Empirical Research on Relationship between College Students’ Social Identity and Online learning Performance: A case Study of Guangdong Province

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Abstract

From “God’s favored person” to “ordinary worker”, college students become indifferent to life and addicted to web gaming because they face a rapid devaluation of college student identity in China. At the same time, MOOC and other online learning resources are bringing students better personal learning environment and requiring the students to be more self-disciplined and self-educated oriented. Correlation was found among academic performance, life satisfaction and personal identity. The relationship between students’ online learning performance, life satisfaction and social identity has become a key issue for the Chinese educators and academic institutions. This paper investigates college student’s social identity and identify how online learning performance influences their life satisfaction and social identity based on 490 questionnaires using Jonathan M. Cheek relational identity orientation scale for the AIQ. The results suggest that the demographic feature of students has different influence on their social identity, and the effect of online learning performance and life satisfaction on social identity shows a significant difference. Besides, implications for improving college students' social identity are also discussed.

Keywords: college student, social identity, online learning performance, life satisfaction

1. Introduction

At the end of the 1990s, the higher education enlarged enrollment by a big margin every year and caused serious employment crisis in China. The media reported a grave situation of employment of the college students, and a relevant term--intellectual migrant workers--has emerged. From “God’s favored person” to “ordinary worker”, some college students’ gradually become less positive on their social identity and personal pride, and they began to doubt about themselves as a college student. Consequent confusion and perplexities has become a primary problem to a considerate part of college students (Zhou et al. 2013). Pressures from school, life, interpersonal relationship and employment caused social identification biases and low self-evaluation to college students, further leading to a sense of loss. The crisis and predicament of social identity for contemporary college students have become an important concern for educators.

The Generation Z or Post-Millennial has become the main force of the current universities, and activities such as sharing information, posting daily life via social media and using computers for schoolwork are their routines. In the transformation from the traditional text environment to the digital environment, the development of MOOCs, exquisite video open classes, and shared resource courses have been continually improving university's online learning environment. With the characteristics of immediacy, openness, interactivity and decentralization, online learning has become an unavoidable trend in higher education. College students’ dependence on the Internet is increasing which attract them away from traditional learning methods and classrooms. Their school performance directly relate to the efficiency and effectiveness of online learning. Scores and GPA are still the most important factors for the most college students when applying to a graduate program or a scholarship. Therefore, it is a problem faced by educators whether college students can have better sense of identity through their improvement of school performance and satisfaction.
A number of studies have shown that academic achievement is associated with subjective well-being and personal identity for primary and secondary students (Fan et al. 2011; Sun Fang. 2013; Zhang & Du. 2012). And evidence also support the influence of academic performance and satisfaction on social identity among college students. Based on Tajfel's social identity theory and Jonathan M. Cheek's relational identity orientation scale for the AIQ and through the survey of 490 questionnaires, this study tries to investigate the relationship between college students' online learning performance, satisfaction and social identity in the context of online learning.

2. Literature Review

For the primary and secondary students, academic achievement is related to subjective well-being and personal identity (Fan et al. 2011; Sun Fang. 2013; Zhang & Du. 2012). For college students, however, does the learning effect in the Internet age such as academic performance have the same effect? What is the role of life satisfaction in their social identity? This is the key issue that this paper cares about.

2.1 Academic Performance and Life Satisfaction

Diener & Oishi (2002), Pavot & Diener (2008), and Schimmack et al. (2002) believes that for college students, the most important criterion judging the satisfaction of life is academic achievement. Radosveta et al. (2018) found that ethnic identity and cultural pride were related to students’ school achievement and life satisfaction.

Online learning is increasingly important in the life of college students. Nada & Anastasia (2012) believes that the personal learning environment is a potentially promising pedagogical approach for both integrating formal and informal learning using social media and supporting student self-regulated learning in higher education. Huseyin Binic (2012) finds that when undergraduates use Micro-blog to share learning information. He believes Microblog application in education has become an important research area. Since 2007, research by Chinese researchers on the use of the Internet and social media as teaching tools has begun to increase. Jin Zhi (2011) finds that college students prefer learning with audio materials, video, text-based dialogues such as E-Mail, instant messaging as well as web search. However, there has been considerable controversy regarding the efficiency and effectiveness of online learning activities. Researchers have found that students' autonomous learning ability, attitudes, and procrastination have a great influence on online learning (Ali Akbar S. F. 2008; Fu et al. 2014; He et al. 2017).

