 1.2)	t = -4.7, p < .001
15. Percentage of SNS friends living in the same city	3.6 (n = 254, SD = .9)	3.7 (n = 241, SD = 1.2)	t = -1.7, p = n.s.
16. Percentage of SNS friends in a similar age	4 (n = 256, SD = .9)	4.5 (n = 242, SD = 1.1)	t = -5.1, p < .001
17. SNS network density	3.6 (n = 253, SD = .8)	3.8 (n = 244, SD = 1.1)	t = -2.5, p = .015
18. Centrality in SNS network	5.2 (n = 255, SD = 2.5)	2.1 (n = 241, SD = 2.0)	t = 15.4, p < .001
19. Communication reciprocity on SNS	3.4 (n = 257, SD = 1.1)	3.1 (n = 239, SD = 1.3)	t = 2.7, p = .006
20. Percentage of close friends on SNS	2.8 (n = 258, SD = .8)	2.4 (n = 245, SD = 1.1)	t = 5.1, p < .001

1) Perceived stress. The average perceived stress level was 27.8 (n = 224, SD = 6.6) of a total of 50 in the U.S. sample and 26.7 (n = 230, SD = 5.1) in the Chinese sample. American student respondents perceived significantly higher levels of stress than Chinese student respondents (t = 2.0, p = .05).

2) Positive strategic SNS involvement. American student respondents spent an average of

7.4 hours on Facebook per week ( $n = 237$ ,  $SD = 8.5$ ). Chinese student respondents spent an average of 2.8 hours on Renren per week ( $n = 234$ ,  $SD = 3.4$ ). The time American student respondents spent on Facebook was about triple the time Chinese students spent on Renren per week ( $t = 7.8$ ,  $p < .001$ ). Compared with Chinese student respondents, American student respondents were significantly more involved in the five recharging activities, including checking friends' updates, clicking likes, participating in online groups, self-disclosing, and viewing personal pages on SNS ( $t = 8.2$ ,  $p < .001$ ). Of a total add-up frequency score of 25, American student respondents reported an average score of 15.4 ( $n = 249$ ,  $SD = 4.5$ ). Chinese students reported an average score of 12.2 ( $n = 243$ ,  $SD = 4.3$ ).

3) Adaptive coping. The average adaptive coping score for the American student sample is 11.1 of a total of 15 ( $n = 235$ ,  $SD = 3.4$ ). Among various stress coping strategies adopted by American student respondents, writing diary is associated with highest adaptive coping score ( $M = 12.1$ ,  $n = 28$ ), followed by using Facebook ( $M = 11.8$ ,  $n = 74$ ), doing exercise ( $M = 11.5$ ,  $n = 108$ ) and talking to friends ( $M = 11.5$ ,  $n = 185$ ), watching TV ( $M = 11.3$ ,  $n = 128$ ) and listening to music ( $M = 11.3$ ,  $n = 191$ ), self-talking ( $M = 11.1$ ,  $n = 78$ ), and drinking or smoking ( $M = 10.2$ ,  $n = 57$ ). The average adaptive coping score for the Chinese student sample is 12 ( $n = 233$ ,  $SD = 2.7$ ). Among various stress coping strategies, using Renren ( $M = 12.7$ ,  $n = 14$ ) and drinking or smoking ( $M = 12.7$ ,  $n = 14$ ) are associated with highest adaptive coping score, followed by talking to friends ( $M = 12.6$ ,  $n = 150$ ), writing diary is ( $M = 12.5$ ,  $n = 53$ ), listening to music ( $M = 12.4$ ,  $n = 179$ ), doing exercise ( $M = 12.3$ ,  $n = 94$ ), watching TV ( $M = 12$ ,  $n = 89$ ) and self-talking ( $M = 12$ ,  $n = 78$ ). Chinese student respondents reported significantly higher adaptive coping scores than American student respondents ( $t = -3.1$ ,  $p = .002$ ).

4) Social adjustment. American student respondents reported an average social

adjustment score of 22.04 ( $n = 230$ ,  $SD = 4.1$ ) of a total score of 28, while the average score for Chinese student respondents is 18.2 ( $n = 232$ ,  $SD = 3.3$ ). American students reported significantly higher social adjustment scores than Chinese students ( $t = 4.4$ ,  $p > .001$ ).

5) Personal emotional adjustment. The average personal emotional adjustment score is 17.0 ( $n = 229$ ,  $SD = 4.8$ ) of a total score of 24 for American student respondents and 17.00 ( $n = 233$ ,  $SD = 3.5$ ) for Chinese student respondents. The difference is not significant between the two samples ( $t = -.1$ ,  $p = n. s.$ ).

6) Emotional status while using SNS. Among the 218 American student respondents, 73.9% ( $n = 161$ ) reported feeling relaxed, 16.5% ( $n = 36$ ) reported feeling happy, 5% ( $n = 11$ ) reported feeling sad, and 4.6% ( $n = 10$ ) reported feeling nervous when they use Facebook most of the time during the last month. Among the 206 Chinese student respondents, 89.8% ( $n = 185$ ) reported feeling relaxed, 5.8% ( $n = 12$ ) reported feeling happy, 2.4% ( $n = 5$ ) reported feeling sad, and 1.9% ( $n = 4$ ) reported feeling nervous when they use Renren most of the time during the last month. There is no significant difference in reported emotional status between Chinese and American student samples ( $t = .5$ ,  $p = n. s.$ ). The majority of American and Chinese student respondents reported feeling relaxed while using Facebook/Renren most of the time during the last month.

7) Role modeling via SNS. American student respondents reported an average number of 7 ( $n = 247$ ,  $SD = 15.5$ ) role models on Facebook, while Chinese student respondents reported an average number of 3 ( $n = 241$ ,  $SD = 8.5$ ) role models on Renren. There is a significant difference in reported numbers of role models in two samples ( $t = 4.2$ ,  $p < .001$ ). Besides, American students reported a significantly higher frequency of paying attention to role models on Facebook than Chinese students ( $t = 5.3$ ,  $p < .001$ ). Among the 257 American student

respondents, 31.9% (n = 82) indicated never paying attention to their role models on Facebook, 24.9% (n = 62) indicated paying attention to their role models on Facebook “once a month or less”, 18.7% (n = 48) indicated paying attention to their role models on Facebook “several times a week”, 15.6% (n = 40) indicated paying attention to their role models on Facebook “once a week to once a month”, and 8.9% (n = 23) indicated paying attention to their role models on Facebook “almost daily”. In contrast, among the 244 Chinese student respondents, 50.4% (n = 123) indicated never paying attention to their role models on Renren, 23.8% (n = 58) indicated paying attention to their role models on Renren “once a month or less”, 12.7% (n = 31) indicated paying attention to their role models on Renren “once a week to once a month”, 11.5% (n = 28) indicated paying attention to their role models on Renren “several times a week”, and 1.6% (n = 4) indicated paying attention to their role models on Renren “almost daily”. Overall, American students reported on average twice the number of role models and had a significantly higher frequency of paying attention to role models on Facebook compared to Chinese student respondents.

8) Social support received from SNS. The average score of social support received from SNS, including both emotional and informational support, was 4.7 (n = 255, SD = 1.7) out of a total score of 10 among American students, and 4.6 (n = 240, SD = 1.7) among Chinese students. There was no significant difference in the two samples ( $t = .5$ ,  $p = n. s.$ ). Specifically, among the 256 American student respondents, 41.4% (n = 106) reported receiving emotional support (e.g.: encouragement or validation) from Facebook friends “once a month or less”, 28.9% (n = 74) reported receiving emotional support “once a week to once a month”, 19.5% (n = 50) reported never receiving emotional support from Facebook friends, 8.6% (n = 22) reported receiving emotional support “several times a week”, 1.6% (n = 4) reported receiving emotional support



“almost daily”. In addition, 39.1% (n = 100) American student respondents reported obtaining useful information (such as: advice) while using Facebook “once a month or less”, 23.4% (n = 60) reported never obtaining useful information from Facebook friends, 22.7% (n = 58) reported obtaining useful information “once a week to once a month”, 10.2% (n = 26) reported obtaining useful information “several times a week”, and 4.7% (n = 12) reported obtaining useful information “almost daily”.

Among the 241 Chinese student respondents, 50.2% (n = 121) reported receiving emotional support from Renren friends “once a month or less”, 23.7% (n = 57) reported never receiving emotional support from Renren friends, 15.8% (n = 38) reported receiving emotional support “once a week to once a month”, 9.1% (n = 22) reported receiving emotional support “several times a week”, 1.2% (n = 3) reported receiving emotional support “almost daily”. Additionally, 42% (n = 102) Chinese student respondents reported obtaining useful information (such as: advice) while using Renren “once a month or less”, 22.6% (n = 55) reported obtaining useful information “once a week to once a month”, 17.7% (n = 43) reported never obtaining useful information from Renren friends, 14.4% (n = 35) reported obtaining useful information “several times a week”, and 3.3% (n = 8) reported obtaining useful information “almost daily”. To sum up, American and Chinese student respondents perceived similar levels of social support from Facebook/Renren.

9) Self-efficacy. American student respondents reported an average self-efficacy score of 8.3 (n = 236, SD = 2.4) out of a total of 10, while Chinese student respondents reported an average score of 6.4 (n = 233, SD = 2.6). Hence American students have higher self-efficacy than Chinese respondents. The difference was statistically significant ( $t = 8.0, p < .001$ ).

10) SNS social capital. SNS social capital was measured by seven dimensions in this

study, including a) network size, b) network homophily, c) network density, d) network centrality, e) communication reciprocity, f) tie strength and g) network multiplexity. a) The average Facebook network size reported by American students was significantly larger than the average Renren network size reported by Chinese students ( $t = 10.6, p < .001$ ). American student respondents reported an average number of 802 Facebook friends ( $n = 251, SD = 1258$ ), while Chinese student respondents reported an average number of 146 friends on Renren ( $n = 232, SD = 151.2$ ). b) The network homophily was measured by reported percentage of SNS friends of the same gender, ethnicity, city, as well as age. Chinese students reported significantly higher percentages of SNS friends with the same ethnicity ( $t = -4.7, p < .001$ ) and age ( $t = -5.1, p < .001$ ) than American students, but similar percentages of friends of the same gender ( $t = .06, p = n.s.$ ) and city ( $t = -1.7, p = n.s.$ ). Hence Chinese students have higher network homophily than American students. c) Network density was measured by the reported average percentage of SNS friends who know each other. It was found that the Chinese student sample had a significantly higher average network density than the American student sample ( $t = -2.5, p = .015$ ). While the majority of American student respondents (49%) indicated that many (between 41% and 75%) of their Facebook friends know each other, many Chinese student respondents (34.4 %) reported that most (more than 75%) of their Renren friends know each other. d) Network centrality was measured by self-identified level of centrality on SNS network out of a total score of 10. American student respondents averagely perceived themselves as more central in Facebook networks than Chinese student respondents perceived themselves in Renren networks ( $t = 15.4, p < .001$ ). Specifically, American students reported an average number of network centrality of 5 ( $n = 255, SD = 2.5$ ), while Chinese students reported an average number of network centrality of 2 ( $n = 241, SD = 2.0$ ). e) Communication reciprocity was measured by respondents' perceived

reciprocity of communication on Facebook/Renren out of a total score of 5. The average score in communication reciprocity on SNS was significantly higher in the American sample than the Chinese sample ( $t = 2.7, p = .006$ ). About 32% ( $n = 82$ ) of American student respondents indicated that some (between 6% and 40%) communication on their Facebook was reciprocal, while a lower percentage of Chinese respondents (25.1%,  $n = 60$ ) reported the same. f) Tie strength was measured by the percentage of SNS friends perceived as close friends. American student respondents reported a significantly higher percentage of close friends on Facebook than Chinese student respondents ( $t = 5.1, p < .001$ ). g) Lastly, network multiplexity was measured by the types of media content used to interact with friends on SNS, including text, photo, audio, and video. American students reported an average network multiplexity score of 2 ( $n = 262, SD = .9$ ) out of a total of 4 media content types, which is significantly higher than the average score of 1.25 ( $n = 265, SD = .8$ ) reported by Chinese students ( $t = 10.5, p < .001$ ). In summary, the average Facebook network size reported by American student respondents was approximately four times larger than the average Renren network size reported by Chinese student respondents. In addition, American student respondents reported higher levels of centrality, communication reciprocity, tie strength, and network multiplexity on Facebook than Chinese student respondents. However, Chinese student respondents reported experiencing a higher network density than American student respondents.

### **Assumption Test**

According to Meyers et al. (2006), path analysis is mostly applied to analyze data that is collected using a correlational procedure. Therefore, the path analysis was selected as the statistic technique to test hypothesized research models and hypotheses. Before utilizing the path

analysis, the following basic assumptions were examined: 1) normality, 2) linearity, 3) non-multicollinearity.

### *Normality*

To test whether a distribution of scores is normal, the values of kurtosis and skewness need to be checked (Field, 2009). The values of skewness and kurtosis should be zero in a normal distribution. Positive skewness values indicate a pile-up of scores on the left of the distribution, while negative values indicate a pile-up on the right. Positive kurtosis values indicate a pointy and heavy-tailed distribution, while negative values indicate a flat and light-tailed distribution. The further skewness and kurtosis values are from zero, the more likely distributions of scores are not normal. To find out how likely skew and kurtosis are to occur, skewness and kurtosis values should be converted to z-scores following the equations below:

$$(1) Z_{\text{skewness}} = (\text{Skewness} - 0) / \text{SE}_{\text{skewness}}$$

$$(2) Z_{\text{kurtosis}} = (\text{Kurtosis} - 0) / \text{SE}_{\text{kurtosis}}$$

An absolute value greater than 1.96 is significant at  $p < .05$ , above 2.58 is significant at  $p < .01$  and absolute values above about 3.29 are significant at  $p < .001$ . As shown in Table 5.3, most variables in this study, including time spent on SNS, social support received from SNS, emotional status while using SNS, role modeling on SNS, adaptive coping, social and emotional adjustment, violate the normality assumption. However, as the sample sizes are comparatively large, violation of the normality assumption is not a major concern (Pallant, 2007).

