Global-readiness and intercultural development: Chinese STEM students studying abroad

Tongle Sun
Department of English
The Chinese University of Hong Kong
Outline of the presentation

1. Background of the study
2. Literature review
3. Research design and methodology
4. Key findings
5. Brief summary
6. Implications of the study
Background of the study

• Short-term international exchange programs are widely promoted in Hong Kong universities in line with the internationalization aims set by the University Grants Committee (UGC) (2010).

• A study abroad experience alone does not automatically translate into a broadened sense of self, enhanced second language (L2) proficiency, or expanded intercultural mindset (e.g., Jackson, 2010, 2018; Kinginger, 2011, 2013; Vande Berg et al., 2012).

• Multiple factors may lead to different trajectories with regard to identity (re)construction, L2 gains, and intercultural development (Benson et al., 2013; Jackson, 2013, 2016, 2017).
Literature review

• Post-structuralist notions of identity (e.g., Block, 2007; Norton, 2000, 2013)

• Benson et al.’s (2012, 2013) L2 identity development model


• Study abroad as a context for L2 identity (re)construction and socialization (e.g., Jackson, 2016, 2017, 2018; Kinginger, 2009)

• Insufficient investigations of Chinese STEM (Science, Technology, Engineering, and Mathematics) study abroad students
Research design and methodology

• A multiple case studies design with longitudinal, mixed method components (Creswell, 2013; Duff, 2008; Richards, 2011)

• Instrumentation
  ✓ international exchange questionnaire surveys
  ✓ semi-structured interview protocols
  ✓ monthly email prompts
  ✓ multimodal entries
  ✓ research journal

• Data collection phases: pre-sojourn, during the sojourn, immediate post-sojourn, and six-month post-sojourn

• Triangulation of data of multiple sources (Yin, 2014)
Guiding questions

1. What are the STEM participants’ L2 identities prior to taking part in a semester-long international exchange program, during the sojourn, immediately after the sojourn, and six-months post-sojourn?

2. What are the internal and external factors that appear to influence the STEM participants’ L2 identities and socialization over time and result in different sojourn experiences and outcomes?

3. What are the implications of the research findings for the facilitation of pre-departure preparation, sojourn support, and reentry debriefings of international exchange students, especially STEM majors?
Data analysis and processing

**NVivo 11 database set-up**

**Basic descriptive analysis of quantitative data**

**Qualitative data**
- Interviews transcribed, translated, member checked

**All data uploaded to NVivo 11 Pro**

**Original data revisit**

**Visual elicitation**
- Barkhuizen et al., 2014; Riessman, 2008

**Triangulation**
- Duff, 2008; Yin, 2014

**Open coding**
- Bazeley & Jackson, 2013; Creswell, 2013

**Thematic analysis**
- Dörnyei, 2007; Riessman, 2008
# Profile of case participants

<table>
<thead>
<tr>
<th>No.</th>
<th>Gender</th>
<th>Yr of study while abroad</th>
<th>Faculty</th>
<th>Major code</th>
<th>No. of years living in HK</th>
<th>Host country</th>
<th>Host University</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F</td>
<td>3</td>
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<td>ELEG</td>
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<td>3</td>
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<td>F</td>
<td>3</td>
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<td>2</td>
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Pre-sojourn findings
<table>
<thead>
<tr>
<th>Aim</th>
<th>Rating</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>To travel and see many new places</td>
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<td>0.52</td>
</tr>
<tr>
<td>To enhance my proficiency in a second or foreign language</td>
<td>4.50</td>
<td>0.54</td>
</tr>
<tr>
<td>To experience life in another culture</td>
<td>4.50</td>
<td>0.76</td>
</tr>
<tr>
<td>To increase my ability to communicate in the language used in the host community</td>
<td>4.38</td>
<td>0.74</td>
</tr>
<tr>
<td>To broaden myself</td>
<td>4.38</td>
<td>1.06</td>
</tr>
<tr>
<td>To increase my ability to interact effectively with people from diverse cultural backgrounds</td>
<td>4.25</td>
<td>0.71</td>
</tr>
<tr>
<td>To make friends with people from other cultural backgrounds</td>
<td>4.25</td>
<td>1.04</td>
</tr>
<tr>
<td>To increase my understanding of global/ international issues and events</td>
<td>4.25</td>
<td>1.04</td>
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<tr>
<td>To gain valuable experience for my future career</td>
<td>4.25</td>
<td>1.04</td>
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<tr>
<td>To increase my ability to cope with/ adapt to new situations</td>
<td>4.25</td>
<td>1.17</td>
</tr>
<tr>
<td>To enhance knowledge and skills in my discipline (major)</td>
<td>4.13</td>
<td>0.84</td>
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Sojourn aims (2 of 3)