There is relatively little research linking online learning performance and college student satisfaction with life. While studying the relationships of college students’ smart-phone usage, GPA, anxiety, and life satisfaction, Andrew Lepp (2014) finds that scores, grades, and life satisfaction are positively related, while anxiety are their negative correlations.

2.2 Life Satisfaction and Social Identity

2.2.1 Social Identity

Tajfel (1970), the creator of social identity theory, believes that social identity is the individual's ownership of the group they belong to, and the important knowledge of this group identity in terms of emotion and value (Zhang & Zuo, 2006). Turner (1985) further proposed a self-categorization theory that complements social identity theory. Most of the relevant studies focus on minorities such as ethnic and minority ethnic identity, gender identity, and homosexuality. And there are a few studies on college students (Negy et. al. 2003; Yujong Hwang. 2010; Zhang et al. 2012), Liao (2013) and Sun (2012) study full-time master degree graduate students and outstanding college students from different perspectives, found that the outstanding characteristics of college students have positive identity. Deng Zhiwen (2006) used the identity orientation scale to study the social identity of college students. Social identity was mainly composed of personal identity and social identity. In addition to its own connotation, social identity also included relational identity and collective identity, and college students’ identity appeared to be relatively positive.

Some researchers found that college students have experienced social identity crisis or dilemma (Hua. 2008; Li & Liu. 2010; Ye. 2015; Ying & Tang. 2016). The crisis comes from many aspects such as society, school, family and themselves. There is an obvious downward trend in the collective identity of university students, along with a divergence among different society groups in their cognition. Compared with students from municipalities and intermediate cities, college students from rural areas and townships are more vulnerable to family influence. Ye (2015) reported that college students' sense of superiority disappeared due to the change of identity and the loss of sense of life causing by the Internet. This further caused more suicide, society hatred, disregard for life as well as lower confidence.
2.2.2 Relations between Life Satisfaction and Social Identity

Shin DC (1978) believes that life satisfaction is an important part of subjective well-being. Wang Xi et al (2016) found that college students’ sense of belonging is directly related to life satisfaction and positive emotions. Chen & Jia (2012) reported that identity, including personal identity and collective identity can relieve stress. A number of studies have shown that identity is related to satisfaction and sense of subjective well-being. For example, Li Fenglan et al. (2011) found that the social identity of college students has a significant positive correlation with their subjective well-being. Li et al (2014) found that for minority preparatory students, there is a correlation between ethnic identity and social support and life satisfaction. In their study of students in special education majors, Feng Wei et al (2018) found that altruistic motives influence subjective well-being through professional identity which serves as a mediator. While college students could improve their social recognition due to their high level of life satisfaction lacks direct verification.

2.3 Learning Performance and Social Identity

There are few research in this area. Dai Jianxiong (2013) found that students with poor academic performance in vocational schools are prone to have behavior problems and are more likely to become bidirectional students with low personal identity and social identity. He Liya (2017) found in her analysis that student achievement in college affects student’s professional identity, and that students with good grades have a high degree of personal identity. Wang Jinmei (2014) also studied the relationship between the English learning and ethnic identity of middle school students of the Minority She People and also found that the scores were related to their ethnic identity. By combing the characteristics of college students' social identity dilemma, relationship of learning behavior and social identity, this article hopes to encourage college students back to study and earn better academic performance, help them further counteract the external negative influences and reshape college students' self-image.

2.4 Research Questions

On the basis of the above-mentioned theoretical review, there is reason to believe that online learning performance (mainly, scores and GPA), social identity, and satisfaction are related. Based on works published earlier, the main research questions of this paper are put forward:

(1) What is the relationship between college students’ online learning performance and life satisfaction?