**Table 5.3**

#### Normality of Distribution

Variables	U.S. Sample (N = 262)		Chinese Sample (N = 265)	
	$Z_{\text{skewness}}$	$Z_{\text{kurtosis}}$	$Z_{\text{skewness}}$	$Z_{\text{kurtosis}}$
1. Perceived Stress	.8	.2	-.1	.4

2. Time Spent on SNS	10	11.1	11.5	15.4
3. Positive strategic SNS Involvement	-1.3	-.9	1.2	-1.1
4. Social support received from SNS	2.2	.4	2.2	-.6
5. Emotional status while using SNS	6	9.3	10.5	35.8
6. Role modeling on SNS	17.8	41	37.5	162.2
7. Adaptive coping	-6	4.9	-6.4	5.1
8. Social adjustment	-4.2	1.5	.2	.4
9. Emotional adjustment	-3.1	-1.2	-.2	-.9

### *Linearity*

Linearity assumes that variables in the analysis are related to each other in a linear manner (Meyers et al., 2006). One approach to assess linearity is to run a regression analysis and check standardized residuals and cook's D (Simkiss et al., 2015). Standardized residual measures how well the model fits the data by dividing residual (the difference between the calculated mean value of Y and the actual observed value of Y for a given value of the explanatory variable) by standard error. A standardized residual greater than 3 indicates that an observation is unusual in the Y value and has the potential to influence the regression line. In this case, Cook's Distance should be checked to identify how much actual influence this observation has on the slope of the regression line. Cook's Distance is a measure of the distance between regression coefficients calculated with and without a particular data point. Large values for Cook's Distance indicate unusual observations. Values larger than 1 require careful checking, and values larger than 4 are potentially serious outliers (Simkiss et al., 2015). As shown in Table 5.4, cook's D statistic was used to examine the influence of outliers with standardized residuals larger than 3. These large residual cases didn't have a significant Cook's D value to influence the results. Therefore, these cases are kept in subsequent analysis.

**Table 5.4**

## Linearity of Bivariate Pairs

Pairs	U.S. Sample		Chinese Sample	
	<u>Largest Standardized Residuals</u>	<u>Cook's D</u>	<u>Largest Standardized Residuals</u>	<u>Cook's D</u>
1. Perceived stress – Time spent on SNS	3.33 (2)	.18	2.69	-
2. Perceived stress – Positive strategic SNS involvement	3.39 (1)	.05	2.79	-
3. Time spent on SNS – SNS social support	5.52 (5)	.23	5.48 (4)	.11
4. Time spent on SNS – SNS role modeling	5.05 (5)	.27	5.59 (7)	.24
5. Time spent on SNS – Emotional status	5.01 (4)	.06	5.04 (6)	.46
6. Positive strategic SNS involvement – SNS social support	2.88	-	3.26 (2)	.1
7. Positive strategic SNS involvement – SNS role modeling	-2.51	-	3.07 (2)	1.71
8. Positive strategic SNS involvement – Emotional status	2.33	-	3.01 (2)	.19
9. SNS social support – Adaptive coping	3 (1)	.07	3.06 (1)	.07
10. SNS role modeling – Adaptive coping	6.94 (7)	.12	11.53 (3)	.36
11. Emotional status – Adaptive coping	-3.28 (6)	.18	-5 (4)	.1
12. Time spent on SNS – Adaptive coping	4.82 (5)	.13	5.29 (7)	.08
13. Positive strategic SNS involvement – Adaptive coping	-2.51	.04	3.08 (1)	.1
14. Adaptive coping – Social adjustment	-3.38 (4)	.06	-4.47 (3)	.09
15. Adaptive coping – Emotional adjustment	-3.22 (2)	.11	-4.32 (3)	.12

### *Non-multicollinearity*

Multicollinearity exists when there are strong correlations between more than two predictor variables (Meyers et al., 2006). When multicollinearity exists, interpretation of multivariate analysis results can be distorted. Especially when the research goal is to understand the interplay of the predictors, multicollinearity can be a serious problem in the analysis. Identifying multicollinearity requires researchers to examine the Pearson correlations between predictor variables. Two variables correlated in the middle .7s or higher should not be used together in a multivariate analysis (Meyers et al., 2006). Two commonly used statistical parameters to test multicollinearity are the tolerance level and the variance inflation factor (VIF), which is computed as 1 divided by tolerance. Lower tolerance values and higher VIF values indicate that there are stronger relationships between the predictor variables. A VIF value of 2.5 is considered problematic by Allison (1999); a VIF value of 10 is considered problematic by Stevens (2009). Analysis results of VIF values in both U.S. and Chinese samples report VIF values lower than 2.5. As shown in Table 5.5, there is no sign of multicollinearity as all predictor variables have VIF values lower than 2.5.

**Table 5.5**

#### Test of Multicollinearity

Independent Variables	VIF	
	U.S. Sample	Chinese Sample
1. Perceived Stress	1.05	1.01
2. Time spent on SNS	1.2	1.2
3. Positive strategic SNS involvement	1.67	1.98
4. SNS social support	1.46	2.04
5. SNS role modeling	1.14	1.1
6. Emotional Status	1.09	1.04

#### **Reliability of the Scales**

Reliability is a statistical measure of how replicable the survey instrument's data are (Litwin, 1995). A reliable scale should consistently reflect the construct that it is measuring. The most common measure of scale reliability is Cronbach's alpha. Low Cronbach's alpha values indicate unreliable scales, while a value of .7 to .8 is acceptable in most circumstances (Kline, 1999). As presented in Table 5.6, Cronbach's alpha values for four scales are satisfactory, ranging from .72 to .87.

**Table 5.6**

<u>Variables</u>	<u>Reliability of the Scales</u>		<u>No. of Items</u>
	<u>Cronbach's alpha</u>		
	<u>US Sample</u>	<u>Chinese Sample</u>	
Perceived Stress	.84	.80	10
Adaptive Coping	.81	.74	15
Social Adjustment	.81	.72	7
Emotional Adjustment	.87	.76	6

**Table 5.7**

Scales Items Used in the Study

Perceived Stress

- A1. Felt upset because of something that happened unexpectedly
- A2. Felt unable to control the important things in your life
- A3. Felt nervous and "stressed"
- A4. Felt confident about your ability to handle your personal problems
- A5. Felt that things were going your way
- A6. Found that you could not cope with all the things that you had to do
- A7. Felt able to control irritations in your life
- A8. Felt you were on top of things
- A9. Felt angered because of things that were outside of your control
- A10. Felt that difficulties were piling up so high that you could not overcome them

Adaptive Coping

- B1. I let my emotions show
- B2. I talk to someone about how I feel
- B3. I try to let out my feelings
- B4. I try to get emotional support from friends or relatives
- B5. I talk to someone to find out more about the situation



- B6. I take direct action to get around the problem
- B7. I do what has to be done, one step at a time
- B8. I make a plan of action
- B9. I try to come up with a strategy about what to do
- B10. I try hard to prevent other things from interfering with my efforts at dealing with this
- B11. I try to be optimistic in spite of what happened
- B12. I accept the reality of the fact that it happened
- B13. I try to see it in a different light, to make it seem more positive
- B14. I look for something good in what is happening
- B15. I try to identify something else I care about

#### Social Adjustment

- C1. I am very involved with social activities in college
- C2. I have several close social ties at college
- C3. I feel that I have enough social skills to get along well in the college setting
- C4. I am having difficulty feeling at ease with other people at college
- C5. I am satisfied with the extent to which I am participating in social activities in college
- C6. I feel I am very different from other students at college in ways I don't like
- C7. I am quite satisfied with my social life at college

#### Emotional Adjustment

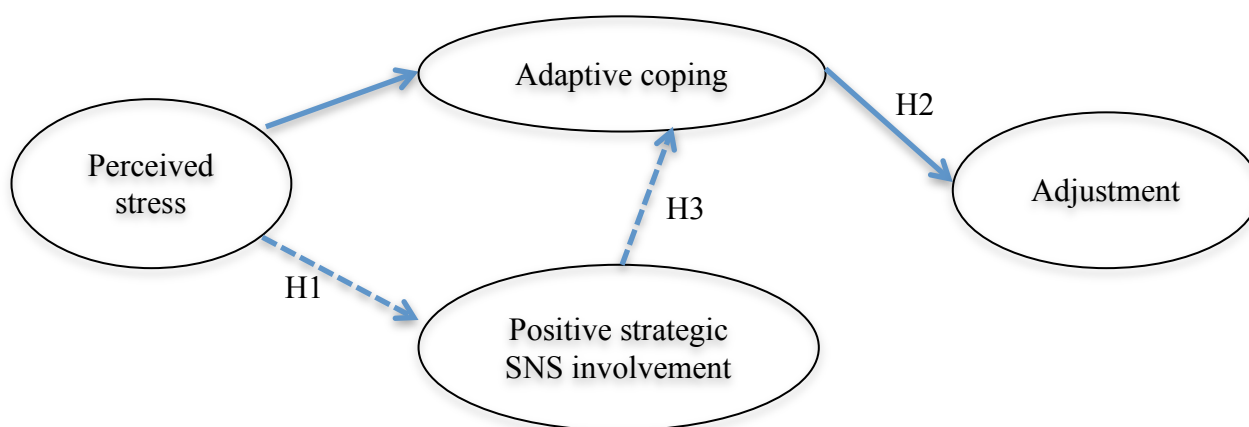
- D1. Lately I have been feeling blue and moody a lot
- D2. I haven't been able to control my emotions very well lately
- D3. I really haven't had much motivation for studying lately
- D4. I have been getting angry too easily lately
- D5. I haven't been sleeping very well
- D6. I have been feeling lonely a lot at college lately

### **Data Examination**

Path analysis was run to test hypotheses in the basic and extended research models in three steps. Firstly, the basic research model was tested to examine associations between perceived stress, time spent on SNS and positive strategic SNS involvement, adaptive coping, and social psychological adjustment. Secondly, self-efficacy and SNS social capital were introduced as two moderators in the simplified model to see whether the association between positive strategic SNS involvement and adaptive coping differed significantly among four groups of users: low self-efficacy and low SNS social capital users ( $l_{se}l_{sc}$  group), low self-efficacy and high SNS social capital users ( $l_{se}h_{sc}$  group), high self-efficacy and low SNS social capital users

( $h_{se}l_{sc}$  group), and high self-efficacy and high SNS social capital users ( $h_{se}h_{sc}$  group). Thirdly, if the relationship between positive strategic SNS involvement and adaptive coping was found to be significant in one or more of the above four groups, the extended research model was further tested to explain how well the three mediators, emotional status while using SNS, role modeling via SNS, and social support received from SNS, explained the relationship. All regression coefficients reported in this section were standardized coefficients.

*Basic Model: Perceived Stress, Positive Strategic SNS Involvement and Adaptive Stress Coping Strategy*



**Figure 5.1 Basic Research Model Revisited**

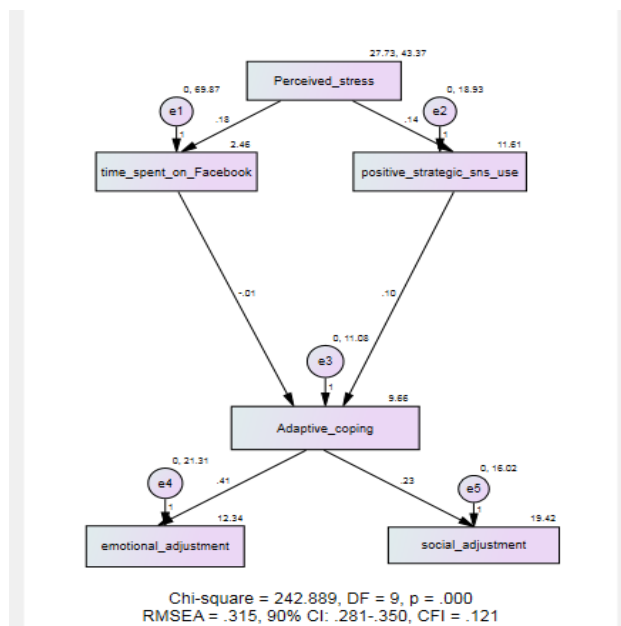
According to path analysis results, perceived stress was significantly positively related to both time spent on Facebook ( $\beta = .14$ ,  $p = .043$ ) and positive strategic SNS involvement ( $\beta = .20$ ,  $p = .003$ ) in the U.S. sample. In the Chinese sample, perceived stress was significantly positively related to time spent on Facebook ( $\beta = .14$ ,  $p = .038$ ), but not significantly related to positive strategic SNS involvement ( $\beta = .11$ ,  $p = n. s.$ ). Therefore, H1 that perceived stress positively related to positive strategic SNS involvement was supported in the U.S. sample, but not in the Chinese sample. American student respondents with higher levels of perceived stress spent more

time on Facebook and were more involved in recharging SNS activities. Chinese student respondents with higher levels of perceived stress spent significantly more time on Renren, but were not significantly more involved in recharging SNS activities.

