

*Full Length Research Paper*

# **Research on interpersonal interaction and school adaptation of the new second-generation vocational high school students in Taiwan: A moderated mediating model**

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As the population of new residents in Taiwan continues to increase due to the increasingly severe trend of having fewer children, the life and school adaptation of the second generation of new residents in vocational high school (VHS) has received significant attention. This study explores the correlation between interpersonal interaction and school adaptation of Taiwan's new second-generation VHS students. Based on the "Cultural Identity" theory, this study proposed a hypothetical model with "self-identity" as the mediating variable and "perceived organizational support" as the moderating variable. This study collected 60 questionnaires from second-generation VHS students in Nantou County, Taiwan, using a purposive sampling technique in June 2023. The author adopted the Hayes' (2022) SPSS 20 PROCESS procedure to verify the mediation and moderation effects. The result of this study contributes to the literature on multiculturalism and applied psychology. Based on first-hand data collection and statistical analysis, the vital conclusions are as follows: 1. the "interpersonal interaction" of the new second-generation VHS students can effectively predict their "school adaptation"; 2. the "self-identity" of the new second-generation VHS students has presented an excellent mediating role between "interpersonal interaction" and "school adaptation"; 3. "Perceived organizational support" plays an excellent moderating role in the relationship between "interpersonal interaction" and "self-identity" 4. Incorporating "interpersonal interaction," "self-identity," and "perceived organizational support," the hypothetical model could effectively predict the "school adaptation" behavior of the new second-generation VHS students.

**Key words:** Interpersonal interaction, school adaptation, self-cognition, immigration, vocational high school.

## **INTRODUCTION**

As internationalization becomes increasingly open, technologically advanced countries mainly adopt available immigration policies to compensate for the lack of labor

force due to their population shortage. For example, Germany immigrated 26% of its total population in 2022 (Gries et al., 2022); the United States immigrated 11.9%

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in 2015 (Valdez, 2018). As of June 2023, Taiwan's new resident population has increased by more than 530,000, accounting for 2.27% of the total population (Ministry of the Interior, Taiwan, 2023). New residents have become the largest group of Taiwan's emerging population.

New residents usually show strong adaptability and strive to build "intercultural competence" in order to integrate into Taiwanese society (Wu et al., 2009; Sarli and Phillimore, 2022; Aradhya et al., 2023); however, Taiwanese people's acceptance of new residents' culture is still in a conservative state. In other words, the cultural integration between the Taiwanese and the new residents needs to strengthen (Wang and Lin, 2009). Therefore, finding an effective way for the new residents to recognize and reconcile with Taiwan society and how to guide the "second generation of new residents" to build cross-cultural competence have become vital issues facing Taiwanese society.

In a multicultural society, "culture identity" is the process of identity for the young generation (Aradhya et al., 2023; Bouchet, 1995; Kazakbaeva, 2002), and might eventually contribute to the "self-identity" of the juvenile through "interpersonal interaction" and "school adaptation" (Liu and Lin, 2012; Zhang et al., 2021). Many researchers have examined the relationship between "interpersonal interaction" and "school adaptation" (Beatson et al., 2023; Kar and Kar, 2023; Yu et al., 2022). However, studies analyzing the internal relationship mechanism between these two variables are scarce. Therefore, based on high school pluralistic education, this study uses a questionnaire survey to investigate new second-generation vocational high school (VHS) students in Taiwan to explore further the relationship between "interpersonal interaction" and "school adaptation" and its internal mechanism (the mediating role of self-identity and the moderating role of perceived organization support) and intends to provide concrete suggestions to improve the "school adaptation" of new second-generation VHS students by constructing a moderating mediation model.

### Research objectives

Based on the above research motives, the objectives of this study are as follows:

- 1) To explore the influence of "interpersonal interaction" on "school adaptation" of the new second-generation VHS students.
- 2) To explore whether the "self-identity" of the new second-generation VHS students plays a mediating role in the impact model of "interpersonal interaction" on "school adaptation."
- 3) To explore whether "perceived organizational support" has a moderating effect on the relationship among "interpersonal interaction," "self-identity," and "school adaptation" of the new second-generation VHS students.

### Research scope and limitations

This study uses the purposive sampling technique to select students from a high school in Nantou County. According to the needs of the research purpose, this author distributed 60 questionnaires to the new second-generation students of the school's five major technical occupations (fashion, catering, baking, leisure travel, and auto repair). Due to the limitations of the sampling population and research objects, readers who plan to use the results of this study for subsequent use should be cautious.