(2) What is the relationship between college students’ online learning performance and their social identity?

(3) What is the relationship between college students’ life satisfaction and social identity?

3. Method

3.1 Questionnaires and Measures

This study uses a questionnaire. The survey is constructed of four separated sections: (1) Demographic information of college students; (2) Social identity of college students, using the identification tendency scale, according to Jonathan M. Cheek (2002) Scale adapted; (3) Satisfaction with Life Scale; (4) Student's online Learning Performance.

Demographics. Demographic information included questions about the gender, year and major in college, length of online learning time and education background of students.

Social identity. We employed Jonathan M. Cheek’s relational identity orientation scale for the AIQ including personal identity, relationship identity, social identity, and collective identity, which consisted of 35 items and used a 5-point Likert scale from “strongly Disagree” (coded 1) to “Strongly Agree” (Coded 7). According to the statistical requirements of internal consistency, Cronbach’s $\alpha$ coefficient is not less than 0.7, which has high confidence. In this study, the above four factors were tested by exploratory factor analysis. After removing the less reliable items (9 items), the remaining 26 items were in accordance with the structure proposed by Cheek and integrated into personal identity, relationship identity, social identity, and group identity. The Cronbach's alpha coefficient values for all four conformations are greater than 0.7, indicating that the scale had acceptable internal consistency (see Table 1).
Table 1. Reliability Analysis of Approval Scale

<table>
<thead>
<tr>
<th>Item deleted scale mean</th>
<th>Item deleted scale variance</th>
<th>Corrected Item Total Relevance</th>
<th>Crombach’s Alpha Value in Deleted Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Identity (PI)</td>
<td>101.04</td>
<td>276.573</td>
<td>.619</td>
</tr>
<tr>
<td>Relationship Identity (RI)</td>
<td>101.11</td>
<td>269.634</td>
<td>.634</td>
</tr>
<tr>
<td>Social Identity (SI)</td>
<td>117.47</td>
<td>342.184</td>
<td>.423</td>
</tr>
<tr>
<td>Collective Identity (CI)</td>
<td>105.41</td>
<td>252.656</td>
<td>.677</td>
</tr>
</tbody>
</table>

**Life Satisfaction.** We adopt the scale of life satisfaction of Pavot & Diener (2008) as an indication of overall well-being, and it has been previously applied in numerous studies by researchers at China and abroad including Andrew Lepp (2014), Wang Wei et al. (2016) and Radosveta Dimitrova (2018). This scale has good reliability and validity, and it composed of 5 items. Sample items include “I am very satisfied with my life”, “In most ways my life is close to my ideal,” and “If I could change my life over, I would change almost nothing”); Each item was answered on a 7-point Likert scale ranging from complete disagreement (coded 1) to 7 (complete agreement). An average score for the SWL factor is computed, and higher scores meaning higher life satisfaction.

**Online learning performance.** The online learning effect is measured by students’ scores, GPA, grants or scholarship, competition awards, and self-evaluation. Scores and GPA are rated on a five-point scale ranging from 1 to 5, with 5 for the top 20%, 4 for the 20%-40%, and 3 for the 40%-60%, 2 or the 60%-80%, and 1 for the rest. In terms of scholarship, 5 for national first class scholarship, 4 points for other national scholarship, 3 for provincial first class scholarship, 2 for other provincial scholarships and 1 for the rest. The online learning performance should also be taken into consideration, with 5 for national-level, 4 for provincial-level, 3 for departmental-level, 2 for school-level, and 1 point for the rest. Besides, students’ self-evaluation on their online learning effect are also included with scores rated on a 5-point Likert scale ranging from poor (coded 1) to excellent (coded 5), and higher scores indicating better learning performance. The reliability of students’ self-evaluation on school achievement and performance has been shown in recent work and findings of Escriberno & Morales (2014) and Radosveta et al. (2018).

