

# Perspectives of Chinese Undergraduates in the US towards Advanced Placement High School Curriculum in China

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**Abstract**—The Advanced Placement (AP) curriculum program is a rapidly growing university preparation program that is being adopted by high schools in China. Despite the fast growth of AP high school curriculum programs, and high expectations from students and parents in China, empirical studies exploring the Chinese AP learners' perceptions of their university preparation are limited. This study aims at exploring the AP learners' perspectives on the AP high school curriculum program in equipping them for universities when they are studying in the US. Students' responses to the Chinese AP program were collected through a questionnaire and individual semi-structured interviews. The findings show that students generally felt positive about the AP academic courses, which prepared them for their transition to universities. They also expressed that the English learning environment in the AP program developed English competence. However, they felt disappointed about the lack of teaching of paraphrasing skills, and were frustrated about not gaining much intercultural communicative competence in casual communication. This result sheds light on the under-researched area of the Chinese AP high school curriculum for the AP administrator and curriculum designers.

**Index Terms**—Advanced Placement (AP) curriculum, Chinese AP program, Chinese Undergraduates, perspective, the US universities

## I. INTRODUCTION

There were 369,548 Chinese students studying in undergraduate, graduate, non-degree, and optional practical training (OPT) programs in the US in the 2018/2019 academic year, with a significant increase of 56.9 % from the 2012/2013 academic year [1]. Many of the studies have revealed that academic challenges, linguistic barrier, and intercultural communication problems are the main difficulties that Chinese students face in universities in the US [2]-[8].

One of the most popular university preparation curricula is the Advanced Placement Curriculum (AP Curriculum) in China [9]. The AP high schools in Shenzhen claim that they follow both standards of the US curriculum and the Chinese classical curriculum. The tuition fees of AP international high school range from

about ¥ 100,000 to ¥220,000 (about \$14,300–\$31,500) annually, compared to the tuition fees for Chinese state high schools which are only ¥ 1,000 to ¥ 2,000 per year [10]. Students taking the expensive AP high school curriculum programs anticipate that the curriculum and English proficiency enhancement from the program will prepare them to take on the challenges of university-level courses in America [10].

Despite the fast growth of AP high school curriculum programs and high expectations from students and parents in China, empirical studies exploring the Chinese AP learners' perceptions of their university preparation seem almost undocumented. This vacuum has led to the current research, which seeks to get insights from the AP undergraduates' perspectives on the curriculum in preparing them for studying in US universities.

The findings are essential in three ways: 1. The study will give information to prepare a better curriculum that supports Chinese students to study in the US [11]. 2. The AP learners' perceptions will help Chinese AP curriculum administrators, teachers, and designers attain a deeper understanding of AP students' experience and better prepare a curriculum that supports them to study in the US. 3. Owing to the amount of work and high tuition fees required to learn in the AP curriculum, the perspectives of AP undergraduates will be valuable in evaluating the determination of taking AP curriculum for future students and parents.

## II. LITERATURE REVIEW

Quantitative studies dominate most research on the impact of the AP curriculum on university preparation [12]. Those studies using statistical analysis narrowly focus on students' TOEFL for university admission. However, the impact of the Chinese AP curriculum on university preparation should extend beyond simple measures such as TOEFL scores

The research about Chinese students' perspectives on the AP curriculum is rare and new. As early research in this area, Xiao [13] investigates Chinese students' perspectives on the AP curriculum while still in Chinese AP high schools. This study used a questionnaire to explore 80 participants' perceptions of the AP curriculum in two AP international high schools in China. The

research reveals that most students choose to study Maths, Physics, and Chemistry rather than Humanity courses (i.e., Music History) because they think Maths, Physics, and Chemistry courses are helpful and accessible for them to study at universities in the US. The result also shows that the students feel the teaching and learning styles prepare them to adapt to the American academic learning environment. This study used a questionnaire to investigate a large dataset. However, only using a questionnaire, Xiao [13]'s result cannot offer richer detail about "how" and "why" students hold such perspectives, i.e., why students perceived English skills fostered in the AP curriculum prepared them in learning in the US universities [14].

Moreover, Bradley [15] also investigated Chinese students' perspectives on the AP curriculum while they were still in AP high schools. In contrast to Xiao [13]'s study, Bradley [15] conducted qualitative research with ten Chinese AP high school students from 9th grade through 12th grade to investigate their perceptions of the effectiveness of international university preparation courses. The students demonstrate that their high school preparation program is helpful in many respects, such as English level, advanced AP courses (Math, Physics, Chemistry, Economics), communication with international teachers. However, the students feel classes like dance and other extracurricular activities are ineffective in preparing them to study in the academic and intercultural learning environment in the US. This study gives an in-depth understanding of students' perspectives, such as "how" and "why" students feel being prepared. However, only using a qualitative research method might cause a potential problem of reliability, validity, and generalizability [14].