### LITERATURE REVIEW

To establish the theoretical basis of this study, this author reviews and analyzes related literature on critical variables, including (1) the "self-identity," the intermediary variable role, in how "interpersonal interaction" impacts the "school adaptation" of the new second-generation VHS students. (2) the moderating effect of how "perceived organizational support" moderates the relationship among "interpersonal interaction," "self-identity," and "school adaptation" of the new second-generation VHS students. For the convenience of the readers, the subsections include the influence of interpersonal interaction of the new second-generation VHS students on school adaptation, the self-identity of the new second-generation higher vocational students-the intermediary variable, and the moderating effect of "perceived organizational support," which are summarized as follows:

#### The influence of interpersonal interaction of the new second-generation VHS students on school adaptation

Maslow's (1978) "need-hierarchy theory" advocated that after the "physiological" and "safety" needs are satisfied, human beings will have expectations for "love." Love and belonging to the VHS school students; this level of needs belongs to interpersonal interaction. Cai (2002) research pointed out that the interaction between the individual and social culture is inseparable. The corresponding cultural structure must be obtained through continuous participation in social life to interpret the study and life experience reasonably. In other words, establishing a good "interpersonal interaction" situation in vocational education can meet the needs of students for love and belonging.

Regarding vocational education students, interpersonal relationship is a dynamic response, which is the interaction and emotional response between peers and teachers of VHS students to meet the psychological needs of love and belonging (Zhang, 1997). Research by Zhang et al. (2021) pointed out that there is a positive correlation between "school adaptation" and

"interpersonal relationships"; Zhang also pointed out that "interpersonal relationships" will directly affect students' "school adaptation." Therefore, the excellent peer interaction of VHS students in school is conducive to their "learning adaptation" in school.

### **The self-identity of the new second-generation higher vocational students - the intermediary variable**

"Self-identity" was proposed by Erik Erikson, who believed that "self-identity" refers to a person's self-identification, self-creation, and self-belonging in a specific environment (Beatson et al., 2023; Yuan, 1996; Zhang, 2007; Chen, 2005); that is, "self-identity" means that when an individual clearly understands their conditions and abilities, understands their own needs for love and affiliation, and accordingly moves toward their own career goals and ideals, strive for awareness of self-actualization.

#### ***The mediating effect of the "self-identity" theory***

From the perspective of developmental psychology, the new second generation of higher vocational students belongs to the stage of adolescent development. Adolescents' "self-identity" development is often affected by relevant events in life, living environment, and daily learning. Erikson (1980) pointed out that teenagers aged 13 to 19 will continue to experience various "developmental crises" in self-learning and development. Vocational education students are at this age. Such as: "I am experiencing the challenges of identity versus role confusion and a strong sense of group belonging" or "I hope to gain support through interpersonal interaction with peers" to construct "Who am I?" concepts of self-identity to achieve adaptation to school life (Liao and Lian, 2012; Chen et al., 2005). Deslandesa et al. (2022) used the "Adoption Host Culture" strategy in English teaching and found that the improvement of self-identity can enhance the peer relationship of the new second-generation students, thereby enhancing communication and improvement in learning. Thus, if the school adopts an effective "self-identity" strategy for the new second-generation students in vocational education, it can develop a positive "self-identity" and establish a good "interpersonal relationship," thereby improving a good "school adaptation" (Xie et al., 2018; Simonsen and Rundmo, 2020; Virtanen et al., 2020).

#### ***The influence of "self-identity" on "school adaptation" of the new second generation of vocational students***

Merton (1938) believed that when humans face stressful situations, five adaptation strategies may be adopted:

innovation, ritualism, retreatism, rebellion, and conformity. Usually, relationship adaptation difficulties may happen after students enter high school, leading to social isolation (Matthews et al., 2015). One of the school's critical educational goals is to assist students in their socialization. Therefore, the vocational education system and connotation contain different degrees of socialization purposes and functions, aiming to let students understand the differences between people to complete the socialization process (Yu et al., 2022; Liu and Lin, 2012; Song, 2006; Wu, 2000). Zhang et al. (2021) pointed out that positive "interpersonal relationships" will directly affect students' "school adaptation"; the study pointed out that the reason why "interpersonal relationships" can improve students' "school adaptation" is simply because good school adaptation, It will increase students' "level of social support," thereby constructing a positive sense of self-identity, and then inevitably affect students' "school adaptation."

#### ***The influence of "interpersonal interaction" on "self-identity" of the new second generation of higher vocational students***

The "interpersonal interaction" between VHS students and their peers and teachers is closely related to their "self-identity" (Lin, 2012). Meiling's (2016) research pointed out that the daily "interpersonal interaction" of vocational education students has a considerable degree of predictive power for their "self-identity." Thus, the "self-identity" of vocational education students may be affected by "interpersonal interaction." Poling et al. (2022) pointed out that if vocational education students can establish good interpersonal relationships in school, it will positively impact their "self-identity."