### 3.2 Sampling and Data Collection

This study used a random sampling method to conduct surveys and sent more than 500 questionnaires to college students in first-tier cities such as Guangzhou and Shenzhen in Guangdong Province (including 381 paper questionnaires and 120 questionnaires distributed online). A total of 490 valid questionnaires were recovered, and among the respondents, 203 were males, accounting for 41.5%, and 285 were females, accounting for 58.2%. In addition, there are 2 questionnaires without the gender being filling in, but other items were complete. Researchers believed that other parts still have research value, so the Gender of the two questionnaires were set as missing values (for ease of study, the missing values were uniformly set to “99” in SPSS). In the survey, students of associate degree accounted for 42.2% and that of bachelor degree accounted for 53.9% with the rest (mainly postgraduates) accounted for 3.9%. Of all respondents, freshmen to junior students accounted for 89.4%. The most concentrated majors are arts, science, engineering and business. In terms of the time using the Internet to learn, the daily average online study time of 43.9% of students is less than 1 hour, and that of 27.9% of students are 1-2 hours, and 10.5% are more than 3 hours. For GPA, there are 34.8% of students’ GPA ranks within the top 20%, 30% for the 20%-40%, 24.7% for the 40%-60%, 7.4% for the 60%-80%, and 3.1% for others.

### 4. Research Results and Empirical Analysis

#### 4.1 Characteristics of College Students’ Social Identity and Life Satisfaction

Table 2. Main variable characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Identity</td>
<td>5.1575</td>
<td>.86 053</td>
<td>457</td>
</tr>
<tr>
<td>Online Learning Performance</td>
<td>4.9573</td>
<td>1.11 107</td>
<td>457</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>4.3063</td>
<td>1.32 752</td>
<td>457</td>
</tr>
</tbody>
</table>
According to Table 2, it can be seen that the social identity of college students is relatively better than that of satisfaction, and the lower standard deviation reflects that the views of the college students are consistent.

To further understand the characteristics of college students' social identity, researchers adopt methods including independent sample t-test and variance analysis, analyzing respectively the differences in social identity and life satisfaction of college students with different demographic characteristics such as gender, degree, year of college, and the length of online learning. The final results showed that for college students, there is a significant difference in satisfaction between genders, and a difference in social identity in terms of education background.

4.2 Differences in Satisfaction of College Students between Genders

An independent two-group t-test was used to discuss whether gender differences in life satisfaction were found. The results found that girls' satisfaction (M=4.77) was higher than that of boys (M=4.43). The Levene test in Table 3 is used to test whether the two groups are homogeneous. The F value reached a significant difference (F=9.499, sig. =0.002<0.05), indicating that the two groups are inhomogeneous and a corrected t value should be used, and t value, df value and significant level are 2.582, 375 and 0.01 respectively, reaching a significant level of 0.05, indicating that there is a significant difference in life satisfaction between genders.

Table 3. T-test

<table>
<thead>
<tr>
<th></th>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9.499</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-2.582</td>
<td>375.201</td>
</tr>
</tbody>
</table>

Note: CI=confidence interval of the difference; LL=lower limit, UL=upper limit

4.3 Differences in Social Identity among College Students with Different Education Background

Single-factor analysis of variance (ANOVA) was used to determine whether there was a significant difference in recognition among different education background. Levene Statistic’s F value of 1.128 and significant level of 0.325 which is greater than 0.05 indicating that the variance of the sample is not significant lead to conclusion of heterogeneity of variance. Overall the test, the results show F value of 4.402 and Significant level of 0.013 which reached a significant level. Therefore, we must reject the null hypothesis and accept the opposite hypothesis, indicating that college students with different educational backgrounds have significant differences in their social identity. By further looking at the multiple comparison summary tables, we found that students of bachelor degree and students of associate degree had a difference in the value of social identity, with an average difference of 0.421. The positive value was indicates that the first average was higher than the second average, that is, students of associate degree have a higher level of social identity. Their social identity is significantly higher than that of undergraduate students.