(1 = not at all important to 5 = extremely important)

To increase my understanding and appreciation of OTHER peoples/cultures 4.12 1.13
To challenge myself intellectually/academically 4.12 1.13
To increase my level of comfort with people different from myself 4.12 1.13
To add diversity to my academic programme (e.g. take courses not offered at CUHK) 4.00 0.93
To develop my ability to look at problems/situations from diff. perspectives 4.00 1.07
To become more mature and independent 4.00 1.07
To improve my interpersonal skills (ability to relate to others) 4.00 1.07
To have fun 3.88 1.13
To become a more cosmopolitan, global citizen 3.88 1.25
To gain exposure to a second/foreign language in daily life 3.75 0.46
Sojourn aims (3 of 3)
(1 = not at all important to 5 = extremely important)

To become more self-confident 3.63 1.19
To improve my practical academic skills (e.g. writing essays, doing project work, giving oral presentations) 3.62 1.06
To enhance my critical thinking skills 3.50 0.93
To enhance my résumé and increase job opportunities 3.38 1.19
To increase my understanding of MY OWN culture, identity, and values 3.25 1.28
To enhance my leadership skills 2.75 0.71

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## Sojourn concerns

<table>
<thead>
<tr>
<th>Anticipated challenges before sojourn</th>
<th>f</th>
<th>%</th>
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<tr>
<td>Coping with cultural shock</td>
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<td>37.5</td>
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<tr>
<td>Racial discrimination</td>
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<td>37.5</td>
</tr>
<tr>
<td>Making the best use of my time</td>
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<td>37.5</td>
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<tr>
<td>Unpredictable situations</td>
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<td>37.5</td>
</tr>
<tr>
<td>Making friends across cultures</td>
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<td>25.0</td>
</tr>
<tr>
<td>Heavy workload</td>
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<td>12.5</td>
</tr>
<tr>
<td>Language barrier</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>Homesickness</td>
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<td>12.5</td>
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<tr>
<td>Personal safety and security</td>
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<td>12.5</td>
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<tr>
<td>Accommodation problems</td>
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<td>12.5</td>
</tr>
<tr>
<td>Interacting with people from other cultures</td>
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<td>12.5</td>
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<tr>
<td>Managing finances</td>
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<td>12.5</td>
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<tr>
<td>Participating in class</td>
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<td>0</td>
</tr>
<tr>
<td>Difficult course at the host university</td>
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Host language proficiency (English)

<table>
<thead>
<tr>
<th></th>
<th>Excellent (5)</th>
<th>Very good (4)</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
<th>f</th>
<th>%</th>
<th>f</th>
<th>%</th>
<th>f</th>
<th>%</th>
<th>f</th>
<th>%</th>
<th>M</th>
<th>SD</th>
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<tbody>
<tr>
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<td>25.0</td>
<td>4</td>
<td>50.0</td>
<td>2</td>
<td>25.0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>4.00</td>
<td>0.76</td>
<td></td>
<td></td>
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<tr>
<td>Speaking</td>
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<td>0</td>
<td>4</td>
<td>50.0</td>
<td>3</td>
<td>37.5</td>
<td>1</td>
<td>12.5</td>
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<td>0</td>
<td>3.38</td>
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<td></td>
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<tr>
<td>Reading</td>
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<td>25.0</td>
<td>4</td>
<td>50.0</td>
<td>2</td>
<td>25.0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>4.00</td>
<td>0.76</td>
<td></td>
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<tr>
<td>Writing</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>25.0</td>
<td>6</td>
<td>75.0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>3.25</td>
<td>0.46</td>
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<tr>
<td>Overall</td>
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<td>37.5</td>
<td>4</td>
<td>50.0</td>
<td>1</td>
<td>12.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3.25</td>
<td>0.71</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Average TOEFL score: 101.6/120;
- Average IELTS score: 7.8/9;
- Average years of learning English: 12.7 years
Previous international experiences & social network before sojourn

Travel abroad:
- 7 (87.5%) yes (brief visits to Asian countries)
- 1 (12.5%) no

Education abroad:
- 1 (12.5%) yes (e.g., one-month summer programme)
- 7 (87.5%) no