#### **The moderating effect of "perceived organizational support"**

"Cultural identity" is the process of identity formation (Hu and Dai, 2021; Aradhya et al., 2023; Bouchet, 1995; Kazakbaeva, 2022). Transnational marriages contribute to multiculturalism. The couples of transnational marriages must adapt to the new environment and construct a sense of "self-identity" for the new residents (Beatson et al., 2023; Oswald, 1996; Sarli and Phillimore, 2022). Usunier (1996) pointed out that the "self-identification" of new residents is a process of assimilation and internalization, emphasizing that the values, standards, and social expectations of the host country should be internalized in the self-concept of new residents. In order to integrate into the new environment, the new residents must "do as the Romans do when they enter the country." However, it is also essential for the people of the immigrant country to accept and integrate

into the multicultural integration (Pan, 2011; Donnalaja and McAvay, 2022).

"Perceived organizational support" was proposed by Eisenberger (1986). The "cultural identity" theory points out that those individuals in the organization feel the overall support for their integration into the culture of the immigrant country and thus think about whether the relevant institutions of the immigrant country value new residents and newcomers. In this study, "perceived organizational support" refers to the new second-generation VHS students studying in vocational schools feeling the school or community based on cultural identity and showing a degree of support and care for themselves.

Some related studies have pointed out that the multiple activities, advocacy, and care of the government, schools, and non-governmental organizations for new residents and the new second generation of care and cultural integration have a moderating effect on the "self-identity" of the new second generation of vocational students (Su and Jiang, 2023; Wang, 2014; Yang, 2021; Zhuo and Gao, 2022; Kastoryano, 2018; Chen, 2008). To realize this idea, the Taiwanese government has long been emphasizing the promotion of multicultural policies and promoting the life, employment, and cultural activities of new residents in the host country (Foresight Magazine, 2019; Small World News Week, 2022; Valdez, 2018).

Based on the above literature review, this study speculates that some "perceived organizational support" based on cultural identity buffers and regulates the "self-identity" of the new second-generation VHS students while studying and growing up. Will the new second-generation VHS students with higher "perceived organizational support" will gain better "interpersonal interaction," "self-identity," and "school adaptation" than those with lower "perceived organizational support"?

With the implications of reviewing the literature, this author made conclusions as follows: 1) In the vocational education environment, the "school adaptation" of the new second-generation VHS students is directly affected by the "interpersonal relationship" while the "self-identity" is to some extent based on sound "interpersonal interaction." However, whether "self-identity" plays a mediator role is still worth further exploration. 2) In the vocational education environment, to meet their emotional, love, and belonging needs, the new second-generation VHS students will strive to seek organizational support in their environment to establish and form their unique interdependent relationships. Are the new second-generation VHS students with higher "perceived organizational support" better than those who are with lower "organizational support" in terms of "interpersonal interaction," "self-identity," and "school adaptation"? In addition, does "perceived organizational support" moderate the effect of "interpersonal relationship" on "school adjustment"? Furthermore, whether "perceived organizational support" can moderate the impact of "self-identity" on "school adjustment"? These moderating and mediating roles are worthy of further examination.

## RESEARCH DESIGN AND IMPLEMENTATION

### *Research design*

**Instrument development:** To verify the proposed hypothetical model, this author employed a self-administered questionnaire to gather first-hand data. Before developing the research instrument, the author conducted a review of the following scales and studies: "Research on School Life Adaptation and School Support System of Visually Impaired Students in Ordinary Senior Vocational High Schools" (Zhang, 2003), "Research on the Relationship between High School Students' Interpersonal Attraction and School Life Adaptation" (Li, 2008), "Self-identity, Role Identity, Organizational Identity, and Work Performance Correlation Research," "Exploring the Impact of Perceived Support Activities on Online Collaborative Learning on Learning," and "Exploring the Moderating Effect of Perceived Organizational Support on Human Resource Management Measures and Organizational Performance" (Tao, 2011).

After reviewing the aforementioned scales, the author compiled a questionnaire titled "Research on Interpersonal Interaction and School Adaptation of the New Second-Generation Higher Vocational Students: Self-Identity as the Mediating Model." This questionnaire includes the following constructs: "perceived organizational support," "interpersonal interaction," "self-identity," and "school adaptation." The questionnaire employs a 5-point Likert scale, with responses ranging from 1 for "strongly agree" to 5 for "strongly disagree."