Zhou [16] went into greater depth in a mixed-methods study where she used a questionnaire and semi-structured interviews to explore the Chinese AP high school students' attitudes and satisfaction with the AP curriculum in preparing them for university studies in the US. There were 170 participants in the questionnaire, and 30 students participated in the follow-up interview. The research findings revealed that students felt prepared and be familiar with the university contents, because of the AP books, the class contents, and the teaching quality. The students also responded that international teachers offer a relaxed class discussion atmosphere, communication opportunity, and knowledge related to university studies in the US. However, when asked if they feel the high school program will prepare them for university studies in the US, the students do not have a clear idea about the AP curriculum's impact on their university preparation [16]. This result might be because the study was conducted when the students were still learning in AP high school, and they could not foresee the real deficiency or benefits from the AP curriculum until they studied in the US.

All three studies above only look at Chinese students' perspectives on how they felt about the AP curriculum when they were still studying in Chinese AP high schools. These results are useful in some ways, such as identifying

individual AP high school students' experiences and satisfaction that correlated to the academic aspect of university preparation. However, leaving aside the methodological limitations of these methods, these studies alone could not investigate whether AP learners feel eligible for university learning after they take the university studies [17]. Because when those students are still in Chinese AP high schools, they could not foresee whether they are prepared or not until they enroll in US universities. Therefore, a study that looks at AP undergraduates' perspectives on how prepared they feel after studying in the US becomes necessary. Therefore, this research aims to investigate first-year and second-year undergraduate students' experiences of the AP high school curriculum program they took in Mainland China before studying in US universities.

The research question is therefore developed:

*What are the perspectives of graduates of the AP high school on the curriculum in preparing them for learning in the US universities?*

### III. METHODOLOGY

#### A. Research Design

This study used a mixed explanatory method as it is appropriate for perception analysis. A questionnaire survey was used as its efficiency to elicit a large amount of attitudinal data [18]. Individual follow-up interviews were conducted to help further interpret the results of the quantitative data [19]. In this case, the follow-up interviews offered in-depth information to understand how the AP high school learning experiences affected their universities in the US. The methodology choice was also supported by Tashakkori and Teddlie [20], who demonstrate that qualitative methods are fundamental complements to quantitative methods. Therefore, the mixed method using a questionnaire and follow-up interviews was used to bring out the voices of AP undergraduates studying in US universities.

#### B. Research Setting and Participants

The AP high school named Sun School (pseudonym) and founded in 2004 is the first AP curriculum high school in Shenzhen. As an AP international high school officially recognized by the American College Board, it has had about a thousand graduates studied at overseas universities, mainly in the US during the past 15 years. I had been teaching English in this AP high school for about eight years and still has contact with some of the undergraduates. This relationship allowed me to contact the AP undergraduates and investigated their perspectives.

The participants were undergraduates in the US who graduated from the AP high school in China in either 2018 or 2019. This study focused only on the recent AP undergraduates for two reasons. First, the newly AP undergraduates still have relatively fresh memories about their AP high school learning experiences to give critical reflections on the AP curriculum. Second, the students who graduated from the AP curriculum high school in 2017 or 2016 might have received extra support in

universities, which would affect their reflections on the efficacy of their high school studies. In 2018, the AP high school had 26 graduates, 22 of them went to study in the US. The other four went to study in Australia, Canada, England, and Japan. In 2019, the AP high school had 20 graduates, 16 of them went to study in the US. The other four went to study in Australia (two), Canada, England. Overall, the total number of the target participants was 38, who went to study in US universities.

### C. Instruments and Data Collection

#### 1) Stage 1: Questionnaire

I adopted Smith's questionnaire on studying perceptions of students graduating from AP or IBDP high school curriculum [11]. Since Smith's questions focused on both the AP and IBDP curricula, I modified the items to focus on the AP curriculum. The questionnaire included demographic information in Section A which covered age, gender, the ranking of the university in the US [21], length of time in the US, major, etc. Section B included perceptions of AP high school curriculum for university preparation and success in studying in US universities. The questionnaire items were designed to measure three critical aspects related to AP learning experiences, which were academic learning (4 items), English language skills (3 items), and intercultural awareness (4 items). All the items were measured using a 5-point Likert scale from strongly disagree to strongly agree.