Table 4. Differences in Social Identity among College Students with Different Education Background

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5.1575</td>
<td>2</td>
<td>10.312</td>
<td>4.402</td>
<td>.013</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4.9573</td>
<td>485</td>
<td>2.343</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.3063</td>
<td>485</td>
<td>1.32752</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.4 Analysis of the Correlation between Online Learning Performance, Life Satisfaction and Social Identity

4.4.1 Correlation Analysis between Online Learning Performance and Life Satisfaction

According to Table 5, since the correlation coefficient R value is 0.324 which less than 0.4, so the correlation between the two variables should be weak and the value of R square is 0.105 means the online learning performance can only explain the variance of 10.5% of the life satisfaction variable, indicating that the correlation between students’ online learning effect and degree of satisfaction is weak.
4.4.2 Correlation Analysis of Online Learning Performance and Social Identity

The significance level between college students’ social identity and online learning test is less than 0.05. And the Pearson Correlation Coefficient is 0.554 which is greater than 0.4, indicating that the correlation between variables is strong and the two variables are significantly correlated. The better the college students' online learning performance, the higher their social identity, while the worse the relative online learning performance, the lower their social identity. It shows that the better the college students learn online, the more positive the social recognition of college students is.

4.4.3 Correlation Analysis of Life Satisfaction and Social Identity

The correlation coefficient between social recognition and satisfaction of college students' significance test is 0.474 which is greater than 0.4, indicating that the correlation between variables is strong. It shows that the higher the college students' life satisfaction, the higher the social recognition of college students.

In summary, college students' social identity is significantly and positively correlate with their life satisfaction and online learning effect. However, the relationship between school performance and life satisfaction is not clear.

Table 5. Two-Factor Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Social identity</th>
<th>Network learning effect</th>
<th>Life satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pearson Correlation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social identity</td>
<td>1.000</td>
<td>.554**</td>
<td>.474**</td>
</tr>
<tr>
<td>Network learning effect</td>
<td>.554**</td>
<td>1.000</td>
<td>.324</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>.474**</td>
<td>.324</td>
<td>1.000</td>
</tr>
<tr>
<td><strong>Sig.(2-tailed)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social identity</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Network learning effect</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

4.5 Regression Analysis of Social Identity, Life Satisfaction on Social Identity

To further understand the relationship between college students’ social identity, life satisfaction, and online learning outcomes, total scores of life satisfaction and online learning outcomes were divided into predictive variables for multivariate stepwise regression analysis with social identity as the dependent variable, and the predictive effects of life satisfaction and online learning effects on social identity were examined.

Table 6. Model Summary Table

<table>
<thead>
<tr>
<th>Model</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std.Error of the Estimate</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.642^</td>
<td>.412</td>
<td>.409</td>
<td>.66128</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.412</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.412</td>
<td></td>
<td></td>
<td>159.100</td>
<td>2.049</td>
</tr>
</tbody>
</table>

a. Predictors (constant) Life Satisfaction, Online Learning Performance

b. Dependent Variable: Social Identity

From Table 6, we can see that the multivariate correlation coefficient between the two independent variables and social identity is 0.642, the determination coefficient is 0.412, and value of R2 is 0.412, indicating that the two predictors can explain the 41.2% variation of the “social identity”

The Durbin-Watson test statistic expresses the observational independence of the observer. The closer the DW statistic value is to 2, the closer the correlation coefficient is to 0. In this table, DW value is 2.049, indicating there is no self-correlation between the residual items.
<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1 (constant)</td>
<td>2.491</td>
<td>.153</td>
<td></td>
<td>16.250</td>
<td>.000</td>
</tr>
<tr>
<td>Online learning performance</td>
<td>.355</td>
<td>.029</td>
<td>.458</td>
<td>12.051</td>
<td>.000</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>.210</td>
<td>.025</td>
<td>.325</td>
<td>8.530</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Social Identity

Table 7 shows the significance test of the regression coefficients and regression coefficients of the regression model. The larger the absolute value of the standardized regression coefficients, the greater the influence of the predictor variables on social identity variables, and the greater the variation in the explanatory variables. The normalized regression equations from the summary table are as follows:

Social identity=0.458×online learning performance+0.325×life satisfaction

The β values of both variables are positive, indicating that the influence on the dependent variable is positive, and the positive and negative values of β are the same as the positive and negative values of the previous product-difference correlation coefficient. The t-values for the significance test of the two-variable regression coefficients were 12.051 (sig. =0.000<0.05) and 8.53 (sig. =0.000<0.05), and the regression coefficients were significant. At the same time, "online learning performance" (influence coefficient=0.458) has a greater impact on "social identity" than life satisfaction (influence coefficient=0.325).

