# Fostering educational innovations in the era of global digital futures with students as partners (SaP) - Agency of university students in the Asian context

Peter Lau[A]

Kevin Chan[B]

Anna Kwan[C]

Beatrice Chu[D]

Paul Lam[E]

Theresa Kwong[F]

Crusher Wong[G]

King Chong[H]

A    The University of Hong Kong

B    The Hong Kong Polytechnic University

C    Higher Education Research & Development Society of Australasia (HERDSA) Hong Kong Branch

D    The Hong Kong University of Science and Technology

E    The Chinese University of Hong Kong

F    Hong Kong Baptist University

G    Hong Kong Baptist University

H    Hong Kong Baptist University

## Abstract

Most studies on Students as Partners (SaP) in the literature have been found to be western-centric, highlighting a significant lack of SaP studies in Asian countries. Higher education in Hong Kong is still developing its SaP practice. This article aims to address this gap by examining how student partnership fosters education innovation in the era of global digital futures, particularly through the *Redesigning Student Learning Experience in Higher Education* (RSLEIHE) project scheme in the recent years in Hong Kong.

Believing that meaningful and impactful student partnership relies on the student agency developed during the projects, this study discusses factors facilitating student agency development through SaP projects of the RSLEIHE scheme in an age of digital futures. The two-stage research design (including student responses on a quantitative survey and a ranking task) allowed for a comprehensive exploration of student perception of student agency levels among a diverse cohort of participants from local universities in Hong Kong.

The findings revealed interesting patterns and variations in student agency across different demographic factors such as gender, level of study and academic disciplines. Notably, graduate students exhibited higher levels of agency compared with undergraduate students, while female students perceived significantly more peer support. Overall, this study emphasises the significance of support systems, trust-building, and opportunities for students to make choices in shaping the student experience.

## Introduction

During and after the pandemic, the rapid transition to online and hybrid learning has created opportunities for developing possible usages of technologies in education. The enormous discussions on the role of technologies in shaping future education to prepare students better for their future have led to real innovation in education. A lesson learned at the time is that such a global challenge requires collaborative efforts among the major stakeholders: teachers and students.

The *Redesigning Student Learning Experience in Higher Education* (RSLEIHE), a Students as Partners (SaP) scheme spearheaded by The Higher Education Research and Development Society of Australasia (HERDSA) Hong Kong Branch in 2017, stands as a distinguished endeavour aimed at fostering student-centric, student-driven, and forward-looking learning and teaching paradigms to captivate student engagement and bolster their capacities in Hong Kong higher education. Over the years, 50-plus projects under the RSLEIHE scheme involved using technologies to enhance teaching and learning. Particularly in 2021, all 16 projects were fully conducted online due to the COVID-19 pandemic. In terms of project nature, around 38% involved providing online learning platforms to support peer student learning, 25% involved online teaching to deepen and widen learning, 25% involved initiating digital interventions in a course such as using gamification, and 13% involved investigating and improving online teaching (Kwan et al., 2022).

In addition to the group projects, the scheme encompasses project development, awards, a symposium, and a publication showcasing the group project outcomes. For example, in 2021, with *Learning in the era of "New Normal": Post-Pandemic Learning* as the main theme, the RSLEIHE scheme recruitment opened to all teachers and students in local higher education institutions and was promoted through their teaching and learning centres. Adhering to a student-teacher collaborative model that requires each project team to include a minimum of two students and one academic or professional staff member, students were encouraged to voice out their learning needs and co-create teaching and learning projects with their teachers. The projects targeted to engage and empower students and directly meet their future needs in one of the five subthemes, including (1) Pedagogical Change during the Pandemic, (2) Alternative Assessment, (3) Holistic Competencies, (4) Educational Innovations, and (5) Digital Learning Strategies. These themes highlight the significant challenges in the era of post-pandemic learning, which emphasises the transition to hybrid learning environments for both students and teachers with digital learning and teaching strategies. Twenty-two proposals were reviewed by EdTech experts, education developers/research and educational leaders. Seventeen projects were selected and received feedback from the review panel for further project development. Eventually, sixteen project teams completed execution, implementation and evaluation by May 2021 and reported in the online RSLEIHE symposium in June 2021. As a follow-up engagement, a collaborative publication on the completed projects were edited and published on the HERDSA HK website (https://herdsahk.edublogs.org) in the next year.