Before the questionnaire distribution, the questionnaire was piloted with six voluntary AP students who were graduated in 2017 from the AP high school and were studying in the US.

To facilitate data collection, this study constructed an online questionnaire using WenJuanXing [22], a popular survey tool in China. After construction of the questionnaire online, the link of the anonymous questionnaire was distributed via email to all 38 target participants.

Based on the questionnaire items, the individual interview questions were constructed in three aspects: academic learning skills (5 questions) English language skills (6 questions), and intercultural awareness (5 questions).

#### 2) Stage 2: Semi-structured individual interviews

The interview questions were piloted with two voluntary AP students who graduated in 2017 and 2016 and were studying in universities in the US then. After piloted the interview questions, I refined some interview questions to make them more straightforward for interviewees to understand.

Since participants were undergraduates studying in the US, the interviews were conducted through an online software ZHUMU (like Zoom) at the interviewees' convenience. The individual semi-structured interviews were conducted in English and began with a standard introduction about the goal of the study.

### D. Data Analysis

Among the 38 questionnaires distributed, 20 out of 22 (90.9%) AP undergraduates in 2018 returned the

questionnaire, and all were valid. 14 out of 16 (87.5%) AP undergraduates in 2019 returned the questionnaire, and 13 out of 14 were valid. One questionnaire response was eliminated because the participant gave the same response to all the items. The total response rate was 89.4%.

For the 33 valid questionnaires, the means and standard deviations of each item were calculated and reported using WenJuanXing (like Survey Monkey). I input all the data into SPSS for analyzing results and noticeable patterns.

I verbatim transcribed the individual interview recordings. All transcriptions with uncertain expressions highlighted were sent to individual interviewees to confirm the accuracy of the transcriptions. Before coding, I uploaded each transcription to MAXQDA 2020, a software program designed for computer-assisted qualitative data analysis and display common themes in academic research [23]. The three aspects of the questionnaire provided the central themes for analyzing the data from the interviews, namely: 1) university preparedness in academic courses and skills, 2) English skills, and 3) intercultural communication skills.

### E. Validity and Reliability

For the sake of the validity of the survey tool, the clarity and content of the questionnaire items and interview questions were checked and refined by three professional Applied Linguistics teachers at the University of Hong Kong. The refined version was sent to two teachers working in the AP high school to review the items and give recommendations to check whether the items covered the main learning aspects in the AP high school curriculum. The two AP teachers were satisfied with the items without giving further recommendations.

For the questionnaire, the response rate was 89.5%. The Cronbach's alpha was calculated,  $\alpha = 0.967$ , which means that the questionnaire data had high reliability.

For the individual interviews, I took a neutral posture when asking interview questions to be as objective as possible. The interviewees had time to think and answer the questions.

TABLE I. OVERALL SATISFACTION OF THE AP ACADEMIC LEARNING EXPERIENCE IN PREPARING STUDENTS' UNIVERSITY LEARNING

Questionnaire question (n=33)	Likert scale percentage				
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
1f. AP high school curriculum helped me to adapt to the pace of academic learning in the university	0%	6%	24%	55%	15%
4. The academic learning in AP high school greatly supports my current university learning.	9%	6%	18%	55%	12%

## IV. RESULTS AND DISCUSSION

A. *Students' Perspectives on the AP Curriculum in Developing Their Academic Learning Competence*

Overall satisfaction. Most students valued the AP academic learning experiences in preparing them for academic learning in the US. Table I shows that 67% of respondents thought the academic learning experiences in the AP high school supported their current university learning. This response, coupled with 70% of participants indicated that the AP curriculum helped them adapt to the learning pace at university, suggests students' positive perceptions towards the AP academic learning experiences for university preparation.

1) *University entry-level courses covered in AP high school courses*

First, students responded with positive attitudes towards academic courses learned in their high school from the questionnaires. When responding to the question on whether courses learned in the AP high school prepared their university learning in the US, 70% of the students thought that Science courses (e.g., Physics, Chemistry, Biology, etc.) were useful. 67% of the students expressed that Foreign Language courses (e.g., English, etc.) were helpful (detailed analysis in Section 4.2). 67% of the students valued the contribution of the Mathematics courses (see Table II). The reasons for the positive attitudes towards Mathematics, and Science courses, identified from interviewees' responses, were technical vocabularies and formula learned in the AP high school.