**Instrument validity and reliability:** During the questionnaire preparation, three scholars and experts participated in the review and revision, ensuring its expert validity. Additionally, this study invited 30 VHS students to participate in a pre-test to assess its reliability, which is further discussed, including the Cronbach's reliability coefficient test.

### *Research objects and sampling*

The original thinking of the study is a case study. The author set a target group on the second-generation vocational high school (VHS) students in Nantou County, Taiwan, and selected the sample from a VHS. In Taiwan's rural area, the amount of target groups, second-generation VHS students, is limited. Through informed consent by their parents, this study used a "purposive sampling technique" to select 60 new second-generation students in a small VHS in Nantou County, Taiwan, as the research object and distribute questionnaires in June 2023. A total of 60 valid questionnaires were collected.

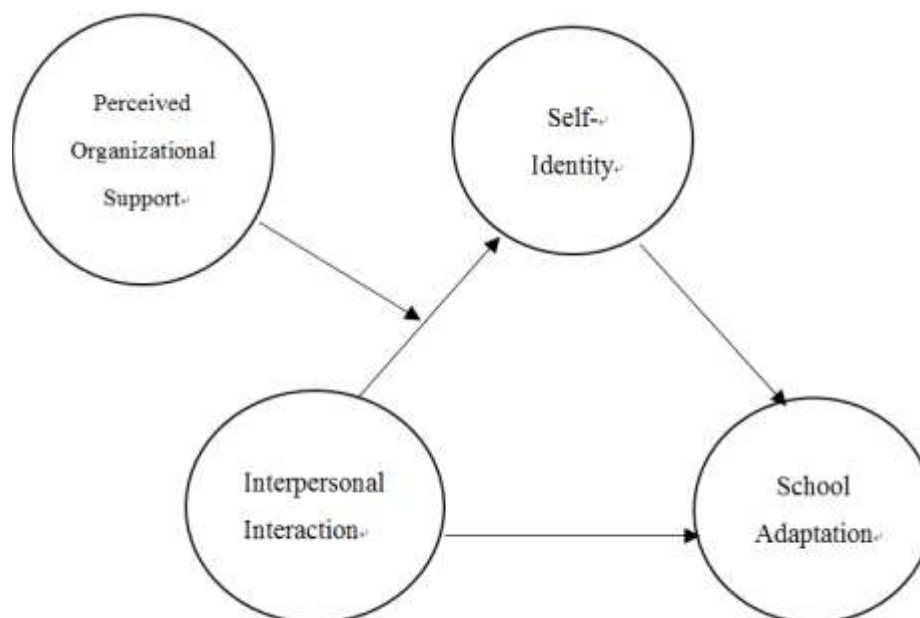
### **Data analysis**

The data collected from the questionnaire survey was processed using SPSS 20 and the PROCESS procedure created by Hayes (2022) for intermediary effect and moderating examination.

### **Research hypothesis and framework**

To achieve the purpose of this research, the author explored and collected scholars' opinions through a relevant literature review, then constructed the framework diagram, a hypothetical model, of this research (as shown in Figure 1).

The detailed process that the author completed in this model development is as follows. (1) Initially, the author reviewed the literature based on the problem statement and the research objectives. (2) After a causal-effect relationship examination, the



**Figure 1.** The proposed hypothetical model.  
Source: Author.

**Table 1.** Cronbach's Alpha value of the survey instrument scale in this study.

| Reliability statistics |       |
|------------------------|-------|
| Cronbach's Alpha       | Items |
| 0.96                   | 60    |

author then concluded an arena of hypothetical model framework.

Among them, the "interpersonal interaction" of the new second generation may directly affect their "school adaptation"; the "self-identity" of the new second generation may affect "school adaptation"; the "interpersonal interaction" of the new second generation may affect "self-identity" and further affect "school adaptation." That is, "self-identity" may have a mediating role between "interpersonal interaction" and "school adaptation." "Perceived organizational support" may play a moderator role in "interpersonal interaction," "self-identity," and "school adaptation" of the new second-generation VHS students. According to the essential model variables, then put forward the Null Hypotheses as follows:

H1: The "Interpersonal interaction" of new second-generation VHS students has no significant effect on "school adaptation."

H2: The "self-identity" of the new second-generation VHS students has played no mediating role in the impact model of "interpersonal interaction" on "school adaptation."

H3: The "perceived organizational support" has played no moderating effect on the relationship among "interpersonal interaction," "self-identity," and "school adaptation" of the new second-generation VHS students.

## RESULTS AND DISCUSSION

This study conducted a questionnaire survey on the new

second-generation students. Based on the purposive sampling technique, this author distributed sixty questionnaires to the students, and 60 valid questionnaires were received. The analysis is as follows.