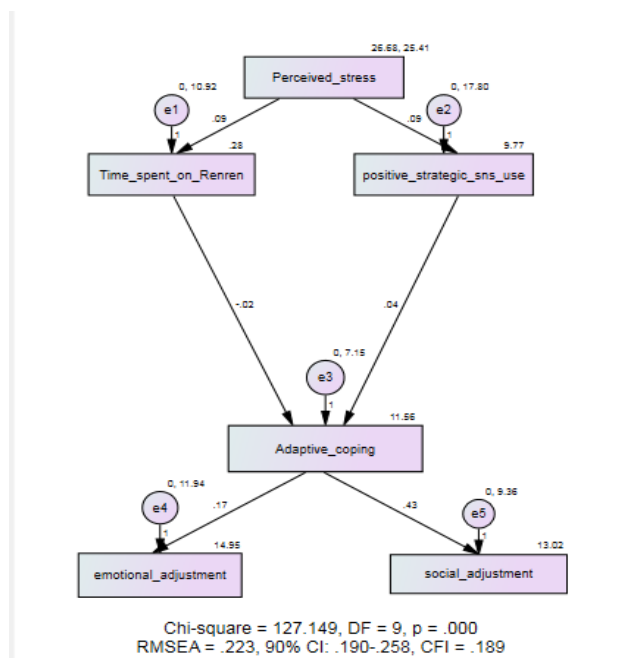
In the U.S. sample, a weak positive relationship was found to exist between positive strategic SNS involvement and adaptive coping ( $\beta = .14, p = .041$ ) controlling users' time spent on SNS, which was not related to adaptive coping ( $\beta = -.03, p = n. s.$ ). In the Chinese sample, neither positive strategic SNS involvement ( $\beta = .06, p = n. s.$ ) nor time spent on SNS ( $\beta = -.03, p = n. s.$ ) was significantly related to adaptive coping. Thus, H3 that college students' positive strategic SNS involvement is positively correlated to adaptive coping was supported in the U.S. sample, but not in the Chinese sample. American student respondents who were more engaged in recharging activities on Facebook reported significantly higher adaptive coping scores, controlling for their time spent on Facebook. Chinese student respondents' strategic use of Renren was not related to adaptive coping.

The positive relationships between adaptive coping and social adjustment and personal-emotional adjustment were supported in both U.S. and Chinese samples. Specifically, the higher the adaptive coping scores American student respondents reported, the higher their personal-emotional adjustment scores ( $\beta = .29, p < .001$ ) and social adjustment scores ( $\beta = .19, p = .003$ ). Similarly, the higher the adaptive coping scores Chinese student respondents reported, the higher their personal-emotional adjustment scores ( $\beta = .13, p = .049$ ) and social adjustment scores ( $\beta = .35, p < .001$ ). Therefore, H2a on the positive relationship between adaptive coping and social adjustment and H2b on the positive relationship between adaptive coping and personal-emotional adjustment were supported in both the U.S. sample and the Chinese sample.

## U.S. Sample



## Chinese Sample



**Figure 5.2: Path Analysis Output for the Basic Model in the U.S. and Chinese Samples**

To sum up, the first three hypotheses in the basic research model were supported in the U.S. sample, but only H3a and H3b were supported in the Chinese sample. American student

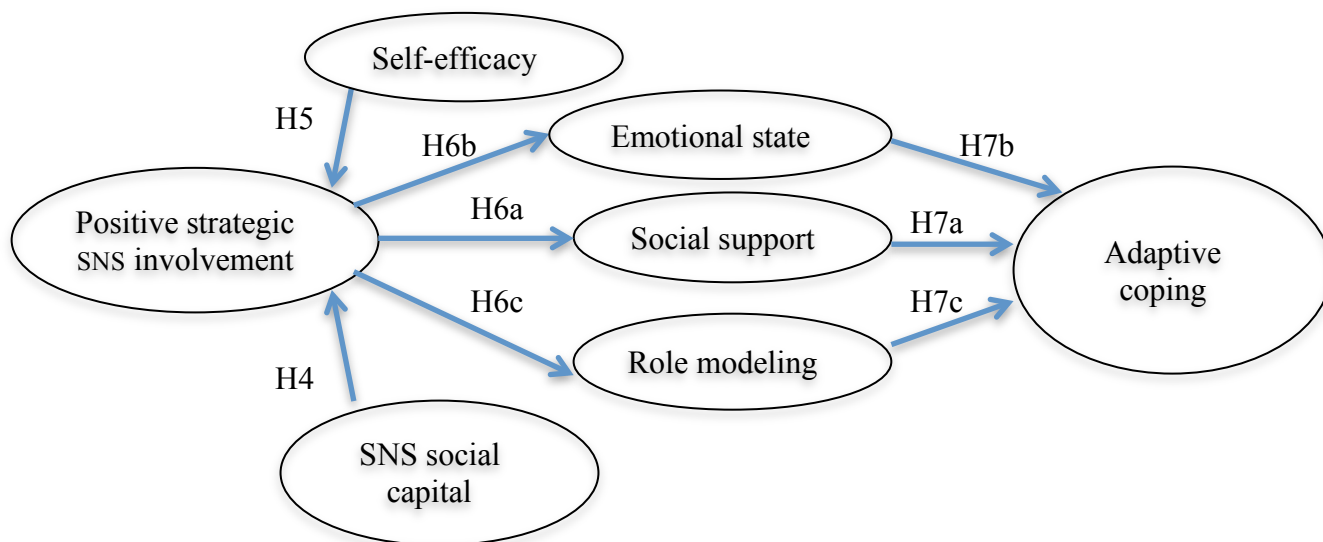
respondents reporting higher levels of perceived stress were more engaged in recharging Facebook activities. Their frequencies of involving in recharging Facebook activities were positively related to reported adaptive coping scores, which were positively associated with their personal-emotional and social adjustment scores. These associations suggested that positive strategic Facebook use could serve as an adaptive stress coping strategy among U.S. student respondents. In contrast, perceived stress was not related to Chinese student respondents' positive strategic SNS involvement. Moreover, their positive strategic SNS involvement was not related adaptive coping, which was positively associated with personal-emotional and social adjustment. The findings suggested that Chinese student respondents generally didn't involve themselves in recharging activities on Renren to adaptively cope with stress. Although the relationship between positive strategic SNS involvement and adaptive coping was not significant in the Chinese sample and weak in the U.S. sample, it could exist, or be more prominent, in different groups with further investigation of the moderating effect of self-efficacy and SNS social capital in the next step.

#### *Moderated Model with Self-Efficacy and Social Capital*

To test the moderating effects of self-efficacy and SNS social capital in the relationship between positive strategic SNS involvement and adaptive coping, two sets of groups (high self-efficacy vs. low self-efficacy and high SNS social capital vs. SNS social capital) were created in AMOS research model respectively. In the U.S. sample, self-efficacy ( $c^2 = 4.71$ ,  $df = 1$ ,  $p = .03$ ) was identified as significant moderators. The relationship between strategic SNS use and adaptive coping was significant among high self-efficacy users ( $\beta = .27$ ,  $p < .001$ ), but not significant among low self-efficacy users ( $\beta = -.08$ ,  $p = n.s.$ ). SNS social capital measured by the sum of z-scores of seven network characteristic factors didn't serve as a significant moderator (c

$t^2 = 2.69$ ,  $df = 1$ ,  $p = n. s.$ ). Tie strength was found as a significant moderator ( $c^2 = 18.47$ ,  $df = 1$ ,  $p < .001$ ). The association between positive strategic SNS involvement and adaptive coping was positive among users with a high percentage of close friends on Facebook ( $\beta = .37$ ,  $p < .001$ ), and negative among users with a low percentage of close friends on Facebook ( $\beta = -.22$ ,  $p = .04$ ). A new moderator, self-efficacy\*SNS social capital, was created by combining the two moderators. The U.S. sample was then separated into four groups: low self-efficacy and low SNS social capital users ( $l_{se}l_{sc}$  group), low self-efficacy and high SNS social capital users ( $l_{se}h_{sc}$  group), high self-efficacy and low SNS social capital users ( $h_{se}l_{sc}$  group), and high self-efficacy and high SNS social capital users ( $h_{se}h_{sc}$  group). According to analysis results, self-efficacy\*SNS social capital was a significant moderator ( $c^2 = 12.32$ ,  $df = 3$ ,  $p = .006$ ). The association between strategic SNS use and adaptive coping was positive and strongest in the  $l_{se}h_{sc}$  group ( $\beta = .4$ ,  $p = .01$ ), followed by the  $h_{se}l_{sc}$  group ( $\beta = .3$ ,  $p = .01$ ) and  $h_{se}h_{sc}$  group ( $\beta = .29$ ,  $p = .008$ ); while it was negative in the  $l_{se}l_{sc}$  group ( $\beta = -.3$ ,  $p = n. s.$ ). Therefore, H4 hypothesizing SNS social capital as a moderator was only partially supported in the U.S. sample, while H5 proposing self-efficacy as a moderator was supported in the U.S. sample. In the Chinese sample, neither self-efficacy ( $c^2 = 1.92$ ,  $df = 1$ ,  $p = n. s.$ ) nor SNS social capital ( $c^2 = 2.86$ ,  $df = 1$ ,  $p = n. s.$ ) served as significant moderators. After separating the Chinese sample into four groups, the association between positive strategic SNS involvement and adaptive coping was found significant in the  $h_{se}l_{sc}$  group ( $\beta = .37$ ,  $p = .023$ ). Therefore, H4 and H5 were not supported in the Chinese sample. In the following step, the positive association between positive strategic SNS involvement and adaptive coping is further examined in the extended moderated mediation model to explain how positive strategic SNS involvement relates to adaptive coping, especially in the  $l_{se}h_{sc}$ ,  $h_{se}l_{sc}$ , and  $h_{se}h_{sc}$  groups of the U.S. sample and the  $h_{se}l_{sc}$  group of the Chinese sample.

*Expanded Research Model with Multiple Group Comparison*



**Figure 5.3 Expanded Research Model Revisited**

Social support received from SNS, role modeling via SNS, and emotional status while using SNS are included as three mediators in the expanded research model to see how positive strategic SNS involvement is associated with adaptive coping.

In the U.S. sample, the direct path between positive strategic SNS involvement and adaptive coping was negative among low self-efficacy users with low SNS social capital ( $\beta = -.30$ ,  $p = n. s.$ ), and positive among other groups of users, including low self-efficacy users with high SNS social capital group ( $\beta = .40$ ,  $p = .01$ ), high self-efficacy users with low SNS social capital ( $\beta = .3$ ,  $p = .01$ ), and high self-efficacy users with high SNS social capital ( $\beta = .29$ ,  $p = .008$ ). 1) Analysis of low self-efficacy users with low SNS social capital indicated that their positive strategic SNS involvement was not significantly related to social support received from SNS ( $\beta = .27$ ,  $p = n. s.$ ), role modeling via SNS ( $\beta = .12$ ,  $p = n. s.$ ), and emotional status while using SNS ( $\beta = .18$ ,  $p = n. s.$ ). However, the support  $l_{se}l_{sc}$  group users received from SNS was positively

related to their adaptive coping scores ( $\beta = .33, p = .033$ ). The direct effect remained negative and became significant ( $\beta = -.38, p = .02$ ) after adding three mediators. 2) Positive strategic SNS involvement by low self-efficacy users with high SNS social capital was positively related to social support received from SNS ( $\beta = .72, p < .001$ ), role modeling via SNS ( $\beta = .58, p < .001$ ), and emotional status while using SNS ( $\beta = .40, p = .016$ ). These three mediators, social support received from SNS ( $\beta = .38, p = .044$ ), role modeling via SNS ( $\beta = .43, p = .008$ ), and emotional status while using SNS ( $\beta = .52, p < .001$ ), were then positively related to adaptive coping. The direct path changed from significantly positive ( $\beta = .4, p = .01$ ) to significantly negative ( $\beta = -.47, p = .035$ ) after adding these three mediators. 3) Among high self-efficacy and low SNS social capital users, their positive strategic SNS involvement was positively related to social support received on SNS ( $\beta = .56, p < .001$ ) and emotional status while using SNS ( $\beta = .39, p = .002$ ). However, the relationship between positive strategic SNS involvement and role modeling via SNS was not significant ( $\beta = .19, p = n. s.$ ). The associations between social support, role modeling and emotional status and adaptive coping were not significant either. After adding three mediators, the direct path remained positive but became non-significant ( $\beta = .19, p = n. s.$ ). 4) Positive strategic SNS involvement among high self-efficacy users with high SNS social capital was positively related to social support ( $\beta = .42, p < .001$ ) and role modeling ( $\beta = .25, p = .026$ ), but not significantly related to emotional status ( $\beta = .13, p = n. s.$ ). The associations between social support, role modeling and emotional status and adaptive coping were not significant. The direct path remained positive but became non-significant ( $\beta = .22, p = n. s.$ ) after adding three mediators.

In summary, H6a was supported among three of the four groups of users in the U.S. sample by self-efficacy and social capital: Positive strategic SNS involvement was positively



related to social support received from SNS among the  $l_{se}h_{sc}$  group ( $\beta = .72, p < .001$ ), the  $h_{se}l_{sc}$  group ( $\beta = .56, p < .001$ ), and the  $h_{se}h_{sc}$  group ( $\beta = .42, p < .001$ ). H6b was supported among two groups of users in the U.S. sample: Positive strategic SNS involvement was positively related to emotional status while using SNS among the  $l_{se}h_{sc}$  group ( $\beta = .4, p = .016$ ) and the  $h_{se}l_{sc}$  group ( $\beta = .39, p = .002$ ). H6c was supported among high SNS social capital users in the U.S. sample: Positive strategic SNS involvement was positively related to role modeling among the  $l_{se}h_{sc}$  group users ( $\beta = .58, p < .001$ ) and the  $h_{se}h_{sc}$  group users ( $\beta = .25, p = .026$ ). H7a was supported among low self-efficacy users in the U.S. sample: There was a positive association between SNS social support and adaptive coping among the  $l_{se}l_{sc}$  group users ( $\beta = .33, p = .033$ ) and the  $l_{se}h_{sc}$  group users ( $\beta = .38, p = .044$ ). H7b and H7c were only supported among low self-efficacy users with high SNS social capital in the U.S. sample: Both emotional status ( $\beta = .52, p < .001$ ) and role-modeling via SNS ( $\beta = .43, p = .008$ ) were positively related to adaptive coping in the  $l_{se}h_{sc}$  group.