7 out of 9 interviewees stated that their feeling ease of understanding Mathematics, Physics, and Science classes in the US universities was related to technical vocabularies or formulas learned in the AP high school. One interviewee commented:

More than half of the AP Biology was composed of technical vocabularies related to how the human body systems work and how humans acquire nutrition. So, when I start to learn Anatomy at university, I've already known more about Anatomy than others. So, I get an A+ in Anatomy at university (Interviewee 3-- 2019).

TABLE II. PREPARATION OF AP HIGH SCHOOL COURSES FOR US UNIVERSITY LEARNING

Questionnaire question (n=33)	Likert scale percentage				
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
The following courses/activities in the AP high school prepared me for my university learning in the US.					
2a Foreign Language courses (e.g. English, etc.)	0%	9%	24%	40%	27%
	9%			67%	
2b Science classes (e.g., Physics, Chemistry, Biology, etc.)	6%	6%	18%	49%	21%
	12%			70%	
2d Mathematics	6%	3%	24%	33%	34%
	9%			67%	

Students were taught entry-level university contents such as technical vocabularies or formulas in the AP high

school, and that might build up their understanding of relevant courses at universities. This finding reinforces Conley [24]'s finding that learning entry-level university courses in high school facilitates students to master extended academic knowledge for university study. The result also echoes Krashen [25]'s Input Hypothesis that with the comprehensible input of technical vocabularies and formulas in AP high school, students understand the terms in relevant classes in the US universities.

2) *Insufficient academic preparation offered by clubs and art courses*

While students felt satisfied with entry-level university contents such as technical vocabularies or formulas taught in the Mathematics and Science classes in the AP high school, they felt dissatisfied with the Clubs and Art courses offered in the AP high school.

When responding to the question on whether the AP high school courses/activities prepared them for their university learning in the US, only 39% of the students thought Art classes (e.g., Music, Drawing, etc.) were helpful and 24% disagreed with this. Only 45% of the students thought Clubs activities offered in the AP high school prepared them for university studies, while there were 15% of them strongly disagreed in both Arts classes and clubs (see Table III). The quantitative data shows that AP students did not value AP Clubs and Art classes in preparing them with their current university studies in the US. The interview data revealed that reasons for students' negative perceptions were deficiency in improving academic performance and lack of US culture-related clubs.

Students' lack of interest to involve in Clubs or Art classes in the AP high school as Clubs or Art classes could not improve their academic scores in the US universities, and this might be the reason for students' dissatisfaction with the club activities or art classes. This finding is in line with Bradley [15]'s finding that Chinese students do not value extra-curricular activities such as clubs in the AP curriculum because Chinese students are result-oriented in academic learning. Also, this finding confirms Lee, *et al.* [26]'s results that because of the result-oriented culture in China, the non-academic aspects in Chinese international schools often faded to the background and became under-prioritized by students.

TABLE III. PREPARATION OF THE AP HIGH SCHOOL CLUBS ACTIVITIES AND ART COURSES FOR UNIVERSITY LEARNING IN THE US

Questionnaire question (n=33)	Likert scale percentage				
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
The following courses/activities in the AP high school prepared me for my university learning in the US.					
(e) Art classes (e.g., Music, Drawing, etc.)	15%	9%	36%	27%	12%
	24%			39%	
(f) Various clubs (e.g., Drama, Dance, 3D etc.)	15%	6%	33%	33%	12%
	21%			45%	

B. *Students' Perspectives on the AP Curriculum in Developing Their English Language Skills*

Overall satisfaction. Most students valued the AP academic learning experiences in preparing them for

English skills in the US. As Table IV shows, the students were satisfied with English language skills learned in the AP high school. 76% of respondents thought the English learning experiences in the AP high school helped them to use English in universities. This finding is consistent with the proposition that students generally hold a positive attitude towards the improvement of English competency in Chinese AP high school [16]. Reasons for students' satisfaction are presented and discussed in the following four sections.

TABLE IV. OVERALL SATISFACTION OF THE AP ENGLISH LEARNING EXPERIENCES IN PREPARING STUDENTS' UNIVERSITY LEARNING

Questionnaire question (n=33)	Likert scale percentage				
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
7. My English learning experiences in AP high school help me to use English in the university.	3%	3%		58%	18%
	6%		18%	76%	

### 1) Satisfaction about academic writing ability but a deficiency in paraphrasing skills

Satisfied with academic writing skills was highlighted by many students in both the questionnaire and the interview data. Table V shows that 63% of the interviewees felt their English learning experiences in the high school equipped them to write essays at university. The reasons for the satisfaction were identified from interviewees' responses, which included the acquisition of referencing skills and extensive writing output.