Organised biennially, the RSLEIHE scheme consisted of three distinguished awards and three to six merit awards, underscoring a commitment to recognising excellence. With the participation of local universities in Hong Kong (including the Chinese University of Hong Kong, City University of Hong Kong, Hong Kong Baptist University, the Education University of Hong Kong, Lingnan University, Hong Kong Polytechnic University, the Hong Kong University of Science and Technology, the University of Hong Kong, Hong Kong Metropolitan University, and Hong Kong Institute of Vocational Education), the scheme has successfully culminated in over 50 SaP projects. Over 700 individuals partook in the symposia, leading to four online publications. The outcomes of the scheme showed that, despite constraints in the education system such as power relations, SaP projects created opportunities for students to discuss pedagogies with teachers and to develop student agency. The transformative power of such initiatives is demonstrated by occasions when students can make choices and take actions that affect their learning experience. This capacity enriches their educational journey and nurtures a profound sense of agency and ownership in their academic pursuits. This sense of empowerment extends beyond the classroom, equipping students with the skills and mindset needed to navigate the realms of academia, and the workplace and positively impact society. By fostering independence and ownership, these initiatives lay a strong foundation for students to excel in their future endeavours and contribute meaningfully to various aspects of their lives and communities. It showcased student agency in SaP projects from multiple perspectives.

Most studies on SaP in the literature were found to focus on Anglophone countries, and there is currently a dearth of SaP studies in other regions (Dai et al., 2024). Higher education in Asia is still developing its SaP practice (Liang & Matthews, 2020). Confucianism is generally believed to exert significant cultural influence on the educational systems of Asian countries. The Confucian cultural norms of revering teachers and embodying humility and politeness promote the notion that students should be instilled with respect, attentiveness, and obedience from a young age, rather than fostering a spirit of inquiry. This creates a power imbalance between teachers and students, with the teacher exercising authority over decision-making, while students stay passive and compliant in a rigid school setting (Liang & Matthews, 2020). This cultural context poses a hurdle in implementing SaP, which emphasises student-centredness in Asia universities.

A group of Hong Kong scholars, Zou et al. (2023), though did not find a prominent influence of Confucian background in three SaP projects in a Hong Kong university. They suggested that the cultural factors (such as honouring respect and obedience to authorities) might affect students approaching student-staff partnership because students cannot "immediately assume a partner's role" (p. 15) at the project's initial stage. Such uncertainty and hesitation might indicate limited opportunities to develop student agency. Yang et al. (2023) also assert that student agency is not taken for granted in Asian universities. Moreover, studies on the factors that support student agency development in

SaP projects, particularly in the Asia context are few and far between. It is the fact that SaP studies in the literatures are generally western-centric (for example, the US, Europe and Australia, etc.). There are only a few Asian studies on SaP and hence less voices representing the Asian culture. This study aims to fill this gap by focusing on two key questions:

1.  To what extent do students develop student agency through student partner projects in the era of global digital futures?

2.  What are the factors that facilitate student agency development in Hong Kong higher education from student perspectives?

## Literature review

### Students as partners

The core theme of the RSLEIHE scheme, the Student as Partners (SaP) approach has been gaining global recognition for its transformative impacts on various aspects of higher education. SaP is "a collaborative, reciprocal process" of teaching and learning whereby "all participants have the opportunity to contribute equally, although not necessarily in the same ways, to curricular or pedagogical conceptualisation, decision making, implementation, investigation, or analysis" (Cook-Sather et al., 2014, pp. 6-7). This collaborative framework is known for producing positive outcomes in student learning, faculty development, curriculum innovation, and the scholarship of teaching and learning by engaging students as partners in teaching and learning, which recognises students' contributions to shaping educational practice (Cook-Sather & Matthews, 2021). By fostering a reciprocal process where students and other stakeholders, including university administrators, faculty members, student affairs staff, alumni, and community/industry representatives, work together to shape curricular and pedagogical practices, the approach provides opportunities for students to develop student agency (see the following Student agency section).