In the Chinese sample, the direct path between positive strategic SNS involvement and adaptive coping was only significant among high self-efficacy users with low SNS social capital ( $\beta = .37, p = .023$ ). Analysis results of the  $h_{se}l_{sc}$  group users indicated that their positive strategic SNS involvement was significantly related to social support received from SNS ( $\beta = .63, p < .001$ ), but not role modeling via SNS ( $\beta = .25, p = n. s.$ ) and emotional status while using SNS ( $\beta = .11, p = n. s.$ ). Furthermore, the association between social support and adaptive coping was significant ( $\beta = .48, p = .01$ ), while associations between role modeling via SNS, emotional status while using SNS and adaptive coping were not significant. The direct path remained positive but became non-significant ( $\beta = .01, p = n. s.$ ) after adding three mediators. Therefore, H6a and H7a were supported, while H6b, H6c, H7b, and H7c were not supported in  $h_{se}l_{sc}$  group users in the

Chinese sample. Social support received from SNS mediated positive strategic SNS involvement and adaptive coping among high self-efficacy users with low SNS social capital in the Chinese sample.

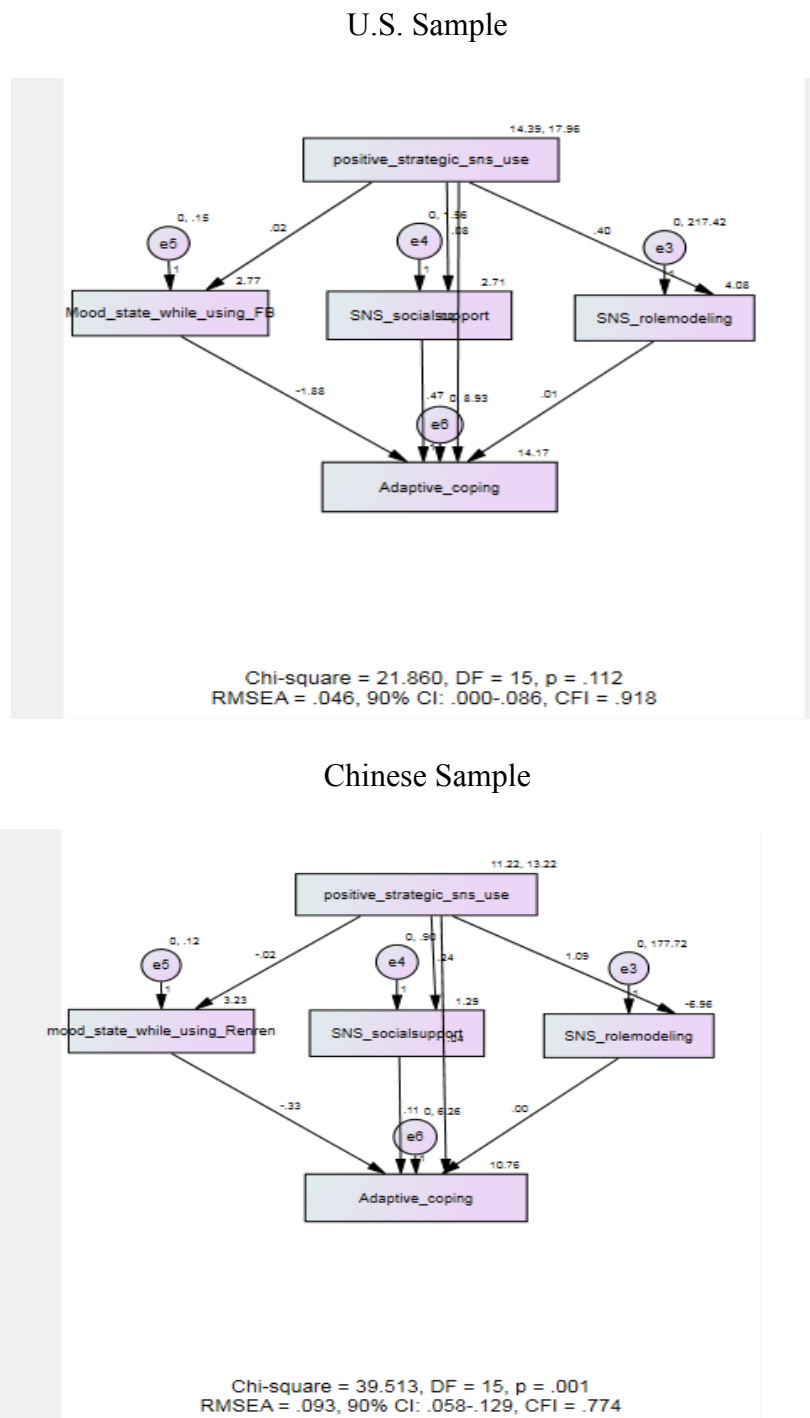


Figure 5.4 Path Analysis Output for the Extended Model in the U.S. and Chinese Samples

## Differences in SNS Uses in the United States and China

Facebook and Renren are two technically similar platforms with almost identical features. The screenshots below circled five social media features examined in this study: news feed, status update, like click, group, personal page and time line.

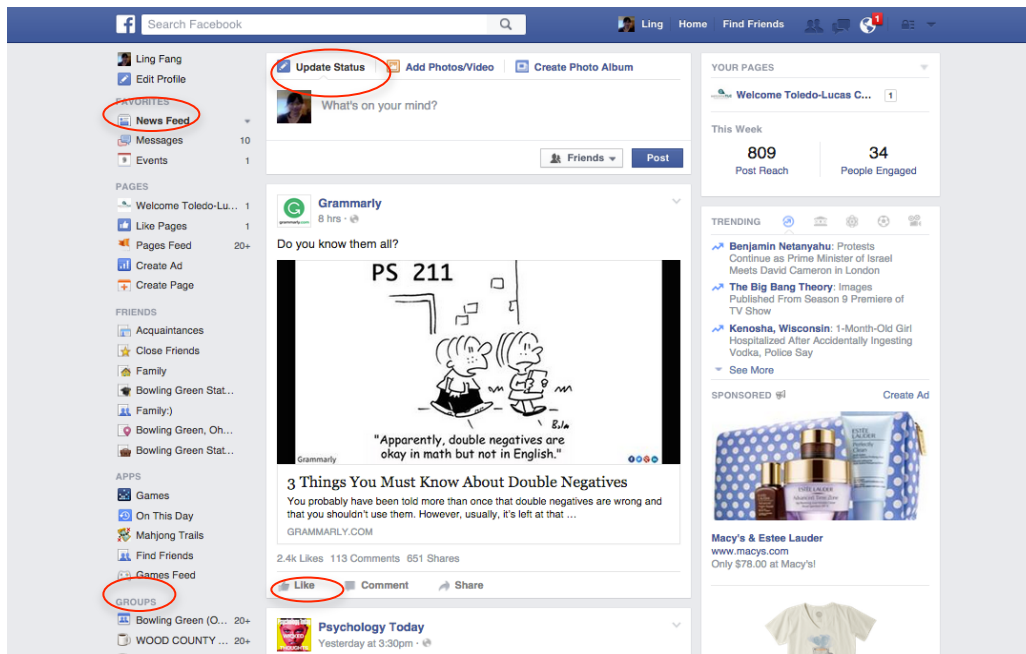
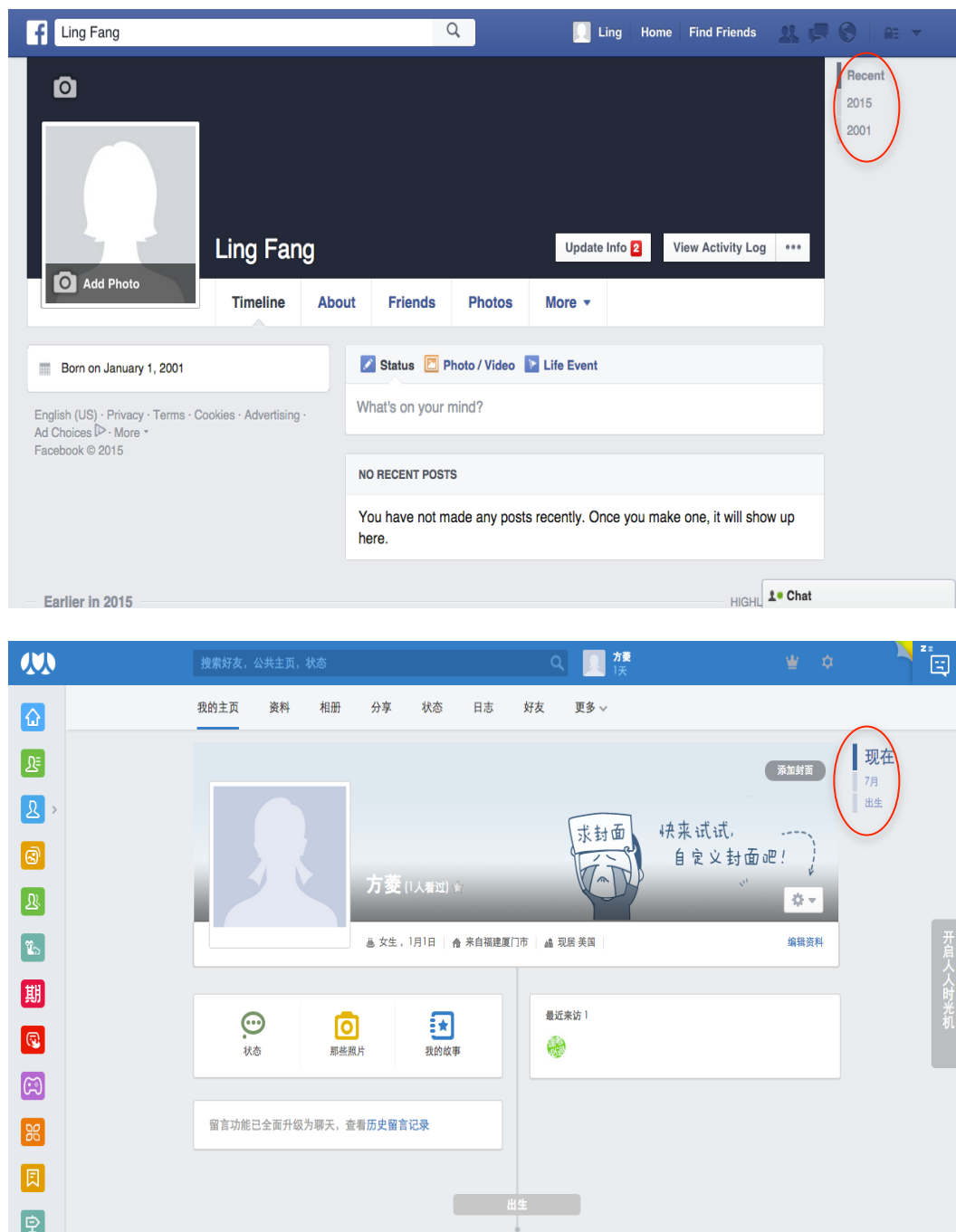


Figure 5.5 Facebook and Renren Homepage Screenshots



**Figure 5.6 Facebook and Renren Personal Page Screenshots**

Three hypotheses are proposed to examine differences in social support received from Facebook/Renren between American students and Chinese students and how it relates to their adaptive coping. H8 hypothesizes a difference in perceived social support from Facebook/Renren between American students and Chinese students. This study's results show that there was no

significant difference ( $t = .49, p = n. s.$ ) in perceived social support between American and Chinese student samples. H9 hypothesizes a difference existed in the relationship between positive strategic SNS involvement and perceived social support between American students and Chinese students. It is found that the positive relationship between positive strategic SNS involvement and perceived social support was more prominent among Chinese student respondents ( $\beta = .71, p < .001$ ) than American student respondents ( $\beta = .57, p < .001$ ) ( $c^2 = 6.53, df = 1, p = .011$ ). Chinese student users' involvement in five recharging SNS activities was associated with a significantly higher level of informational and emotional support compared to American student users. H10 hypothesizes a difference in the relationship between positive strategic SNS involvement and adaptive coping between American students and Chinese students. It turned out that the relationship between positive strategic SNS involvement and adaptive coping didn't differ significantly in these two samples ( $c^2 = .85, df = 1, p = n.s.$ ). Therefore, Chinese student users' positive strategic SNS involvement was associated with a higher level of perceived social support from SNS than American student users. There was no significant difference in perceived social support from social media between American and Chinese student samples. The relationship between positive strategic SNS involvement and adaptive coping was not significantly different in these two samples.

## CHAPTER VI. DISCUSSION AND CONCLUSION

Social media continue to function as popular social contexts among college students. This study explores the positive potential of social media in assisting student users to adaptively cope with stress accompanied with various developmental tasks. Based on audience-centered media use theories and a review of existing literature, the researcher identified a few social media activities as more recharging for college students than others in this study and tested the associations between student respondents' perceived stress, positive strategic SNS involvement, adaptive coping, and adjustment. Three major questions were addressed in this study: Is positive strategic SNS involvement an adaptive coping strategy? Who benefits most from positive strategic SNS involvement? How does positive strategic SNS involvement work? Findings to these questions are compared between the American student sample and the Chinese student sample. Theoretical and practical implication is discussed in this chapter.