5. Findings and Applications

5.1 Findings and Conclusion

Based on the questionnaire of 490 college students, this paper studies the relationship between online learning performance, life satisfaction and social identity, and obtains some valuable conclusions:

5.1.1 Life Satisfaction of Girls is Higher than That of Boys

The students' learning and life satisfaction of Guangdong colleges and universities will be significantly different due to their gender differences. The female college students' satisfaction is higher than that of male college students.

5.1.2 Students of Associate Degree Have Higher Social Identity than Students of Bachelor Degree

There are significant differences in the social recognition of different educational backgrounds, which shows that junior college students' social identity is significantly higher than that of undergraduate students.

5.1.3 Online Learning Performance and Life Satisfaction Have a Positive Effect on Their Social Identity

For college students in Guangdong, both online learning and life satisfaction have a positive effect on their social identity. That is to say, both the improvement of online learning and life satisfaction can promote the enhancement of social identity, and the effect of improving online learning is more significant.

5.2 Suggestions and Applications

Based on the above results, this study believes that the answers to the problems that afflict college educators can be given in the following aspects:

5.2.1 Improvement on Online Learning Environments for Better Online Learning Performance

The better the effectiveness of online learning for college students in Guangdong, the more positive their social identity is. Colleges and universities should emphasize the importance of the online learning environment such as online teaching facilities and online self-learning resources.

5.2.2 More Training for Teachers and Staffs about Online Learning Requirements and Instruments

The most mentioned issue of concern is the need of upgrade of the facilities and hardware. Surprisingly, very few indicated that there is a need to upgrade the teacher’s qualifications on online teaching. Teachers' thinking modes and curriculum arrangements should change with the improvement of network and hardware facilities. They should actively adapt new methods to and actively innovate during the process, giving full play to the
advantages of online teaching through the use of MOOCs, online resource sharing, the student’s centered class like Rain Classrooms invented by Qing Hua University. The knowledge gained through training and further education will eventually benefit students. Only highly qualified online educators with appropriate orientations and sufficient online practical training experience can produce quality college students with positive social identity which are essential to the success of their future career and healthy mental life.

5.2.3 More Training to Help Students on Online Self-regulated Learning

For students, the change in learning style could be transformed from teacher-led to student-centered, thus students should combine clear learning objectives with self-regulated learning skill. It should be noted that self-control ability of freshmen is weak, and their habits and achievements in the first year will determine the future development. At the same time, students should improve their information literacy, change their attitude towards online learning, and avoid ineffective network time. Students should actively deal with fragmented information and learn to master corner time to benefit the advantages of user-centered learning.

5.2.4 More Implementation on Conductive Education for College Students

Guangdong college students have different characteristics in online learning and social identity. Students of associate degree are more willing to continue further studies and characterized by a higher degree of social identity and collective identity. The government and universities should pay attention to their needs and support their further education requirement. The GPA and credit system should be more liberal in order to allow students to complete their studies based on personal needs.

5.2.5 More Counselling Services on Living Attitude to Enhance Perception of Life Satisfaction

Colleges could offer psychological counseling and self-learning training to students who have problems with e-learning. At the same time, some Chinese college students lack the self-regulated living experience because they were raised under parental and nanny-style nurturing for a long time. Therefore, colleges and universities may offer counseling service on how to establish positive life goals and learn to be grateful, so the students could be more satisfied with their life and earn positive social identity. They could also encourage students to actively participate in various social services and volunteer activities which will make them give back to society and communicate with other social groups and classes.

6. Limitation and Further Research

The number and location of respondents could be one limitation and more data should be collected in future studies. Also focus groups interviews could be conduct to learn more about the college students in further research. In future, more studies could be conducted to test the formula this paper found and extend the model with other influencing factors like motives, intentions, etc.

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