Cook-Sather and colleagues (2014) emphasised the significance of empowering students to drive meaningful development in teaching and learning. This ethos of collaboration and shared responsibility within higher education has been described as transformational (Judd et al., 2021), highlighting its potential to revolutionise traditional educational paradigms. An affirmative partnership with students prompts teachers to question the assumptions they made about the teaching and learning process "in a way we (teachers) don't often make explicit" (Flint, 2015, p. 2) and identifies any presumptions in educational quality enhancement. Involving students in curriculum development empowers them as active participants in their educational journey and enhances their ownership of learning, deepens their understanding of educational processes, strengthens their professional identity formation, and builds rapport among stakeholders.

The SaP approach enhances higher education by integrating theory with practice and fostering a culture of mutual respect, trust, and collaboration, particularly during the transition to online and hybrid learning, which has revealed technology's potential to revolutionise educational practices. This transition not only provided an impetus for the integration of digital tools but also highlighted the critical importance of collaboration among all stakeholders, including teachers and students. One significant observation from this period is that students often exhibited a higher proficiency in utilising various e-tools, showcasing their IT and digital literacy skills. These newfound dynamic allowed teachers to leverage student expertise, fostering a collaborative environment where students could actively contribute to teaching innovations.

Many researchers (for example, Curran, 2017; Dickerson et al., 2016; Hill et al., 2019; Luke & Evans, 2021), identified the benefits of involving student partners as pedagogical co-designers or co-researchers in developing educational (or pedagogy-driven) technologies, for example, gained access to diverse perspectives and marginalised voices for innovative applications, improved student engagement, personalisation of learning, and enhanced dialogue between teachers and students in a digital world. These researchers identified the need to adopt SaP model in the future EdTech research and potential impacts on teaching and learning.

This inclusive and participatory model enriches the educational experience for students and drives continuous innovation and evolution in teaching and learning methodologies within the academic community. Embracing this collaborative ethos establishes a culture of shared responsibility and co-creation, ultimately creating a transformative educational experience for all participants involved (Peseta et al., 2021).

### Student agency

For a meaningful and productive student-staff partnership, Jääskelä and colleagues (2017) proposed that it relies on the student agency developed or fostered during the partnership project. According to Bandura (1999), agency is entangled with personal intents and self-processes like motivation and self-efficacy, acting as a mediator between thinking and action. Student agency refers to the ability of students to take an active role in their learning and to have a sense of control over their educational experiences. According to the Organisation for Economic Co-operation and Development (Organisation for Economic Co-operation and Development, 2019, p. 2), it also covers the ability to "set goals, reflect, and act responsibly to effect change". In higher education, it is about students' active involvement, rather than "passive acceptance" (p. 2); shaping the surroundings, rather than being shaped by others; willing to take risks for the decisions/choices that they have made, instead of accepting the decision made by others. It is anticipated that when students develop agency, meaning that they can choose the content and pathway of their education, they are more likely to demonstrate increased motivation towards learning and set goals for themselves. In brief, it refers to a student's belief and ability to explore resources and take control of their academic journey. This also depends on the resources or supports (in *individual, relational* and *contextual/situational* domains) that students need to engage purposefully, intentionally, and meaningfully in their

learning experiences within educational settings (Jääskelä et al., 2017).

By providing students with decision-making and participation opportunities, they can take on a more proactive role in their learning experiences. Students with strong agency are more likely to assume accountability for their learning objectives and methods, promoting self-improvement and personal growth.