### Reliability analysis

The Cronbach's Alpha value of the self-compiled questionnaire "Research on Interpersonal Interaction and School Adaptation of the New Second-Generation Higher Vocational Students" is 0.96, showing the reliability of the research tool. Table 1 shows the reliability analysis of this instrument.

### Correlation analysis

Using SPSS 20, under the condition of controlling age and gender, this study carried out the descriptive statistical correlation analysis as shown in Table 2.

The correlation analysis in Table 2 shows that the "interpersonal interaction," "school adaptation," "self-identity," and "perceived organizational support" of the

**Table 2.** Statistical results and correlation analysis of each variable description ( $N=60$ ).

| Variable                         | M      | SD     | 1        | 2        | 3        | 4 |
|----------------------------------|--------|--------|----------|----------|----------|---|
| Interpersonal Interaction        | 1.7813 | 0.5997 | 1        |          |          |   |
| School Adaptation                | 2.1478 | 0.5127 | 0.776*** | 1        |          |   |
| Self-Identity                    | 2.228  | 0.6143 | 0.724*** | 0.797*** | 1        |   |
| Perceived Organizational support | 2.4766 | 0.7046 | 0.494*** | 0.624*** | 0.911*** | 1 |

Source: Author \*\*\* $p < 0.001$  \*\* $p < 0.01$  \* $p < 0.05$ .

**Table 3.** Using SPSS PROCESS Model 4 to test the mediating effect of "self-identity" in the hypothetical model.

| Variable                  | Model 1: School adaptation |         | Model 2: Self-identity |         | Model 3: School adaptation |         |
|---------------------------|----------------------------|---------|------------------------|---------|----------------------------|---------|
|                           | $\beta$                    | $t$     | $\beta$                | $t$     | $\beta$                    | $t$     |
| Age                       | -0.11                      | -0.89   | -0.41                  | -1.88   | 0.06                       | 1.21    |
| Sex                       | -0.24                      | -3.6    | -0.23                  | -6.32   | 0.06                       | 0.84    |
| Interpersonal Interaction | 0.66                       | 9.38*** | 0.74                   | 8.00*** | 0.36                       | 4.10*** |
| Self-Identity             |                            |         |                        |         | 0.41                       | 4.86*** |
| $R^2$                     | 0.60                       |         | 0.53                   |         | 0.72                       |         |
| F                         | 87.90                      |         | 64.05                  |         | 72.87                      |         |

Source: author. all variables in the model are standardized variables into the regression equation.

new second-generation VHS students have all reached highly statistically significant correlations ( $p < 0.001$ ).

### Test the mediating effect of "self-identity" in the research model

Using the SPSS 20 PROCESS model 4 created by Hayes (2022), under controlling the age and gender, this study has done the mediating "self-identity" effect test of the new second-generation VHS students. Table 3 shows the results.

The results in Table 3 have significant meanings as follows: 1. "Interpersonal interaction" can significantly predict "self-identity" of the new second-generation higher vocational students ( $\beta=0.74$ ,  $p < 0.001$ ); 2. "Interpersonal interaction" and "self-identity" can significantly predict "school adaptation" ( $\beta=0.36$ ,  $\beta=0.41$ ,  $p < 0.001$ ); 3. "Interpersonal interaction" can significantly predict "school adaptation" ( $\beta=0.66$ ,  $p < 0.001$ ); Three path coefficients of the proposed hypothetical model have all reached highly statistically significant levels. This study found that the null hypothesis "H1: "Interpersonal interaction" of the new second-generation VHS students has no significant impact on "school adaptation" has been overturned. The null hypothesis of "H2: "Self-identity" of the new second-generation VHS students has no intermediary role in the influence of "interpersonal interaction" on "school adaptation." This finding established that the "interpersonal interaction" of the new second-generation VHS students on "School adaptation" has a significant impact, and the "self-identity" of the new second-

generation VHS students plays a mediating role in the impact of "interpersonal interaction" on "school adaptation."

### Test the moderating effect of "perceived organization support" in the research model

This study uses the SPSS PROCESS model 7 provided by Hayes (2022), under the control of age and gender, to verify the role of "perceived organizational support" (POS) of the new second generation of VHS students in moderating the relationship among POS and "interpersonal interaction" and "self-identity," and the moderating effect of the relationship among POS and "interpersonal interaction" and "school adaptation." Table 4 shows the results.