### **Positive Strategic SNS Involvement as an Adaptive Coping Strategy**

American student users' positive strategic involvement in Facebook to a certain extent assists in their adaptive stress coping, including problem solving, self-help, and reinterpretation. First, the manner in which American students spent their time acted as a more important factor than their time spent on SNS in their stress coping and adjustment process. As the researcher found in this study, students' time spent on Facebook was partially stress driven and their positive strategic involvement was associated with adaptive stress coping and adjustment. This was in line with previous studies highlighting young people's active and normative consumption of TV and online media content and associated psychological recovery and social well-being after using (Derrick, Gabriel, & Hugenberg, 2009; Lanthier & Windham, 2004; Ranney & Troop-Gordon, 2012). Second, perceived support is the key connecting positive strategic SNS

involvement and adaptive coping. The positive strategic SNS involvement in this study consists of five items, including *checking friends' updates*, *participating in SNS groups*, *clicking "like"*, *self-disclosing in status updates*, and *viewing personal pages*. American student respondents' frequency of involving in each of them was positively associated with perceived social support from Facebook. As social media are readily accessible to students via smartphones, students can turn to social media to talk to trusted friends, search for favored content, remind themselves of good old memories by viewing personal timelines, and engage in interested group discussions, all of which may bring out a sense of support among users. The fact that only perceived social support acted as an effective mediator among the three paths between positive strategic SNS involvement and adaptive coping and adjustment supports the social support approach in previous social media effects studies (DeAndrea et al., 2012). Built on previous studies on positive associations between these five SNS activities and social psychological well-being indicators (Lee, Lee, & Kwon, 2011; Vitak, & Ellison, 2013; Wise, Alhabash, & Park, 2010; Zuniga, 2012), this study's findings suggest that Facebook uses that enhanced users' perceived social support can facilitate users' adaptive coping with stress. Among the five SNS activities, clicking likes and viewing personal pages are most conducive to perceived support. Except for *participating in SNS groups*, student respondents' frequencies of involving in the other four activities were also positively related to role-modeling and emotional status while using Facebook. Overall, when users take Facebook as a channel to provide, receive support, learn from each other, as well as to convey positive emotions, the quality time each user spent on Facebook can be transferred to positive power that is psychologically rewarding for individual users and socially beneficial for one's online community.

The positive effect of positive strategic SNS involvement was not found as an adaptive coping strategy among Chinese student respondents. The basic research model was not supported in the Chinese student sample. Chinese student users who perceived higher levels of stress reported more time spent on Renren, but not higher positive strategic involvement and adaptive coping scores. That the model failed to explain Chinese student respondents' positive strategic Renren involvement and stress coping behavior suggests that Renren was not identified as much as an adaptive coping tool among Chinese students as Facebook was to American students. Another possibility for the lack of relationship between positive strategic SNS involvement and adaptive coping is that those activities, such as status updates and disclosure on social media, may not be used by the Chinese students as tools for stress coping. They may use social media to just keep a social presence in their online networks. As the researcher proposed the positive strategic SNS involvement measure based on previous research conducted in the United States, some items in this measure may not be positively related to social psychological well-being for Chinese students.

### **Who Benefits Most from Positive Strategic SNS Involvement?**

As Rubin argued (2009), media effect is not universal but socially and psychologically constrained by individual differences. Such effect is found in this study: self-efficacious student users and users with more online social capital are more likely to positive strategically involve in Facebook to cope with stress adaptively.

According to the findings of this study, with low social capital online, users' positive strategic SNS involvement overall is not associated with social support, social learning, or mood adjustment. Their participation in Facebook group is related to perceived social support. As previous scholars argued, this group of users' indulgence in social media actually is likely to lead



to negative outcomes, such as fewer face-to-face interactions and higher levels of loneliness (Karaïskos et al., 2010; Kuss, & Griffiths, 2011). Comparatively, high self-efficacy users' positive strategic Facebook involvement was more likely to be associated with adaptive coping and adjustment. To break the vicious cycle, heavy social media users who have low self-efficacy and low online social capital should be recommended to direct their time and attention to more offline resources to receive social support. High self-efficacious users with low online social capital should be encouraged to use Facebook as a resource for social support and higher education institutions should target these students with Facebook support.

Social resource on Facebook served as a buffer and support for both low self-efficacy and high self-efficacy users in stress coping and adjustment processes when individuals had comparatively high social capital. The fact that the positive strategic SNS involvement model gained the most support among low self-efficacy and high online social capital users supported the social compensation hypothesis. Previous studies have found that social media are used to cope with negative emotions and enhance adjustment among users with lower social psychological assets, such as low self-esteem, low life satisfaction, or high social anxiety (Ellison et al., 2007; Steinfield, Ellison, & Lampe, 2008; Tazghini & Siedlecki, 2013). Similar to previous research findings, emotional and informational support received from Facebook, especially from close friends, explained the buffering and uplifting effect. Additionally, this study's findings suggested that low self-efficacy users experienced positive emotion through clicking likes and viewing personal pages on Facebook, which also explained their adaptive coping in relation to positive strategic SNS involvement. Among students who have high social capital, self-efficacious users' frequency of checking friends' updates, clicking like, self-disclosing, and viewing personal pages were positively associated with perceived support or role

modeling. In line with the social enhancement hypothesis, it is likely that self-efficacious users are more involved in Facebook in order to enhance and enlarge social networks as well as to build a supportive community.

Taking online social capital as an indicator of users' dependency on Facebook as a socializing channel, it makes sense that Facebook is more likely to serve as an adaptive coping tool among users with high social capital. Among the seven items within the online social capital measure, only tie strength acted as a significant moderator in users' positive strategic SNS involvement and adaptive coping indicated the importance and value of connecting and interacting with close ties online. Previous research has found honest self-presentation and self-disclosure to be associated with subjective well-being indirectly through social support (Kim, & Lee, 2011; Vitak, & Ellison, 2013). As people tend to present themselves honestly and self-disclose freely among close friends, it makes sense that close-tie oriented network buffers stress better than other types. Furthermore, this study's findings indicate gender, age, ethnicity, and place to live as sources of homophily on Facebook. Most student respondents reported that 41 to 75 % of their friends on Facebook were of the same gender, age, and ethnicity, or lived in the same city. The wide range of homophily on Facebook demonstrates that users' online interaction tends to reflect their offline interaction with similar others. Such findings are in line with previous research on MySpace homophily (Thelwall, 2009). The extensive evidence of homophily on Facebook suggests that fragmentation among people of opposing viewpoints and life experience may be replicated in the virtual world. The fact the homophily doesn't moderate users' positive strategic SNS involvement and adaptive coping suggests that interaction among similar and dis-similar others online played different roles and were equally important in users' stress coping process.

Although no demographic difference was found between low self-efficacy and high self-efficacy users, it is interesting to note that high self-efficacy users spent eight more hours per week with friends offline and low self-efficacy users have a significantly higher GPA score. Findings also showed that low self-efficacy and high self-efficacy users prefer involvement in different Facebook activities when they experienced high stress. Low self-efficacy users tended to self-disclose and participate in Facebook groups. High self-efficacy users turned to Facebook to check friends' updates and view their own personal page for self-reflection. It is interesting to find that both low self-efficacy (with high online social capital) and high self-efficacy users' perceived support from Facebook was related to their frequencies for clicking likes and viewing personal pages. Facebook personal pages serves as an individual archival repository and provides access to past memories based on chronologically documented media fragments (Good, 2013). Exposure to liked media fragments and cherished memories may prime positive feelings that uplift users. Similar to what Zywicki and Danowski's (2008) found in their study, both social compensation and social enhancement hypotheses were supported in this study. Low and high self-efficacy users' involvement in preferred stress coping activities was associated with perceived support within close-tie oriented networks on Facebook.

### **How Does Positive Strategic SNS Involvement Work?**

College students' positive strategic SNS involvement enhances their adaptive coping and adjustment when they were mentally or emotionally recharged through optimizing mood, communicating with supportive friends, and following role models' updates.

#### *Reference Power*

Facebook acts as a virtual social learning platform for student users. The reference power users gained from exposure to diversified role models on Facebook played a role in their

adaptive coping process. It has been argued that diversified role modeling is superior to exposure to the same performances by a single model (Bandura, 1986, p.404). When role models are not approachable in offline social setting, young people may turn to social media to supplement and enrich their social learning experience. The fact that low self-efficacy users who more frequently paid attention to various role models online reported higher informational support and adaptive coping scores suggests that social media served as a platform for young people to gain advice to assist in their stress coping when needed. The reference power is stronger when role models are perceived as close ties. As people tend to exchange genuine opinions in a close-tie oriented circle, users' perception of social context is likely to be shaped by messages received from close ties online. In other words, SNS provides users a virtual sphere to exchange opinions and construct reality with their close ties together in a timely manner. This is important because many of the close ties may not live close to the students. Feedback from close ties online can help individuals understand and handle challenging situations. A well-functioned online network can serve as a mentally recharging source for individual users, especially when users evaluate their reference power in their own network.

### *Social Support*

Supportive relationships on Facebook matter most in assisting users' social psychological adjustment process. In line with works that highlight the potential social benefits of relationships developed online (Lanthier & Windham, 2004), perceived support on Facebook was found as an important factor that bolstered student users' adaptive coping and adjustment. Similar to Vitak and Ellison's (2013) findings, self-disclosure on Facebook personal status or posts has been found related to perceived support in this study, suggesting that Facebook has been utilized as a channel to broadcast support needs. Besides, the fact that the buffering effect was more obvious

among close-tie oriented networks on Facebook indicated the importance of connecting with close ties online. As people tend to have more trust and lower communication barriers among close friends, dissemination of supportive messages can be more effective in close-tie oriented networks. This study indicates that exchanging social support within close-tie oriented online network is particularly helpful to those students who are highly self-efficacious but do not have much social capital.

### *Mood Optimizing*

The mood optimizing function of social media also gained support in this study. In line with previous research on low self-efficacy users' media use to assist mood management (Derrick, Gabriel, & Hugenberg, 2009; Leung, 2010), it was found that student users who more frequently clicked like and viewed Facebook personal pages were more likely to experience positive emotional reactions. It is likely that exposure to a list of favored media content on personal pages alleviated negative emotions. The fact that reported emotional status while using Facebook was positively related to perceived emotional support suggests that the warm message users receive from online friends enhanced users' emotional well-being.

### **Difference in SNS Use between the United States and China**

The results of this study extend understandings of social media use in relation to college students' social psychological well-being in United States and China. Differences in users' online network characteristics and activity preferences in this study partially reflect the role of users' cultural identities on social media use. In line with western individualistic culture's value of personal freedom and importance, American student respondents spent much more time on Facebook in solitude, have larger network sizes, and were more likely to perceive themselves as hubs of their online networks. Similar to Qiu and his colleagues' (2010) research findings,

Facebook users were more likely to be involved in self-interested behaviors, such as clicking likes and viewing personal pages. People in a collectivistic culture tend to value interdependence and think of themselves in reference to relationships with others. Users identify more with collectivistic culture spend less time on SNS and have fewer but more intimate online friends (Cho, 2010; Qiu et al., 2012). The fact that Chinese student respondents on average reported a smaller percentage of close friends but a larger percentage of friends who know each other in their online networks provides additional evidence. Moreover, the fact that the association between positive strategic SNS involvement and adaptive coping was more prominent in the Chinese sample than the American sample suggests a stronger need for support among Chinese student respondents and the potential for social media to enhance supporting each other within one's community. Because of the one-child policy, most single children grew up without close peer company in their daily lives, which explains a stronger need for company and support. The fact that the positive social media use model was not well supported in the Chinese sample indicates that researchers need to find avenues for social support for these students such as offline support or other interactive media tools, such as QQ or wechat. More studies on Chinese students' use of different types of social media may help identify the media and functions that work best to enhance users' social psychological well-being.

### **Conclusion and Suggestions for Future Research**

Overall, this study's findings suggests that the quality time each user spent on social media could be transferred to positive power that was psychologically rewarding for individual users and socially beneficial for one's online community when social media are taken as a channel for individuals to learn from each other, to provide and receive support, and to convey positive emotions. This is more prominent among self-efficacious users and users with a close-tie

oriented online networks. Based on the findings, implications for social media use and online learning, self-management, and e-health are discussed below.

### *Implications for Social Media Use and Online Learning*

Although social media are not originally created for educational purposes, recent research has shown evidence on its contribution to personal learning experience, both as a tool for assisting online collaboration and discussion (Arouri, 2015), and as a social learning platform for transformative learning and identity construction (Jing, 2013; Kind & Evans, 2015). College is a transformational period in the life of college students. Their online social practice may reflect their exploration of various roles as students, friends, co-workers, life partners, etc. Scholars indicate both the positive potential of using social media to construct identities and concern over privacy issues and boundary establishment (Jing, 2013; Kimmons, 2014). As Jing (2013) argues, a new dimension of self, the technoself, plays a role in enhancing users' social learning and identity construction. Findings of this study provide evidences of student users' role modeling behavior on Facebook. Future research may further explore whether users' online role modeling relates to their identity construction, for example, how does student users' following of Facebook friends from different life domains relate to their identity construction and lifetime learning. The social learning measure should be enriched in future studies with more dimensions besides role modeling. On the other hand, concern has been raised over online privacy and identity boundary issues (Kimmons, 2014). As Kimmons argues, the assumption that people can and should express their authentic identities online could be the root of some undesirable outcomes, such as exposure of immature personal pictures to future employers. The current Facebook practice of only differentiating public and close friends as two sharing levels is inadequate for allowing users to customize their content to different people. Hence, social media service providers may

consider advancing social media platform designs so that users can selectively present online content to different groups of friends, with an option to keep some content private for users only.

### *Implications for Social Media Use and Self-management*

Self-management enhanced by students' positive strategic involvement could be another reason explaining the support for this positive social media use model. As Kaun and Stiernstedt (2014) argue, social media can act as affordable channels for users to structure temporal experience as a strategy of self-care, identity management, and memory work. As findings of this empirical study revealed, users' frequency of clicking likes and viewing personal pages were well conducive to perceived support and adaptive coping. Future research may explore psychological recovery use of the specific timeline function of Facebook, such as how moments of reviewing or creating cherished memories on social media ties to enhancement of bonding with close ties. Besides the mood management use, another dimension of social media use for self-management involves student users' management of their online network. As the findings of this study showed, a well-functioned online network serves to exchange informational and emotional support for the users and assists in their social and emotional adjustment. Future research may examine other specific feature uses on Facebook, such as the organization of the friend list habit, to determine if it is conducive to perceived support and adaptive coping. From social media service providers' perspective, it will be worthwhile to investigate relationships between users' involvement in specific online activities, perceived support, and users' gratification of specific social media attributes, like richness, to identify specific functions that gratifying users' support needs.