TABLE V. PREPARATION OF ENGLISH WRITING SKILLS IN THE AP HIGH SCHOOL FOR UNIVERSITY LEARNING IN THE US

Questionnaire question (n=33)	Likert scale percentage				
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
5b. The AP high school academic English learning experiences helped my studies at university because I feel equipped to write essays.	0%	6%		48%	15%
	6%		30%	63%	

The students' writing skills were acquired because they learned the referencing skills in the AP high school curriculum. The data above is consistent with the claim that the ability to perform the right citation format in high school has an extended value in university writing [9]. The findings are also in line with the results of Combs [12] that the writing skills of using quotations and citing sources appropriately in the text are critical. Students need to use those skills all the time, and the skills are important to their academic study at university.

In addition to referencing skills mentioned above, students also expressed that their satisfaction with academic writing ability came from the extensive writing exercises in the AP curriculum.

Students' emphasis on writing output is supported by Krashen [25]'s Output Hypothesis. According to Krashen

[25]: second language learners can efficiently acquire the target language only if the output is enough.

### 2) Fluency in speaking in the classroom

First, self-expression skills developed from the AP high school curriculum were identified from both the questionnaire and the interview data. Table VI shows that 67% of the participants felt that their AP high school English learning experiences helped them to express their thoughts easily and clearly in the US universities. 7 out of 9 interviewees pointed out that the speaking practice, such as group discussion in the high school, developed their self-expression skills.

TABLE VI. PREPARATION OF SELF-EXPRESSION SKILLS IN THE AP HIGH SCHOOL FOR UNIVERSITY LEARNING IN THE US

Questionnaire question (n=33)	Likert scale percentage				
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
5d. The AP high school academic English learning experiences helped my studies at university because I can express my thoughts easily and clearly in class.	0%	3%		49%	18%
	3%		30%	67%	

Students were encouraged to participate in group discussions and share their ideas with others in the AP high school, and that built up their self-expression skills at universities. The data above is consistent with the findings of Larsen-Freeman [27] that the classroom interaction such as group discussion offering authentic speaking practice in high schools helps students understand how to express themselves at university.

### 3) Clear understanding in English lectures

The third type of English skills students stated was the listening skills. Satisfied with listening skills was highlighted by many students in both the questionnaire and the interview data.

TABLE VII. PREPARATION OF ENGLISH LISTENING SKILLS IN THE AP HIGH SCHOOL FOR UNIVERSITY LEARNING IN THE US

Questionnaire question (n=33)	Likert scale percentage				
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
5e. The AP high school academic English learning experiences helped my studies at university because I understand lectures easily.	0%	0%		43%	30%
	0%		27%	73%	

Table VII shows that 73% of the students thought that the AP high school academic English learning experiences helped their understanding of lectures at university in the US. With no participants disagreed with this questionnaire item, students seemed to highly appreciate the listening skills fostered in the AP high school in preparing their university studies in the US. The reasons for the high satisfaction were revealed from the

interviewees' responses, which included an understanding of classroom instructions and familiarity with English speech rate.

It was found that the intensive English instructions in the AP high school could develop students' capacity to understand class instructions and respond appropriately in class in the US. The finding is consistent with Smith [11]'s study. He points out that compared to students who study within a national curriculum, students who take the AP curriculum could easily follow the class instructions without confusion at university and pay more attention to class content.

#### 4) Efficiency in academic reading

##### a) Overall satisfaction

The students were satisfied with the academic reading skills learned in the AP high school. When asked about their academic reading skills, 64% of the students felt that the AP high school academic English learning experiences helped their reading competence at university in the US (see Table VIII). The reasons for students' positive perceptions were identified from the interview data, which included speed reading skills and reading to write skills.

##### b) Speed reading skills

Firstly, the academic writing courses in the AP curriculum taught students speed reading skills. 7 out of 9 students explained that they read fast at university in the US as the AP curriculum taught them rhetorical reading skills and required them to read intensively.

Students developed rhetorical reading skills and read intensively in the AP high school, and that built up their speed-reading skills at universities. The data above is consistent with the claim that speed reading ability fostered in high school is important to students' success at university as professors require students to read fast in classes [12].