In higher education, some argue that curriculum transformation necessitates strong ecological support, with learners' proactive attitude crucial for success (Luong et al., 2023, Peseta et al., 2021). Active student involvement is vital for a smooth transition to university life: students adapt to new academic standards, acquire skills for independent academic journeys, cultivate new perspectives, knowledge, and capabilities, develop strategies for engaging with university faculty, and integrate into professional communities. By fostering student agency within student-staff partnerships, a more positive and meaningful learning environment can be cultivated, ultimately enhancing the quality of education. Therefore, student agency is considered an integral component in fuelling successful student-staff collaboration (or SaP ventures) among all teaching and learning centres in Hong Kong universities.

To assess student agency, Jääskelä and colleagues (2017) developed the "Agency of University Student (AUS) Scale" of three resource domains (*individual, relational,* and *contextual*). AUS is a student self-report instrument consisting of 54 items (see Appendix). These items are found to be correlated positively with ten factors across the *individual, relational,* and *contextual* domains: Interest and Motivation (including utility value), Self-efficacy, Competence Beliefs, Participation Activities; Equal Treatment, Teacher Support, Peer Support, Trust; and Opportunities to Influence, and Opportunities to Make Choices.

In a student partnership project or setting, Individual Resources (consisting of four factors including Interest and Motivation, Self-efficacy, Competence Beliefs, Participation Activities) represent a range of personal readiness that an individual would consider. When students feel interested in the project content, identify with the values of the project (utility), predict enjoyment, have a strong belief in their abilities to succeed and feel confident to participate, they are more likely to engage in the partnership project.

Relational Resources include how an individual perceives emotional and interpersonal support from teachers and peers, and the perceived working relationship with others. It also includes the perception of how others value an individual's contributions or respect his/her options. Four factors - Equal Treatment, Teacher Support, Peer Support, and Trust, contribute to the above-mentioned support needs, and hence foster student agency. Students who feel supported in these factors are more likely to demonstrate agency.

In the Contextual Resources, providing students with opportunities to influence and make choices is paramount in cultivating student agency. While the first two dimensions focus on the support at a micro level (working level), the Contextual dimension focuses on the support from the department or university at a macro level. It concerns whether the university or education systems establish relevant regulations or policies to offer opportunities for student partnership and co-creation to influence the teaching and learning environment or "ecosystem". Other concerns about this dimension consist of departmental acknowledgment and university recognition for students' contribution to and participation in SaP projects although these items have yet been included in the existing AUS scale. With these types of support, students feel that their voices will be heard, and their contributions will be valued. It conveys messages to students that the universities welcome them to explore solutions to the existing challenges in teaching and learning. More importantly, universities are willing to involve students as partners in decision-making.

The AUS scale helps faculty members to assess the experience and capacity of student agencies and allows academic developers to investigate what resources are (not) in place to support the development of student partnership projects.

Although the AUS scale was established within the Finnish context, it encompasses ten factors across individual, relational, and contextual domains, which sound reasonably similar in Asian context. The scale offers a complete framework for assessing student agency, hence rendering it a powerful tool applicable to students globally. Its versatile character guarantees efficient application in many educational environments. This study employed the scale to examine elements that facilitate the development of student agency in SaP projects within an Asian context, as pertinent research in this region is few.

**Methods**

The research method employed in this study followed a two-stage design to first understand students' experience when they were engaged as student partners in projects in Hong Kong universities and second to identify the factors or resources that support the development of student agency from student perspectives.

The first stage entailed administering the AUS scale (Jääskelä, et al., 2017) to collect students' perceptions after the SaP projects or student-faculty collaboration. A five-point Likert scale is used, with 1 as "Strongly Agree" and 5 as "Strongly Disagree". The data collection, conducted online via the Qualtrics platform in 2023, engaged a diverse cohort of 231 respondents from Hong Kong local universities. Undergraduate and postgraduate students who were involved in SaP projects or student-faculty collaboration were the target groups. They were recruited by snowball sampling through teaching and learning centres at local universities.

In the study, t-tests were utilised to compare the mean scores of the 54 items across different demographic dichotomies, such as gender, level of study (undergraduate versus postgraduate), and STEM versus non-STEM major. This

statistical test aimed to identify any significant differences in the levels of student agency among the demographic dichotomies.