*Implications for Social Media Use and E-health*

The findings of this study provide some practical implications for American college students' healthy social media use. First, it is important for heavy social media users to cultivate awareness of positive strategic SNS involvement. With an intention of using Facebook wisely, users will be less likely to be addicted. To cultivate healthy using habits, some self-management apps designed to provide users a sense of support while assisting self-discipline could be helpful. Besides, college student support service should promote their own social media pages online to provide informational support, especially for low self-efficacy users. Another one is to encourage self-efficacious college students to connect with their close ties online. Communication with close friends on SNS is usually more effective and is a source of timely feedback and emotional support. Although the decoding of messages in virtual settings is more difficult than in face-to-face settings, barriers to interact with close friends online is usually lower. It will be interesting to explore in future studies whether adoption of some online applications fostering users' goal setting and friendly competition enhance positive behavioral outcomes, such as doing regular exercise. Furthermore, the promising function of close-tie oriented social network in supporting low self-efficacy users adds new evidence to the importance of bonding in supporting online support groups for individuals facing health concerns (Namkoong et al., 2013). Future research on online support groups may investigate the potential benefits of having close ties socially presented in online group interaction and explore social media activities that help users identify and transform negative thoughts.

After completing the study, the researcher found that there are many more interesting questions that can be pursued by future research. For example, which social media platforms and attributes are most conducive to users' perceived support? Apart from Facebook, future

research can apply this research model to other popular social media tools in order to identify specific attributes or activities associated with users' perceived support. Besides, future research may adopt content analysis to generate specific categories of perceived support and to come up with a more comprehensive measure of perceived support. Also, future research may examine potential moderating roles network characteristics, such as communication reciprocity and media multiplexity, act in the relationship between general or specific social media activities and desirable outcomes.

### **Limitations**

As an exploratory study, there are some limitations that readers need to take into consideration when interpreting the findings of this study.

First, some measurements in the study are underdeveloped, such as positive strategic SNS involvement, perceived social support, and SNS social capital. For instance, items in positive strategic SNS involvement are mostly one-directional in this study, such as the frequency of clicking likes on Facebook. As online interaction is usually reciprocal and bidirectional, items in the opposite direction should also be included to make the measurement comprehensive in future research, such as the frequency of being liked on Facebook.

Second, as this study is based on a cross-sectional survey, relationships between variables are correlational rather than causal. A general support of the research model indicates that American student respondents who are more positive strategically involved in Facebook are more likely to cope with stress adaptively, or student respondents who are more likely to adaptively cope with stress are more positive strategically involved in Facebook. Future research need to adopt a longitudinal survey or experimental design to examine the causal-relationship of positive strategic SNS involvement and social psychological well-being,

Lastly, as non-probability sampling method was adopted to collect data in the U.S. and China, findings of this study should not be over generalized to other populations. Future studies with more resources can conduct a national online study in each country to assess the state of social media use among college students and their use for coping with stressful situations.

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## APPENDIX A: APPROVAL LETTER OF HUMAN SUBJECT REVIEW BOARD



BOWLING GREEN STATE UNIVERSITY

Office of Research Compliance

DATE: November 13, 2013  
 TO: Ling Fang  
 FROM: Bowling Green State University Human Subjects Review Board  
 PROJECT TITLE: [526776-3] College Students' Social Media Involvement and Coping with Stress: A comparative study in China and United States  
 SUBMISSION TYPE: Revision  
 ACTION: APPROVED  
 APPROVAL DATE: November 13, 2013  
 EXPIRATION DATE: November 4, 2014  
 REVIEW TYPE: Expedited Review  
 REVIEW CATEGORY: Expedited review category # 7

Thank you for your submission of Revision materials for this project. The Bowling Green State University Human Subjects Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

The final approved version of the consent document(s) is available as a published Board Document in the Review Details page. You must use the approved version of the consent document when obtaining consent from participants. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that you are responsible to conduct the study as approved by the HSRB. If you seek to make any changes in your project activities or procedures, those modifications must be approved by this committee prior to initiation. Please use the modification request form for this procedure.

You have been approved to enroll 1,025 participants. If you wish to enroll additional participants you must seek approval from the HSRB.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. All NON-COMPLIANCE issues or COMPLAINTS regarding this project must also be reported promptly to this office.

This approval expires on November 4, 2014. You will receive a continuing review notice before your project expires. If you wish to continue your work after the expiration date, your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date.

Good luck with your work. If you have any questions, please contact the Office of Research Compliance at 419-372-7716 or [hsrb@bgsu.edu](mailto:hsrb@bgsu.edu). Please include your project title and reference number in all correspondence regarding this project.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Bowling Green State University Human Subjects Review Board's records.

## APPENDIX B: ENGLISH VERSION OF INFORMED CONSENT LETTER



### INFORMED CONSENT FOR COLLEGE STUDENTS' FACEBOOK USE AND EFFECT

- **INTRODUCTION:** You are invited to participate in a dissertation research by Ling Fang, a fourth-year Ph.D. student from the School of Media and Communication at Bowling Green State University. The study is exploring whether and how Facebook is used and its impact on students' daily life. You are asked to participate in this research because you are an American college student who could provide valuable personal experience and contribute to a better understanding and knowledge in healthy social media use. This survey will take you no more than 15 minutes on average to complete. You must be 18 years or older to participate in the study.
- **PURPOSE:** The purpose of this study is to provide some practical insights to healthy social media use and to contribute to social media literacy education.
- **PROCEDURE:** A cover letter, a short oral introduction, as well as a small gift were provided to you when you were recruited in this study. All of your questions and concerns should be addressed before you decided to join in. You provided the researcher with your email addresses for further contact and the researcher will send all survey participants an email reminder to complete the web survey in one week. By completing and submitting the online survey questionnaire, you indicate your voluntary participation in this study. You were recommended to complete the survey right after deciding to join in the study. If you were busy at that moment, you may fill up the online survey (the link is included in the cover letter) when you have time during that week.
- **POTENTIAL RISKS AND VOLUNTARY NATURE:** The risks to you are no greater than those normally found in daily life. There will be no discomforts in the study. Your participation is completely voluntary and the survey responses are anonymous. You are free to withdraw at any time. You may decide to skip questions or discontinue participation at any time without penalty. Deciding to participate or not will not impact any relationship you may have with BGSU.
- **YOUR RIGHTS AS A SUBJECTS:**
  1. Your questionnaire answers won't be tracked and identified by name. Only members of the research team will have access to the data and data will be stored in a password protected computer.
  2. Your personal contact information will be stored in a password protected computer for confidentiality. Your email address will be destroyed by the end of survey data collection procedure.

3. You may ask any questions regarding the research and they will be answered fully.
4. You can obtain a copy of the consent document by printing this page for your records.

- **CONTACT INFORMATION OF INVESTIGATOR AND ADVISOR:** If you have any question or concern about the study, please feel free to contact: Ling Fang at [lfang@bgsu.edu](mailto:lfang@bgsu.edu), 001-419-819-6634(U.S.)/13779961736(China) or Dr. Louisa Ha (Advisor) at [louisah@bgsu.edu](mailto:louisah@bgsu.edu), 419-372-9103.
- **CONTACT INFORMATION OF REVIEW BOARD:** If you have other questions or concerns about your rights as a participant in this research, please contact the Chair, Human Subjects Review Board at Bowling Green State University at [hsrb@bgsu.edu](mailto:hsrb@bgsu.edu) or 001-419-372-7716. Thank you for your time!
- **CONSENT OF THE RESEARCH PARTICIPANT**

I have been informed of the purposes, procedures, risks and benefits of this study. I have had the opportunity to have all my questions answered and I have been informed that my participation is completely voluntary. I am at least 18 years old.

**By completing and submitting the survey, I indicate my consent to participate in this research study.**

## APPENDIX C: CHINESE VERSION OF INFORMED CONSENT LETTER



### 受试者同意书：社交媒体及中国大学生自我效能

- **介绍：**感谢您参加方菱的博士论文研究。我是美国博林格林州立大学新闻传播学院第三年在读博士生。哈筱盈教授是我的博士导师。该论文课题的目的是了解探索中国大学生社交媒体的使用以及其对大学生自我效能的影响。我们邀请您参与这个研究因为你们宝贵的个人经验对这个领域的知识有极大贡献。（您必须是满 18 岁的厦门大学本科生才能参与此研究）
- **研究目的：**该论文的研究目的是探索社交媒体使用对中国大学生自我效能的影响。我们想探究社交媒体是否能增加大学生的自我效能，进而影响学习成绩，社会资本，及公共参与。该研究旨在为社交媒体的健康使用提供一些实际的见解，为社交媒体使用的素质教育提供实证参考。为答谢您宝贵的时间和个人经验，我们将赠送一份小礼物（文件夹或者鼓浪屿明信片）以示敬意。
- **步骤：**在您进入网上问卷之前，我会简单介绍与该课题相关的内容并回答您的问题。如果您自愿参与问卷研究，请在阅读该受试者同意书之后签名并且进入社交媒体使用及自我效能的网上问卷页面。完成该问卷平均大概需要 10 分钟时间。
- **潜在风险及自愿参与特性：**您参与该研究的风险机率不会高于日常生活的风险机率。参与过程中，您不会有不适感。您的参与是完全自愿的，您可以选择性地跳过问题或者终止问卷回答过程。您是否参与此问卷研究不会影响您与博林格林州立大学的关系。
- **参与者权力**
  5. 您的个人信息将予以保密。在数据收集以及分析的过程中，您的名字将被序列号代替，诸如：参与者1，参与者2……未使用时与您个人信息相关的数据和同意书都将加密储存于电脑中。只有我的导师和我有权使用数据。
  6. 您有权提出与此研究相关的任何问题，我们都将尽力回答。
  7. 我们将提供您一份受试者同意书复印件。
- **研究负责人联络方式：**如果您有任何与此研究相关的问题，请随时联系：方菱（邮箱：[lfang@bgsu.edu](mailto:lfang@bgsu.edu)，手机：13779961736 (中国)/ 001-419-819-6634 (美国)。
- **审查委员会联络方式：**如果您有任何与研究参与者权益相关的问题，请联系博林格林州立大学 人体受试者审查委员会主席（邮箱：[hsrb@bgsu.edu](mailto:hsrb@bgsu.edu) 或者电话：001-419-372-7716).感谢您的时间！
- **研究参与者签名**

我已被告知与此研究相关的目的，意义，过程及风险。我的疑问均有机会被回答。我已被告知自己的参与是自愿的，可随时终止。我同意参与该研究。

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参与者签名

---

日期



**APPENDIX D: ENGLISH VERSION OF COVER LETTER**

Dec.6, 2013

Dear Bowling Green State University students:

A recent research on social media use based on our college student sample (394 BG students participated in the survey) indicated an average time spent on social media of 26 hours per week. The popularity of social media, especially Facebook, among college students and lack of knowledge on resulting social psychological effects stimulates our interest to conduct this research. This study aims to find out positive ways of using Facebook and to provide some practical insights to college students' healthy social media involvement.

If you are also interested in learning about the impact of Facebook on your life and how to make positive use of it, please join us and complete the web survey (the link below). Your valuable personal experience can contribute to a better understanding and knowledge in this area. Your response to this survey study is anonymous and there is no risk to you for participating in this study. Your participation is completely voluntary and you are free to withdraw from the study at any time. This survey will take about 15 minutes on average to complete. Your information will be kept confidential.

<https://www.surveymonkey.com/s/bgsufacebookuse>

If you have any question or concern regarding the study, you are welcome to contact Ling Fang at 419-819-6184 (e-mail: [lfang@bgsu.edu](mailto:lfang@bgsu.edu)) or Dr. Louisa Ha (Advisor) at [louisah@bgsu.edu](mailto:louisah@bgsu.edu), 419-372-9103. This research has been reviewed and approved by the Human Subject Review Board of Bowling Green State University (approval #526776). If you have questions about participant rights, you may contact the Chair, Human Subjects Review Board at Bowling Green State University at [hsrb@bgsu.edu](mailto:hsrb@bgsu.edu) or 419-372-7716.

Thank you very much for your participation!

Ling Fang  
Ph.D. student  
School of Media and Communication  
Bowling Green State University

## APPENDIX E: CHINESE VERSION OF COVER LETTER



亲爱的厦大同学：

中国互联网络信息中心近期数据显示，86.4%的大学生都在使用社交媒体。社交媒体的广泛流行和对其对学生心理影响相关知识的缺失促成了该研究的兴趣。该研究旨在增进健康社交网络（人人网）使用的相关知识。如果您也对社交网络的使用和影响感兴趣，想了解如何更为积极地使用它，请参与该网络问卷调查（网络链接随后附上）。您宝贵地个人经验将为增进该领域的知识作出贡献。您的参与是自愿的，如有不便可随时退出。完成该问卷平均需要15分钟。您的问卷答案及相关信息会加密保存。

<https://www.surveymonkey.com/s/xmurenrenuse>

如果您有任何与此研究相关的问题，请通过手机（13779961736）或电子邮件（[lfang@bgsu.edu](mailto:lfang@bgsu.edu)）联系方菱。该研究已通过博林格林州立大学审查委员会审阅和批准（批准号#526776）。如果您有任何与研究参与者权益相关的问题，请通过电话（001-419-372-7716）或者电子邮件（[hsrb@bgsu.edu](mailto:hsrb@bgsu.edu)）联系博林格林州立大学人体受试者审查委员会主席。

感谢您花费宝贵时间参与该研究！

美国博林格林州立大学新闻传播学院在读博士方菱  
敬上

## APPENDIX F: ENGLISH VERSION OF QUESTIONNAIRE

### Facebook Use Questionnaire

Please answer all questions in the marked spaces except otherwise indicated. There's no right or wrong answer. All answers will be kept confidential.