- All respondents (100%) spent most of their time with Mainland students on their Hong Kong campus.
- While abroad, 4 (50%) expected to spend most of their time with local students, 2 (25%) with international students from other cultures, and 2 (25%) on their own.
Perceived intercultural competence and global-mindedness

• 3 (37.5%) rated their ability to communicate appropriately and effectively with people from another culture as ‘good’, 3 (37.5%) as ‘very good’, and 2 (25.0%) as only ‘fair’; all respondents perceived themselves to be ‘open to other cultures’ and indicated the desire to try new food/activities while abroad;

• 4 (50%) rated themselves as ‘global-minded’, 2 (25%) as ‘somewhat global-minded’, and 1 (12.5%) as ‘not global-minded’; only 1 (12.5%) perceived herself as ‘very global-minded’;

• None of the participants had taken any courses in intercultural/cross-cultural communication and appeared to have differing degrees of self-efficacy and self-confidence with regard to their intercultural communication skills.
Post-sojourn findings
Greatest sojournn challenges

<table>
<thead>
<tr>
<th>Most challenging aspects abroad</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time management</td>
<td>4</td>
<td>57.1</td>
</tr>
<tr>
<td>Unpredictable situations</td>
<td>4</td>
<td>57.1</td>
</tr>
<tr>
<td>Language barrier</td>
<td>3</td>
<td>42.9</td>
</tr>
<tr>
<td>Personal safety and security</td>
<td>3</td>
<td>42.9</td>
</tr>
<tr>
<td>Coping with cultural shock</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Participating in class (e.g., discussions)</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Making friends across cultures</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Heavy workload</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Accommodation problems</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Intercultural interactions</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Homesickness</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Managing finances</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Difficult course at the host university</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Racial discrimination</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Gains from sojourn (1 of 3)
(1 = strongly disagree to 5 = strongly agree)

enabled me to travel and see many new places 4.71 0.49
helped me become more mature and independent 4.57 0.54
enabled me to experience life in another culture 4.43 0.54
increased my ability to communicate in the language used in the host community 4.43 0.54
enabled me to make friends with people from other cultural backgrounds 4.43 0.54
enhanced my knowledge and skills in my discipline (major and/or minor) 4.43 0.54
increased my ability to cope with/adapt to new situations 4.43 0.54
increased my understanding and appreciation of OTHER peoples and cultures 4.29 0.49
improved my practical academic skills (e.g., writing essays, doing project work, giving oral presentations) 4.29 0.49
enabled me to gain exposure to a second/foreign language in daily life 4.29 0.49
provided me with valuable experience for my future career 4.29 0.95
Gains from sojourn (2 of 3)
(1 = strongly disagree to 5 = strongly agree)

increased my ability to interact effectively with people from diverse cultural backgrounds 4.14 0.38
increased my understanding of global/international issues and events 4.14 0.38
increased my level of comfort with people different from myself 4.14 0.38
helped me become more self-confident 4.14 0.38
enhanced my intercultural sensitivity (helped me become more open-minded) 4.14 0.38
enhanced my proficiency in a second or foreign language 4.14 0.69
developed my ability to look at problems/situations from different perspectives 4.00 0.58
increased my desire to travel/work/study abroad in the future 4.00 0.58
increased my understanding of MY OWN culture, identity, and values 4.00 0.58
improved my interpersonal skills (ability to relate to others) 4.00 0.82
helped me become a more cosmopolitan, global citizen 4.00 0.82
Gains from sojourn (3 of 3)
(1 = strongly disagree to 5 = strongly agree)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Standard Deviation</th>
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<tbody>
<tr>
<td>was fun</td>
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<td>1.00</td>
</tr>
<tr>
<td>increased my appreciation for the study of foreign languages</td>
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</tr>
<tr>
<td>enhanced my résumé and increased job opportunities</td>
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<td>0.77</td>
</tr>
<tr>
<td>challenged me intellectually/ academically</td>
<td>3.71</td>
<td>0.95</td>
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<tr>
<td>enhanced my critical thinking skills</td>
<td>3.57</td>
<td>0.79</td>
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<tr>
<td>added diversity to my academic programme (e.g., take courses not offered at CUHK)</td>
<td>3.57</td>
<td>0.98</td>
</tr>
<tr>
<td>helped me develop leadership skills</td>
<td>2.86</td>
<td>0.90</td>
</tr>
</tbody>
</table>
Most important gains that could not have been achieved at home university