TABLE VIII. PREPARATION OF THE ENGLISH READING SKILLS FOSTERED FROM THE AP HIGH SCHOOL FOR UNIVERSITY LEARNING IN THE US

Questionnaire question (n=33)	Likert scale percentage				
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
5e. The AP high school academic English learning experiences helped my studies at university because I feel equipped for academic reading.	0%	3%		48%	16%
	3%		33%	64%	

##### c) Reading to write skills

The second reason for students' satisfaction with academic reading skills is the reading to write skills fostered in the AP high school because the skills learned facilitate their academic learning at university. Students were encouraged to read and analyze academic articles before they wrote articles in the AP curriculum, and that built up their reading to write skills at universities. Since ideas cannot be separated from language, analyzing how the articles organize ideas may help students become

more accurate, more self-aware, and more effective in academic writing at university [28].

#### C. Students' Perspectives on the AP Curriculum in Building Their Intercultural Communicative Competence

Most students were satisfied with the intercultural communicative competence they built from the AP curriculum. Table IX shows that 64% of respondents thought the intercultural communicative competence enhanced in AP high school greatly prepared them to adapt to the intercultural learning environment for studying in the US universities. However, 9% of students disagreed with this item. Reasons for the satisfaction were identified from students' responses, which were a) awareness of the US verbal communication culture, b) familiarity with a help-seeking pattern, and c) pragmatic feedback about sensitive cultural expressions.

TABLE IX. OVERALL SATISFACTION OF THE AP INTERCULTURAL LEARNING EXPERIENCES IN PREPARING STUDENTS' UNIVERSITY LEARNING

Questionnaire question (n=33)	Likert scale percentage				
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
11. The intercultural communicative competence gained in AP high school greatly prepared me to adapt to the intercultural learning environment in the university.	3%	6%		55%	9%
	9%		27%	64%	

The first reason identified for students' intercultural communicative satisfaction was their intercultural awareness of the US verbal communication built in the AP high school. Both the questionnaire and the interview data reveal that students were satisfied that intercultural communicative competence developed in the AP high school helped them in interacting with instructors in the US. Reasons for students' positive feelings about interaction with instructors were identified from the interview data, which included a) awareness of the US verbal communication culture, b) familiarity with a help-seeking pattern, and c) pragmatic feedback about sensitive cultural expressions.

According to Huang [6]'s finding, Chinese cultures highly value silence, which is communication avoidance while western cultures tend to value verbal communication highly. The AP intercultural communication experience developed students' intercultural understanding of Americans' appreciation of verbal communication and encouraged them to communicate with instructors at university.

#### V. CONCLUSION

The opinions voiced by the students in this study revealed that many Chinese AP high school curriculum graduates had a smooth transition to university academic

learning as students built a solid foundation in the Math, Science, and Language courses for university study in the US. However, participants were disappointed with AP Clubs or Art courses because of deficiency in improving academic performance and lack of the US culture-related clubs. Moreover, the students considered classroom discussions, group work, and presentations in the AP curriculum helped them to participate in the classroom activities in the US.

Students felt the English learning experiences in the Chinese AP high school helped them to build English language skills. The feeling of being comfortable communicating with and seeking help from universities is unique to this study compared to the research on university preparation.

From the major findings, three implications are generated. First, by learning similar academic content and practicing English language skills, the AP learners are prepared to have a solid foundation in Math and Science courses and language skills in university studies in the US. The Chinese AP high schools should continue to offer a rigorous AP curriculum and English learning environment to prepare future students. This study reinforces Zhou [16]'s study which stresses the value of the AP high school curriculum in fostering students' Science, Math courses, critical thinking, and language skills.

The second significant implication of this research is that it helps AP high school administrators and teachers could offer US culture-related clubs like Music clubs, Soccer clubs, or Baseball clubs. Those clubs can help students participate in the US campus events after they go to study in the US universities.

The third implication is that to reduce the writing obstacle, the AP international high schools need to provide writing instructions about paraphrasing skills to help students feel at ease when paraphrasing ideas.

## VI. LIMITATIONS

While this study has contributed to the understanding of the Chinese AP high school curriculum in preparing Chinese students to study in the US, there are a couple of limitations associated with the depth of the analysis and the study's sampling. As all participants came from one AP high school program only, a limitation of this study was its small sample scope. Due to the small sample scope, one must be cautious about generalizing the major findings to a broader context.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

## AUTHOR CONTRIBUTIONS

Please state each author's contribution to this work, it can be up to several sentences long and should briefly describe the tasks of individual authors. e.g., AB conducted the research; CD analyzed the data; AB wrote the paper; ...; all authors had approved the final version.

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