*I. Please provide your estimate of Facebook use that best represents your usual consumption habit.*

1. Are you a member of Facebook?  Yes  No
2. How many years have you been a member of Facebook? \_\_\_\_\_
3. How many hours do you spend on Facebook in a typical week? \_\_\_\_\_
4. How frequent do you do anything below on your Facebook?
  - a. Checking friends' updates  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - b. Online chatting with friends  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - c. Participating in Facebook groups  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - d. Clicking "like" buttons for you friends' post  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - e. Sending or receiving "gifts" among friends  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - f. Sharing or expressing your inner feelings on personal status or posts  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - g. Sharing your achievement or successful experience on personal status or posts  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - h. Browsing funny or interesting content (including related post, picture, audio, or videos)  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - i. Sharing funny or interesting content (including related statuses, blog, pictures, audio or videos)  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - j. Browsing travel experience shared by friends (including related text, pictures, audios or videos)  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - k. Sharing your travel experience (including related text, pictures, audios or videos)  
 0=never  1=once a month or less  2=once a week to once a month  
 3=several times a week  4=almost daily
  - l. Viewing your own personal page

\_\_\_ 0=never \_\_\_ 1=once a month or less \_\_\_ 2=once a week to once a month  
 \_\_\_ 3=several times a week \_\_\_ 4=almost daily

m. Playing games

\_\_\_ 0=never \_\_\_ 1=once a month or less \_\_\_ 2=once a week to once a month  
 \_\_\_ 3=several times a week \_\_\_ 4=almost daily

5. How frequently do you use Facebook while doing something else?

\_\_\_ 0=never \_\_\_ 1=once a month or less \_\_\_ 2=once a week to once a month  
 \_\_\_ 3=several times a week \_\_\_ 4=almost daily

6. Do you usually use Facebook more frequently during certain period of time?

\_\_\_ 0=No \_\_\_ 1=Yes, in the morning \_\_\_ 2=Yes, in the middle of the day  
 \_\_\_ 3=Yes, in the evening

7. How many friends do you have on Facebook? \_\_\_\_\_

8. Please identify the percentage of Facebook friends you perceived as close friends:

\_\_\_ 0 = None \_\_\_ 1 = A few ( $\leq 5\%$ ) \_\_\_ 2 = Some (6% - 40%)  
 \_\_\_ 3 = Many (41% - 75%) \_\_\_ 4 = Most ( $>75\%$ )

9. Please identify the percentage of Facebook friends similar to you in the following ways:

None A few ( $\leq 5\%$ ) Some (6% - 40%) Many (41% - 75%) Most  
 ( $>75\%$ )

a. Of the same gender

b. Of the same ethnicity

c. Live in the same city

d. In similar age (less

than two years older or younger)

10. How many role models (people with attributes that you look up to and aspired to be like) do you have among Facebook friends? (If you don't role model any Facebook friend, please indicate 0) \_\_\_\_\_

11. How frequently do you pay attention to your role model(s) (like reading updates, checking personal page(s), or involving in other online activities related to your Facebook role models)?

\_\_\_ 0=never \_\_\_ 1=once a month or less \_\_\_ 2=once a week to once a month  
 \_\_\_ 3=several times a week \_\_\_ 4=almost daily

12. Please indicate the extent to which your Facebook friends know one another:

\_\_\_ 0=they don't know each other at all

\_\_\_ 1=a few (less than 5%) of my Facebook friends know each other

\_\_\_ 2=some (between 6% and 40%) of my Facebook friends know each other

\_\_\_ 3=many (between 41% and 75%) of my Facebook friends know each other

\_\_\_ 4=most of my Facebook friends (more than 75%) know each other

13. Please check the following media content you used to interact with your friends on Facebook (Please check all that apply):

\_\_\_ Text (e.g.: posts or comments)

\_\_\_ Photo

\_\_\_ Audio

\_\_\_ Video

14. Overall, how would you identify your level of centrality in Facebook network (from 0 "I am a disconnected node" to 10 "I am a hub")? \_\_\_\_\_

15. Please indicate the degree of communication reciprocal (For every action you or your friends involve in on Facebook, there is an equal reaction, for example, an updated post or personal status usually get replies or likes) on your Facebook:

- 0=none of the communication on my Facebook is reciprocal  
 1=a few (less than 5%) of the communication on my Facebook are reciprocal  
 2=some (between 6% and 40%) of the communication on my Facebook are reciprocal  
 3=quite a few (between 41% and 75%) of the communication on my Facebook are reciprocal  
 4=most (more than 75%) communication on my Facebook are reciprocal

16. Generally speaking, how do you feel when you use Facebook most of the time during the last month?

- 0=Sad       0=Nervous       1=Relaxed       1=Happy

Others (Please specify) \_\_\_\_\_

17. How frequently do you receive emotional support (e.g.: encouragement or validation) from your Facebook friends while using Facebook?

- 0=never       1=once a month or less       2=once a week to once a month  
 3=several times a week       4=almost daily

18. How frequently do you obtain useful information (such as: advice) while using Facebook?

- 0=never       1=once a month or less       2=once a week to once a month  
 3=several times a week       4=almost daily

19. Do you feel your emotional status changed after using Facebook?

- 0=Yes, I usually feel more negative       1=No       2=Yes, I usually feel more positive

*I. The following questions ask about your feelings, thoughts, or behaviors in daily life.*

20. When you feel stressed, which of the following activities would you involve in (Please check all that apply)?

- a. Talking to friends  
 b. Self-talk  
 c. Do exercises  
 d. Write diary  
 e. Listen to music  
 f. Watch TV  
 g. Use Facebook  
 h. Drink or smoke  
 i. Others (Please specify) \_\_\_\_\_

21. Please indicate the frequency you felt or thought in the following ways in last month:

a. In the last month, how often have you been upset because of something that happened unexpectedly?

- 0=never       1=almost never       2=sometimes       3=fairly often       4=very often

b. In the last month, how often have you felt that you were unable to control the important things in your life?

- 0=never       1=almost never       2=sometimes       3=fairly often       4=very often

c. In the last month, how often have you felt nervous and "stressed"?

- 0=never       1=almost never       2=sometimes       3=fairly often       4=very often

d. In the last month, how often have you felt confident about your ability to handle your personal problems?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

e. In the last month, how often have you felt that things were going your way?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

f. In the last month, how often have you found that you could not cope with all the things that you had to do?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

g. In the last month, how often have you been able to control irritations in your life?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

h. In the last month, how often have you felt that you were on top of things?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

i. In the last month, how often have you been angered because of things that were outside of your control?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

j. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

\_\_\_0=never \_\_\_1=almost never \_\_\_2=sometimes \_\_\_3=fairly often \_\_\_4=very often

22. Please indicate your perceived level of stress (indicate a number between 0 and 4) when each of the following hypothesized situations happened to you

0 (Not stressed at all)                      1                      2                      3                      4

(Stressed out)

- |  |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a. Getting a bad grade on an exam                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Falling behind in study                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Burdened with heavy load of study               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Overspending and facing with financial problems | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Involving in serious family conflicts           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Having conflicts with roommates                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Breaking up with a girlfriend or boyfriend      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Discriminated against by others                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

23. Would you turn to Facebook when you face with these stressors (Please check all that apply):

Search information on FB    Post content on FB    Join in

FB Group    Play FB games

(e.g.: read friends' posts)    (e.g.: update personal status)

- |  |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a. Getting a bad grade on an exam                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Falling behind in study                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Burdened with heavy load of study               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Overspending and facing with financial problems | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Involving in serious family conflicts           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Having conflicts with roommates                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Breaking up with a girlfriend                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

or boyfriend

h. Discriminated against by others

24. Please indicate whether you cope with stress in the following ways:

	Yes	No
a. I let my emotions show	<input type="checkbox"/>	<input type="checkbox"/>
b. I talk to someone about how I feel	<input type="checkbox"/>	<input type="checkbox"/>
c. I try to let out my feelings	<input type="checkbox"/>	<input type="checkbox"/>
d. I try to get emotional support from friends or relatives	<input type="checkbox"/>	<input type="checkbox"/>
e. I talk to someone to find out more about the situation	<input type="checkbox"/>	<input type="checkbox"/>
f. I take direct action to get around the problem	<input type="checkbox"/>	<input type="checkbox"/>
g. I do what has to be done, one step at a time	<input type="checkbox"/>	<input type="checkbox"/>
h. I make a plan of action	<input type="checkbox"/>	<input type="checkbox"/>
i. I try to come up with a strategy about what to do	<input type="checkbox"/>	<input type="checkbox"/>
j. I try hard to prevent other things from interfering with my efforts at dealing with this	<input type="checkbox"/>	<input type="checkbox"/>
k. I try to be optimistic in spite of what happened	<input type="checkbox"/>	<input type="checkbox"/>
l. I accept the reality of the fact that it happened	<input type="checkbox"/>	<input type="checkbox"/>
m. I try to see it in a different light, to make it seem more positive	<input type="checkbox"/>	<input type="checkbox"/>
n. I look for something good in what is happening	<input type="checkbox"/>	<input type="checkbox"/>
o. I try to identify something else I care about	<input type="checkbox"/>	<input type="checkbox"/>
p. I refuse to believe that it has happened	<input type="checkbox"/>	<input type="checkbox"/>
q. I pretend that it hasn't really happened	<input type="checkbox"/>	<input type="checkbox"/>
r. I give up the attempt to get what I want	<input type="checkbox"/>	<input type="checkbox"/>
s. I blame someone or something for what happened to me	<input type="checkbox"/>	<input type="checkbox"/>
t. I try to forget the whole thing	<input type="checkbox"/>	<input type="checkbox"/>
u. I blame myself	<input type="checkbox"/>	<input type="checkbox"/>
v. I criticize or lecture myself	<input type="checkbox"/>	<input type="checkbox"/>
w. I see that I am at the root of the problem	<input type="checkbox"/>	<input type="checkbox"/>
x. I just think about my problem constantly	<input type="checkbox"/>	<input type="checkbox"/>
y. I relive the problem by dwelling on it all the time	<input type="checkbox"/>	<input type="checkbox"/>

25. Please check the categories that best represent yourself for each statement below

- a. I am very involved with social activities in college  
 \_\_\_1=not at all true    \_\_\_2=barely true    \_\_\_3=moderately true    \_\_\_4=exactly true
- b. I have several close social ties at college  
 \_\_\_1=not at all true    \_\_\_2=barely true    \_\_\_3=moderately true    \_\_\_4=exactly true
- c. I feel that I have enough social skills to get along well in the college setting  
 \_\_\_1=not at all true    \_\_\_2=barely true    \_\_\_3=moderately true    \_\_\_4=exactly true
- d. I am having difficulty feeling at ease with other people at college  
 \_\_\_1=not at all true    \_\_\_2=barely true    \_\_\_3=moderately true    \_\_\_4=exactly true
- e. I am satisfied with the extent to which I am participating in social activities in college  
 \_\_\_1=not at all true    \_\_\_2=barely true    \_\_\_3=moderately true    \_\_\_4=exactly true
- f. I feel I am very different from other students at college in ways I don't like  
 \_\_\_1=not at all true    \_\_\_2=barely true    \_\_\_3=moderately true    \_\_\_4=exactly true

- g. I am quite satisfied with my social life at college  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- h. Lately I have been feeling blue and moody a lot  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- i. I haven't been able to control my emotions very well lately  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- j. I really haven't had much motivation for studying lately  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- k. I have been getting angry too easily lately  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- l. I haven't been sleeping very well  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- m. I have been feeling lonely a lot at college lately  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true

26. Please check the categories that best represent yourself for each statement below

- a. I can always manage to solve difficult problems if I try hard enough  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- b. If someone opposes me, I can find means and ways to get what I want  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- c. It is easy for me to stick to my aims and accomplish my goals  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- d. I am confident that I could deal efficiently with unexpected events  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- e. Thanks to my resourcefulness, I know how to handle unforeseen situations  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- f. I can solve most problems if I invest the necessary effort  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- g. I can remain calm when facing difficulties because I can rely on my coping abilities  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- h. When I am confronted with a problem, I can usually find several solutions  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- i. If I am in a bind, I can usually think of something to do  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true
- j. No matter what comes my way, I'm usually able to handle it  
 \_\_\_1=not at all true \_\_\_2=barely true \_\_\_3=moderately true \_\_\_4=exactly true

*I. Finally we would like to get some information about you.*

27. What's your gender?

\_\_\_0=male \_\_\_1=female

28. What's your age? \_\_\_

29. What's your class standing?

\_\_\_1=freshman \_\_\_2=sophomore \_\_\_3=junior \_\_\_4=senior

30. Do you live on campus?

\_\_\_1=Yes \_\_\_0=No



31. How much time (hours) do you spent with your friends in a typical week (not including online interaction)? \_\_\_\_

32. Do you go to a college in state?

\_\_\_ 1=Yes      \_\_\_ 0=No, out of state

33. Do you have a part-time job?

\_\_\_ 0=No      \_\_\_ 1=Yes

34. How many siblings do you have (Indicate 0 if you are the only child)? \_\_\_\_

35. What was your total household income before taxes for the most recent calendar year (January through December)?

\_\_\_ 1=Under US\$ 30,000      \_\_\_ 2=\$30,001-\$60,000      \_\_\_ 3=\$60,001-\$90,000

\_\_\_ 4=\$90,001-\$150,000      \_\_\_ 5=Over \$150,000

36. Please indicate your GPA range:

\_\_\_ 7=Higher than 3.5      \_\_\_ 6=Between 3 and 3.49      \_\_\_ 5=Between 2.5 and 2.99

\_\_\_ 4=Between 2 and 2.49      \_\_\_ 3=Between 1.5 and 1.99      \_\_\_ 2=Between 1 and 1.49

\_\_\_ 1=Lower than 1

37. Please use the space below to write any comment or suggestion on this questionnaire:

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Thank you very much for your participation!