A confirmatory factor analysis (CFA) was conducted to thoroughly examine the factorial structure and validate the AUS within the unique context of Asian higher education. Utilising Onyx, an open-source tool for structural equation modelling (SEM), maximum likelihood (ML) estimation was employed to evaluate the model parameters (von Oertzen et al., 2015). Model fit was assessed using various indices, including the chi-square test, Comparative Fit Index (CFI), Standardised Root-Mean-Square Residual (SRMR), and Root-Mean-Square Error of Approximation (RMSEA), to ensure a robust assessment of the model fit.

In the second stage of the study, the participants were further invited to rank the 10 AUS factors according to their experience. Among the 231 students, 45 accepted the invitation. Their responses were collected for descriptive analysis.

## Data analysis and discussion

### Student agency perceived in SaP projects

In the first stage, this study encompassed a total of 231 university students in Hong Kong comprising 162 undergraduate (UG) students and 69 research postgraduate (RPG) students, with a gender distribution of 144 females and 87 males. Most of our respondents were female, constituting 62% of the sample, while undergraduate students comprised 70.1% of the participant pool (see Table 1).

Table 1. Gender and level of study.

| | | Education Level | | Total |
|---|---|---|---|---|
| | | Undergraduate | Postgraduate | |
| **Gender** | Male | 61 | 26 | 87 (37.7%) |
| | Female | 101 | 43 | 144 (62.3%) |
| **Total** | | 162 (70.1%) | 69 (29.9%) | 231 (100%) |

Figure 1 shows the overall ratings in three dimensions. Overall, participants perceived more support from Individual and Relational Resources. The mean scores are 2.25 and 2.26 out of 5 (where 1 represents "Strongly agree"). However, they experienced less support from Contextual Resources (the mean score is 2.53). A similar pattern was also observed in genders and levels of study. This pattern suggests that Hong Kong university students in general perceived more support from their peers and teachers but less support from the department or university during their SaP engagement. Opportunities to Make Choices and Opportunities to Influence are two factors of Contextual dimension resources, so this might also imply that opportunities for students to make decisions in pedagogical design and influence teaching and learning experience are limited in Hong Kong university curricula.

Compared with undergraduate students, research postgraduate students rated more positively in nine of the ten AUS factors, highlighting a higher level of student

agency perceived. Table 2 summarises the descriptive statistics for levels of study. Significant differences were identified between UG and PG students, in all factors, except the Peer Support. This suggests that the PG students generally experienced more resource support regarding the nine factors of the AUS scale.
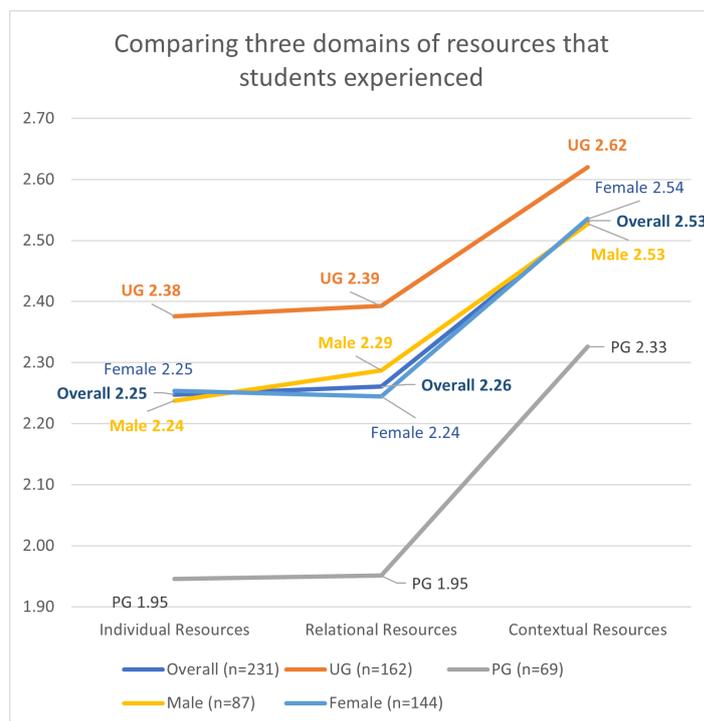


Figure 1. Comparing three domains of resources that students experienced.