The results presented in Table 4 indicate that Equation 1, which pertains to "Interpersonal interaction" in the new second-generation VHS students, significantly predicts "school adaptation" ( $\beta=0.66$ ,  $p < 0.001$ ). In Equation 2, the interaction between "interpersonal interaction" and "perceived organizational support" positively predicts "self-identity" ( $\beta=1.61$ ,  $p < 0.001$ ). As a result, it can be concluded that there is a moderating and mediating effect involving "interpersonal interaction," "self-identity," "perceived organizational support," and "school adaptation."

## CONCLUSION

Based on the "Cultural Identity" theory, this study explored

**Table 4.** Moderating effect in the hypothetical model tested with SPSS PROCESS model 7.

| Variable                          | Model 1: School adaption |           |         |               | Model 2: Self-identity |      |          |               |
|-----------------------------------|--------------------------|-----------|---------|---------------|------------------------|------|----------|---------------|
|                                   | $\beta$                  | SE        | t       | 95%CI         | $\beta$                | SE   | t        | 95%CI         |
| Age                               | 0.54                     | 0.13      | 4.10    | (0.27, 0.80)  | -0.10                  | 0.10 | -1.04    | (-0.29, 0.09) |
| Sex                               | 0.62                     | 0.61      | 1.01    | (-0.60, 1.83) | 0.58                   | 0.32 | 1.80     | (-0.07, 1.22) |
| Interpersonal Interaction: X      | 0.66                     | 0.07      | 9.38*** | (0.52, 0.81)  | 2.19                   | 0.16 | 14.05*** | (1.88, 2.50)  |
| Self-Identity: M                  | 0.41                     | 0.09      | 4.86*** | (0.24, 0.58)  |                        |      |          |               |
| Perceived Organization Support: U |                          |           |         |               | 1.61                   | 0.08 | 19.05*** | (1.44, 1.78)  |
| X*U                               |                          |           |         |               | 0.63                   | 0.05 | 11.79*** | (0.74, 0.53)  |
| R <sup>2</sup>                    | 0.20                     | 0.05      |         |               |                        |      |          |               |
| F                                 | 26.68***                 | 139.04*** |         |               |                        |      |          |               |

Source: Author.

the correlation between "interpersonal interaction" and "school adaptation" of the new second-generation VHS students. Through the literature review, this study proposed a hypothetical research framework including "interpersonal interaction" and "school adaptation" as essential elements, "self-identity" as the mediating variable, and "perceived organizational support" as moderating variables. This author compiled a questionnaire based on the hypothetical model and conducted an empirical investigation on 60 new second-generation students of a VHS in Nantou County, Taiwan. Using the SPSS 20 PROCESS procedure (Hayes, 2022) to verify the proposed model, the conclusions are as follows:

1) The "interpersonal interaction" of the new second-generation VHS students can effectively predict the performance of "school adaptation." This study found that there is a positive correlation between "school adaptation" and "interpersonal relationships," and "interpersonal relationships" will directly affect and can effectively predict students' "school adaptation."

2) The "self-identity" of the new second-generation VHS students has a mediating effect in the influence model of "interpersonal interaction" on "school adaptation."

This study found that the "self-identity" of the new second-generation VHS students has a mediating effect on the impact model of "interpersonal interaction" on "school adaptation." The reason is that an excellent "self-identity" improves their "social support," thus constructing a positive "interpersonal relationship," thereby improving their "school adaptation" performance.

3) The "perceived organizational support" of the new second-generation VHS students plays a moderating role in the relationship between "interpersonal interaction" and "school adaptation."

This study found that "perceived organizational support," including multicultural activities, advocacy and care for the new residents and the new second generation

by the government, school organizations and non-governmental organizations, and cultural integration, has a positive effect on the "self-consciousness" of the new second-generation VHS students. In addition, this study also found that "perception group support" also has a moderating effect on the "interpersonal interaction" and "school adaptation" of the new second-generation VHS students.

This study found that "interpersonal interaction," "self-identity," "school adaptation," and "perceived organizational support" of the new second-generation VHS students constituted a mediating effect model, which confirmed the validity of the proposed model in this study. This finding has essential guiding value for multi-education development and counseling in vocational education.

### Suggestions for future research

Due to the limitation of research time and funds, the main research variables included in this study to explore the new second generation of VHS students are "interpersonal interaction," "self-identity," "school adaptation," and "perceived organizational support." Moreover, this study used empirical data to verify and confirm the mediation model's validity. In the future, follow-up researchers can refer to this study. Interested researchers may expand the scope of research variables and the number of samples to get closer to the real-world situation.

### CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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## REFERENCES

- Aradhya S, Grotti R, Härkönen J (2023). Unemployment persistence among second-generation immigrants. *European Sociological Review* 39(3):433-448.
- Beatson R, Quach J, Canterford L, Farrow P, Bagnall C, Hockey P, Phillips E, Patton GC, Olsson CA, Ride J, Brown LM, Roy A, Mundy LK (2023). Improving primary to secondary school transitions: A systematic review of school-based interventions to prepare and support student social-emotional and educational outcomes. *Educational Research Review* 40:100553.
- Bouchet D (1995). Marketing and the redefinition of ethnicity. In Costa J, Bamossy G (eds.), *Marketing in a Multicultural world: Ethnicity, Nationalism, and Cultural Identity*. Thousand Oaks: Sage Publications.
- Cai ML (2002). *The presentation of the educational qualitative research process*. Taipei: Psychology Co. Ltd. Taiwan.
- Chen K, Lei GL, Wu YZ (2005). Differences in the development of self-identity content and crisis exploration of adolescents at different stages. *Chinese Journal of Psychology* 47(3):249-268.
- Chen JC (2008). Research the mediation model between employees' perceived organizational support and job performance. *Journal of Management* 25(3):309-333.
- Chen YD (2005). An exploration of identity in networked interpersonal relationships. *Journal of Network Sociology Communications*. Issue 50:17-50.
- Deslandes C, Kaufmann LM, Anderson JR (2022). A systematic and integrative review of qualitative research exploring experiences of acculturation and education among African-born migrants. *International Journal of Intercultural Relations* 86:240-257.
- Donnalaja V, McAvay H (2022). The multidimensionality of national belonging: Patterns and implications for immigrants' naturalization intentions. *Social Science Research* 106:8-15.
- Eisenberger R, Huntington R, Hutchison S, Sowa D (1986). Perceived organizational support. *Journal of Applied Psychology* 71(3):500-507.
- Erikson EH (1980). *Identity and the life cycle*. W.W. Norton & Company, New York.
- Foresight Magazine (2019). Where did I go before I felt I didn't have to prove myself anymore? [https://event.gvm.com.tw/201906\\_migrant-worker/10.html](https://event.gvm.com.tw/201906_migrant-worker/10.html)
- Gries T, Redlin M, Zehra M (2022). Educational assimilation of first-generation and second-generation immigrants in Germany. *Journal of International Migration and Integration* 23:815-845.
- Hayes AF (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd edition). New York: The Guilford Press.
- Hu Y, Dai K (2021). Foreign-born Chinese students learning in China: Reshaping intercultural identity in a higher education institution. *International Journal of Intercultural Relations* 80:89-98.
- Kar S, Kar A (2023). Schools and students' preparedness on reopening and adaptation during and after the pandemic: A cross-sectional review of schools of a city in eastern India. *Clinical Epidemiology and Global Health* 23:1-6.
- Kazakbaeva R (2022). A vehicle or hurdle? The impact of English on Kyrgyz immigrants' social and cultural integration in the United States. *International Journal of Intercultural Relations* 88:177-188.
- Kastoryano R (2018). Multiculturalism and interculturalism: Redefining nationhood and solidarity. *Comparative Migration Studies* 6(1):17-24.
- Li WL (2008). Research the relationship between self-identity, role identity, organizational identity and job performance. Ming Chuan University, Taiwan. Unpublished Master Thesis.
- Liao YR, Lian TJ (2012). The effectiveness of Adler-oriented group counseling on Internet addiction in adolescents. *Educational Practice and Research* 25(2):67-95.
- Lin JR (2012). Correlation research on self-concept, real and online interpersonal relationship, and happiness of vocational high school students. Master thesis, Department of Counseling and Counseling, National Changhua Normal University, Taiwan.
- Liu XH, Lin YX (2012). After-school tutoring is a more socialized understanding of learning. *Education and Social Studies* 25:1-32.
- Matthews T, Danese A, Wertz J, Ambler A, Kelly M, Diver A, Caspi A, Moffitt TE, Arseneault L (2015). Social isolation and mental health at primary and secondary school entry: A longitudinal cohort study. *Journal of the American Academy of Child and Adolescent Psychiatry* 54(3):225-232.
- Maslow AH (1978). *Motivation and personality*. New York: Harper, Row. NY.
- Merton RK (1938). Social structure and anomie. *American Sociological Review* 3:672-682.
- Oswald LR (1996). The place and space of consumption in a material world. *Design Issues* (Spring):48-62.