- Exposure to a second language in daily life
- Enhanced intercultural communication skills
- More self-confidence, maturity, and independence
- Increased understanding of OTHER cultures
- Firsthand experience of life in another culture
- Exposure to courses with an international/global focus
- Increased understanding of home cultures

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Host language proficiency after sojourn

<table>
<thead>
<tr>
<th></th>
<th>Excellent (5)</th>
<th>Very good (4)</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Poor (1)</th>
<th>f</th>
<th>%</th>
<th>f</th>
<th>%</th>
<th>f</th>
<th>%</th>
<th>f</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Listening</strong></td>
<td>2 28.6</td>
<td>1 14.3</td>
<td>3 42.9</td>
<td>1 14.3</td>
<td>0 0</td>
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<td>28.6</td>
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<td></td>
<td>3.57</td>
<td>1.13</td>
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<tr>
<td><strong>Speaking</strong></td>
<td>1 14.3</td>
<td>1 14.3</td>
<td>2 28.6</td>
<td>3 42.9</td>
<td>0 0</td>
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<td>3.00</td>
<td>1.16</td>
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<td><strong>Reading</strong></td>
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<td>2 28.6</td>
<td>2 28.6</td>
<td>1 14.3</td>
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<td>2</td>
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<td>3.71</td>
<td>1.11</td>
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<tr>
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<td>3 42.9</td>
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<td>3</td>
<td>42.9</td>
<td>1</td>
<td>14.3</td>
<td>0</td>
<td>0</td>
<td>3.29</td>
<td>0.76</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>1 14.3</td>
<td>2 28.6</td>
<td>4 57.1</td>
<td>0 0</td>
<td>0 0</td>
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<td>0</td>
<td></td>
<td></td>
<td>3.57</td>
<td>0.79</td>
</tr>
</tbody>
</table>

(Pre-sojourn overall proficiency: M = 3.25; SD = 0.71)
Intercultural engagement during sojourn

• While abroad, 2 (28.6%) spent most of their time with students from their own ethnic group (e.g., Chinese); 2 (28.6%) with international students from other cultures; 2 (28.6%) on their own; only 1 (14.3%) spent most of his time with local students from the host culture.

(In the pre-sojourn stage, none of the participants had expected to spend most of their time with co-nationals).

• 2 (28.6%) participated in five (or more) extracurricular activities at the host university with mostly local students from the host culture; 3 (42.9%) participated in three extracurricular activities that involved mostly Chinese students; 2 (28.6%) did not participate in any extracurricular activities at the host university.
Perceived intercultural competence and global-mindedness

• 3 (42.9%) rated their ability to communicate appropriately and effectively with people from another culture as ‘good’, 2 (28.6%) as ‘very good’, 1 (14.3%) as ‘excellent’, and 1 (14.3%) as only ‘fair’;

• 5 (71.4%) rated their openness to other cultures as ‘very good’, 1 (14.3%) as excellent, and one (14.3%) as only ‘fair’;

• Compared to the pre-sojourn stage where half of the respondents rated themselves as ‘global-minded’, in the immediate post-sojourn phase, 4 (57.1%) rated themselves as ‘somewhat global-minded’, 2 (28.6%) as ‘global-minded’, and 1 (14.3%) as ‘very global-minded’.
Perceived value of sojourn

- Academic life
- Personal life
- Future career

somewhat valuable

very valuable

not valuable

valuable

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Brief summary of key findings

• The participants had different linguistic, academic, cultural, and personal goals for the sojourn, which contributed to different sojourn experiences in the host environment.

• The participants revealed shifting attitudes/emotions towards the host language and culture, and perceived themselves to have varying degrees of intercultural communicative competence at different stages of the study.

• Internal factors (e.g., sojourn goals, language/cultural attitudes, agency, personality) and environmental factors (e.g., exposure to the host language/culture, host receptivity) influenced sojourn learning and resulted in divergent sojourn outcomes.
Implications of the study

• Prior to the sojourn, workshops or online modules that focus on goal setting and the fostering of an intercultural mindset may be necessary for a smooth transition in the host environment.

• Online courses that are designed to support successful integration/socialization can be offered while the sojourners are in the host setting (Jackson, 2018).

• Upon reentry, intercultural transition courses (Jackson, 2017) can be offered to help study abroad returnees make sense of their intercultural/international learning experience.

• Mentorship schemes and consultations with advisors could provide support to student sojourners throughout the study abroad cycle.
References


References


References


Thank you for your kind attention!

Any suggestions and comments are welcome!

tonglesuncuhk@gmail.com
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