## APPENDIX G: CHINESE VERSION OF QUESTIONNAIRE

## 人人网使用问卷

请完成以下问题并选择最贴近真实感受的选项。答案没有对错之分。您的问卷答案将会加密保存。

I. 首先, 我们想了解您的人人网使用情况

1. 您是人人网用户吗? \_\_\_是 \_\_\_否
2. 您使用人人网几年了? \_\_\_\_\_
3. 您每周大约花多少时间(小时)使用人人网? \_\_\_\_\_
4. 您多常使用人人网进行以下活动?
  - a. 查看好友更新  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - b. 和朋友在线聊天  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - c. 参与人人组群  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - d. “赞”朋友的新鲜事  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - e. 赠送或接收好友“礼物”  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - f. 通过更新状态或写日志分享或表达内心感受  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - g. 通过更新状态或写日志分享个人成就及成功经验  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - h. 浏览好笑或者有趣的内容(包含相关文字, 照片, 音频及视频)  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - i. 分享好笑或者有趣的内容(包含相关文字, 照片, 音频及视频)  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - j. 浏览朋友分享的旅行经验(包含相关文字, 照片, 音频及视频)  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - k. 分享自己的旅行经验(包含相关文字, 照片, 音频及视频)  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - l. 浏览自己的个人主页  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
  - m. 玩人人游戏  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
5. 您多常在其它事情的同时使用人人网  
\_\_\_0=从来没有\_\_\_1=一个月一次或者少于一次\_\_\_2=一周一次\_\_\_3=一周几次\_\_\_4=每天
6. 您通常会在某个时间段更频繁地使用人人网吗?  
\_\_\_0=不会\_\_\_1=会, 在早上\_\_\_2=会, 在中午\_\_\_3=会, 在晚上
7. 您有多少人人网好友? \_\_\_\_\_

8. 请选出人人网好友中亲密好友（占总好友）的百分比

\_\_\_0= 没有亲密好友 \_\_\_1=一小部分( $\leq 5\%$ ) \_\_\_2=一部分( $6\% - 40\%$ )

\_\_\_3=不少( $41\% - 75\%$ ) \_\_\_4=大多( $>75\%$ )

9. 请选出人人网好友中满足以下特点的比例:

没有 一小部分( $\leq 5\%$ ) 一部分( $6\% - 40\%$ ) 不少( $41\% - 75\%$ ) 大多

( $>75\%$ )

a. 同性别

b. 同种族

c. 同居住城市

d. 相似年龄

(差距两岁以内)

10. 人人网好友中有多少位好友是你的偶像或榜样 (具有你欣赏或向往的特质的人)? (如果没有请填写 0) \_\_\_

11. 您多常注意你的偶像 (例如通过阅读他 / 她的人人网更新, 浏览主页, 或者参与和他 / 她相关的其它活动)?

\_\_\_0=从来没有 \_\_\_1=一个月一次或者少于一次 \_\_\_2=一周一次 \_\_\_3=一周几次 \_\_\_4=每天

12. 请填写您的人人网好友相互认识的程度:

\_\_\_0=他们完全不认识彼此

\_\_\_1=一小部分人人网好友(少于 5%) 认识彼此

\_\_\_2=一部分人人网好友( $6\% - 40\%$ ) 认识彼此

\_\_\_3=不少人人网好友( $41\% - 75\%$ ) 认识彼此

\_\_\_4=我的人人网好友大多 (多于 75%) 认识彼此

13. 您通常通过以下哪些媒介与人人网上的朋友互动 (请选择所有适用选项):

\_\_\_文字 (例如: 贴子或回复)

\_\_\_照片

\_\_\_音频

\_\_\_视频

14. 总体上, 你如何定义自己在人人网社交网络中的中心程度 (从 0 “我是边缘化的成员”到 10 “我是中心人物”) \_\_\_

15. 请指出您的人人网沟通互动情况 (相互回应指每个你或你的人人好友参与的行动都能得到反应, 例如, 更新的状态或者日志总能得到回复或“赞”):

\_\_\_0=所有沟通都是单向的, 缺乏回应

\_\_\_1=少数 (少于 5%) 沟通有相互回应

\_\_\_2=一部分( $6\% - 40\%$ ) 沟通有相互回应

\_\_\_3=不少( $41\% - 75\%$ )沟通有相互回应

\_\_\_4=大多数(多于 75%)沟通都有相互回应

16. 总的说来, 过去一个月使用人人网时您大多数时候感觉如何?

\_\_\_0=难过的 \_\_\_0=紧张的 \_\_\_1=放松的 \_\_\_1=高兴的 \_\_\_其它 (请具体说明) \_\_\_\_\_

17. 您多常在使用人人网时得到好友的情感支持 (例如: 鼓励或者认同)?

\_\_\_0=从来没有      \_\_\_1=一个月一次或者少于一次      \_\_\_2=一周一次  
\_\_\_3=一周几次      \_\_\_4=几乎每天

18. 您多常在使用人人网时获得有用的信息（例如：建设性意见）？

\_\_\_0=从来没有      \_\_\_1=一个月一次或者少于一次      \_\_\_2=一周一次  
\_\_\_3=一周几次      \_\_\_4=几乎每天

19. 使用人人网前后，您是否感受到情绪状态改变？

\_\_\_0=是的，我通常感觉更消极      \_\_\_1=没有改变      \_\_\_2=是的，我通常感觉更积极

II. 以下问题询问你在过去一个月的一些感受，想法及行为。对于每一个问题，请选出符合您个人情况的选项。

20. 当感到压力时，您通常会参与如下哪些活动（请选择所有适用选项）：

- \_\_\_a.和朋友说话  
\_\_\_b.自我对话  
\_\_\_c.运动  
\_\_\_d.写日记  
\_\_\_e.听音乐  
\_\_\_f.看电视  
\_\_\_g.使用人人网  
\_\_\_h.抽烟或者喝酒  
\_\_\_i.其它(请具体说明)\_\_\_\_\_

21. 在过去一个月，您多常产生以下感受或想法：

a. 在过去的一个月里，你有多少时间因为发生意外的事情而感到心烦意乱？

\_\_\_0=从未有      \_\_\_1=几乎没有      \_\_\_2=偶尔      \_\_\_3=经常      \_\_\_4=非常多

b. 在过去的一个月里，有多少时间你感到无法掌控生活中重要的事情？

\_\_\_0=从未有      \_\_\_1=几乎没有      \_\_\_2=偶尔      \_\_\_3=经常      \_\_\_4=非常多

c. 在过去的一个月里，有多少时间你感觉到神经紧张或“快被压垮了”？

\_\_\_0=从未有      \_\_\_1=几乎没有      \_\_\_2=偶尔      \_\_\_3=经常      \_\_\_4=非常多

d. 在过去的一个月里，有多少时间你对自己处理个人问题的能力感到有信心？

\_\_\_0=从未有      \_\_\_1=几乎没有      \_\_\_2=偶尔      \_\_\_3=经常      \_\_\_4=非常多

e. 在过去的一个月里，有多少时间你感到事情发展和你预料的一样？

\_\_\_0=从未有      \_\_\_1=几乎没有      \_\_\_2=偶尔      \_\_\_3=经常      \_\_\_4=非常多

f. 在过去的一个月里，有多少时间你发现自己无法应付那些你必须去做的事情。

\_\_\_0=从未有      \_\_\_1=几乎没有      \_\_\_2=偶尔      \_\_\_3=经常      \_\_\_4=非常多

g. 在过去的一个月里，日常生活中有多少时间你能够控制自己的愤怒情绪？

\_\_\_0=从未有      \_\_\_1=几乎没有      \_\_\_2=偶尔      \_\_\_3=经常      \_\_\_4=非常多

h. 在过去的一个月里，有多少时间你感到处理事情得心应手（事情都在你的控制之中）？

\_\_\_0=从未有      \_\_\_1=几乎没有      \_\_\_2=偶尔      \_\_\_3=经常      \_\_\_4=非常多

i. 在过去的一个月里，有多少时间你因为一些超出自己控制能力的事情而感到愤怒？

\_\_\_0=从未有      \_\_\_1=几乎没有      \_\_\_2=偶尔      \_\_\_3=经常      \_\_\_4=非常多

j. 在过去的一个月里，有多少时间你感到问题堆积如山，已经无法逾越？

\_\_\_0=从未有 \_\_\_1=几乎没有 \_\_\_2=偶尔 \_\_\_3=经常 \_\_\_4=非常多

22. 请填写您在以下假设情况发生时感受到的压力程度(在 0 到 4 之间选择一个数值):

	0 (完全没有压力)	1	2	3	4 (压力很大)
___a. 考试成绩不佳	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___b. 课业落后	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___c. 学习负担沉重	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___d. 透支而面临财务问题	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___e. 经历剧烈的家庭冲突	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___f. 经历舍友冲突	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___g. 与男友或女友分手	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___h. 受到歧视或者不公对待	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. 您会使用人人网来应对这些压力吗? (请选择所有适用选项)

使用人人网搜索信息 在人人网上发布信息 加入人人讨论小组 玩人人游戏

(如: 浏览朋友的贴子) (如:更新个人状态)

___a. 考试成绩不佳	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___b. 课业落后	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___c. 学习负担沉重	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___d. 透支而面临财务问题	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___e. 经历剧烈的家庭冲突	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___f. 经历舍友冲突	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___g. 与男友或女友分手	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
___h. 受到歧视或者不公对待	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. 请评估您应对压力时采用以下各项策略的频度:

	是	否
a. 我让情绪显现出来	<input type="checkbox"/>	<input type="checkbox"/>
b. 我和别人谈自己的感受	<input type="checkbox"/>	<input type="checkbox"/>
c. 我尝试让自己的情绪得到宣泄	<input type="checkbox"/>	<input type="checkbox"/>
d. 我尝试从亲友那得到情感支持	<input type="checkbox"/>	<input type="checkbox"/>
e. 我通过和别人谈话 进一步了解情形	<input type="checkbox"/>	<input type="checkbox"/>
f. 我采取直接行动克服问题	<input type="checkbox"/>	<input type="checkbox"/>
g. 我做该做的事, 一步一步来	<input type="checkbox"/>	<input type="checkbox"/>
h. 我为行动制定计划	<input type="checkbox"/>	<input type="checkbox"/>

- i. 我尝试拟定行动策略
- j. 我努力避开干扰
- k. 我尽量乐观地对待各种可能性
- l. 对已经发生的事我接受现实
- m. 我尝试换一个角度更积极地看待问题
- n. 我在已经发生的事情里寻找有益的部分
- o. 我尝试找出其它自己在乎的事
- p. 我拒绝接受事实
- q. 我假装事情未曾发生
- r. 我不再尝试争取自己想要的
- s. 我埋怨别人让事情发生在自己身上
- t. 我尽力遗忘整件事
- u. 自责
- v. 自我批评教育
- w. 我看到自己是问题的根源
- x. 我反复想自己的问题
- y. 我一直沉湎于过去的问题

25. 请选出以下每项陈述中最能代表自己的选项:

- n. 我很积极参加学校社交活动  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- o. 我在学校有几个亲密的社会联系  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- p. 我觉得自己在学校有充分的社交技能和人和睦相处  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- q. 我感觉无法在他人在场时感到放松  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- r. 我对自己参与学校社交活动的程度感到满意  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- s. 和学校的其他学生相比, 我有让自己不愉快的差异  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- t. 我对自己在大学社交生活感到满意  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- u. 最近我经常感觉没精打采或者情绪不稳定  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- v. 我最近不太能很好地控制情绪  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- w. 我最近真的没什么动力学习  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是

- x. 我最近很容易生气  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- y. 我最近睡得不是很好  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是
- z. 我最近在学校经常感觉很孤独  
 \_\_\_1=完全不是 \_\_\_2=几乎是 \_\_\_3=大致是 \_\_\_4=完全是

26. 请选出以下每项陈述中最能代表自己的选项:

- a. 如果我尽力去做的话, 我总是能够解决难题的  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确
- b. 即使别人反对我, 我仍有办法取得我所要的  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确
- c. 对我来说, 坚持理想和达成目标是轻而易举的  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确
- d. 我自信能有效地应付任何突如其来的事情  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确
- e. 以我的才智, 我定能应付意料之外的情况  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确
- f. 如果我付出必要的努力, 我一定能解决大多数的难题  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确
- g. 我能冷静地面对困难, 因为我可信赖自己处理问题的能力  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确
- h. 面对一个难题时, 我通常能找到几个解决方法  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确
- i. 有麻烦的时候, 我通常能想到一些应付的方法  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确
- j. 无论什么事在我身上发生, 我都能够应付自如  
 \_\_\_1=完全不正确 \_\_\_2=尚算正确 \_\_\_3=多数正确 \_\_\_4=完全正确

III. 最后我们想了解一些你的基本信息

27. 请填写性别:  
 \_\_\_0=男 \_\_\_1=女
28. 请填写年龄: \_\_\_\_\_
29. 您在哪个年级  
 \_\_\_1=大一 \_\_\_2=大二 \_\_\_3=大三 \_\_\_4=大四
30. 您住校吗?  
 \_\_\_1=是 \_\_\_0=否
31. 您每周通常花多少时间(小时)和朋友相处(不包含网上互动)? \_\_\_\_\_
32. 您在本省读大学吗?  
 \_\_\_1=是 \_\_\_0=不, 在外省读大学
33. 您有兼职工作么?

\_\_\_0=没有 \_\_\_1=有

34. 您有几个亲兄弟或者姐妹（如果您是独生子女请填写0）？ \_\_\_

35. 您的税前家庭年收入（最近一年）是多少？

\_\_\_1=<30000 元 \_\_\_2=30000 元 - 60000 元 \_\_\_3= 60001 元 - 90000 元

\_\_\_4= 90001 元 - 150000 元 \_\_\_5=>150000 元

36. 请选出您的 GPA 平均成绩区间：

\_\_\_7=>3.5 \_\_\_6=3-3.49 \_\_\_5=2.5-2.99 \_\_\_4=2-2.49 \_\_\_3=1.5-1.99

\_\_\_2=1-1.49 \_\_\_1=<1

37. 如有与该问卷相关的评价或建议，请填写在以下空白处

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十分感谢您的参与！