- Pan DZ (2011). Does Taiwan embrace multiculturalism? *China Times*, Taiwan, July 28, 2011. [https://groups.google.com/g/yotu/c/qbjSP8\\_NnGk?pli=1](https://groups.google.com/g/yotu/c/qbjSP8_NnGk?pli=1)
- Poling DV, Loan, CL, Riddle R (2022). Enhancing teacher-student relationship quality: A narrative review of school-based interventions. *Educational Research* 37:100459.
- Sarli A, Phillimore J (2022). The intercultural competence of second-generation individuals: knowledge gaps and steps forward. *International Journal of Intercultural Relations* 8:11-21.
- Small World News Week (2022). Identity and belonging of new children in a pluralistic society. <http://shuj.shu.edu.tw/blog>.
- Simonsen IE, Rundmo T (2020). The role of school identification and self-efficacy in school satisfaction among Norwegian high-school students. *Social Psychology of Education* 23:1565-1586.
- Song PL (2006). A study on the cultural capital and school adaptation of elementary school children Pingtung County as an example. The Institute of Educational Administration, National Pingtung University of Education, Taiwan, Unpublished Master Thesis.
- Su Q, Jiang M (2023). The relationship between work-family conflict and job satisfaction of female university teachers in China: A moderated mediating model. *Educational Research and Review* 18(9):225-233.
- Tao SY (2011). The exploration of the influence of support activity perception on online collaborative learning. Yuan Ze University, Taiwan, Unpublished Doctoral Dissertation. <https://hdl.handle.net/11296/pzsfhq>.
- Usunier J (1996). *Marketing across cultures*. N.Y.: Prentice-Hall.N.Y.
- Valdez O (2018). The second-generation American: Who am I? IMPAKTER, [https://impakter-com.translate.google.com/second-generation-american/?\\_x\\_tr\\_sl=en&\\_x\\_tr\\_tl=zh-TW&\\_x\\_tr\\_hl=zh-TW&\\_x\\_tr\\_pto=op,sc](https://impakter-com.translate.google.com/second-generation-american/?_x_tr_sl=en&_x_tr_tl=zh-TW&_x_tr_hl=zh-TW&_x_tr_pto=op,sc)
- Virtanen TE, Räikkönen E, Lerkkanen MK, Määttä S, Vasalampi K (2021). Development of participation in and identification with school: Associations with truancy. *The Journal of Early Adolescence* 41(3):394-423.
- Wang B (2014). A preliminary study on the impact of the adaptation of new residents on Taiwan's social security and coping strategies. *Proceedings of Criminal Policy and Crime Research* 17:189-213.
- Wang M, Lin N (2009). Art and society-essays and interviews with contemporary artists. Taipei Fine Arts Museum, Taiwan.
- Wu QY (2000). A study on anti-school culture among middle school students. The Institute of Education, National Taiwan Normal University, Taiwan, Unpublished Doctoral Dissertations.
- Wu QG, Cai MC (2009). A study on the relationship between cultural identity and school adaptation of children of new residents-Taking the children of new residents in junior high school in Yunlin County as an example. *Journal of Pingtung University of Education* 33:459-488.
- Xie L, Peng YQ, Zhang YC (2018). Self-identity, emotional management and research on the correlation between metacognition and internet usage behavior. *Journal of Technical and Vocational Education* 8(1):1-22.
- Yang HR (2021). The epidemic mirrors racial discrimination: the difficulties faced by new residents and the new second generation and the reflections that Taiwanese society should have. *Humanities and Social Sciences Briefs* 22(3):1-6.
- Yu Y, Peng L, Mo PKH, Yang X, Cai Y, Ma L, She R, Lau JTF (2022). Association between relationship adaptation and Internet gaming disorder among first-year secondary school students in China: Mediation effects via social support and loneliness. *Addictive Behaviors* 125:107166.
- Yuan ZQ (1996). *Perceptual psychology*. LaurelsCo. Ltd, Taipei, Taiwan.
- Zhang CX (2007). *Educational psychology*. DonghuaCo. Ltd, Taipei, Taiwan.



Zhang LT (2003). A study on school life adaptation and school support system of visually impaired students in ordinary senior high schools. National Changhua Normal University, Taiwan. Unpublished Doctoral Dissertations.

Zhang ML (1997). Content analysis and research on interpersonal relationships in elementary school national language textbooks. Taipei Normal University, Taiwan, Unpublished Master Thesis.

Zhang X, Huang PF, Li, BQ, Xu WJ, Li W, Zhou B (2021). The influence of interpersonal relationships on school adaptation among Chinese university students during COVID-19 control period: Multiple mediating roles of social support and resilience. *Journal of Affective Disorders* 285:97-104.

Zhuo Z, Gao RX (2022). Are new resident women accepted? Multicultural acceptance and its influencing factors: Taking Kinmen region as an example. *Journal of Educational Psychology* 54(1):205-234.