Table 2. Descriptive statistics for levels of study.

| Measure | Undergraduate | | Postgraduate | | $F$ (1, 229) |
|---|---|---|---|---|---|
| | M | SD | M | SD | |
| AUS_L01_Make Choice | 2.63 | 0.67 | 2.29 | 0.75 | 11.40*** |
| AUS_L02_Equal Treatment | 2.61 | 0.52 | 2.32 | 0.65 | 12.65*** |
| AUS_L03_Participation | 2.27 | 0.61 | 1.93 | 0.55 | 14.76*** |
| AUS_L04_Motivation | 2.45 | 0.47 | 2.20 | 0.53 | 12.75*** |
| AUS_L05_Self Efficacy | 2.26 | 0.70 | 1.67 | 0.67 | 35.83*** |
| AUS_L06_Competence | 2.65 | 0.40 | 2.28 | 0.59 | 30.37*** |
| AUS_L07_Teacher Support | 2.62 | 0.75 | 1.95 | 0.96 | 32.47*** |
| AUS_L08_Peer Support | 2.23 | 0.66 | 1.91 | 0.79 | 10.26 |
| AUS_L09_Trust | 2.11 | 0.61 | 1.62 | 0.61 | 30.69*** |
| AUS_L10_Influence | 2.61 | 0.41 | 2.36 | 0.58 | 14.22*** |

***$p < .001$

1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

Contrasting to the level of study, Table 3 shows that gender disparities were evident specifically in the Peer Support factor, with female students ($M$ = 2.06, $SD$ = .696) reporting significantly more support in this factor, $F$ (1, 229) = 4.421, $p$ = .037. It is in line with the research conducted by Colarossi and Eccles (2000). This gender difference may reflect significant and widespread variations in how males and females experience and understand working relationships with others at both social and personal levels (Gilligan, 1993). However, in contrast to the findings of Jääskelä et al. (2017) regarding gender differences in the AUS factors, the t-test demonstrated substantial differences in the Interest and Motivation factor, with Finnish female students reporting higher levels than their male counterparts. This interesting differences between Finnish and Hong Kong female students' perceptions would deserve further investigation.

Table 3. Descriptive statistics for gender.

| Measure | Male | | Female | | F (1, 229) |
|---|---|---|---|---|---|
| | M | SD | M | SD | |
| AUS_L01_Make Choice | 2.53 | 0.72 | 2.52 | 0.70 | 0.02 |
| AUS_L02_Equal Treatment | 2.49 | 0.60 | 2.53 | 0.57 | 0.39 |
| AUS_L03_Participation | 2.16 | 0.62 | 2.17 | 0.61 | 0.01 |
| AUS_L04_Motivation | 2.36 | 0.48 | 2.38 | 0.51 | 0.09 |
| AUS_L05_Self Efficacy | 2.06 | 0.68 | 2.10 | 0.78 | 0.16 |
| AUS_L06_Competence | 2.55 | 0.49 | 2.53 | 0.50 | 0.03 |
| AUS_L07_Teacher Support | 2.40 | 0.85 | 2.44 | 0.88 | 0.14 |
| AUS_L08_Peer Support | 2.26 | 0.72 | 2.06 | 0.70 | 4.42* |
| AUS_L09_Trust | 1.99 | 0.63 | 1.94 | 0.66 | 0.46 |
| AUS_L10_Influence | 2.52 | 0.41 | 2.55 | 0.52 | 0.19 |

*$p < .05$

1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

When comparing disciplinary differences between STEM and non-STEM majors, no significant differences were observed across all 10 AUS factors, suggesting that the AUS model might be applicable across diverse academic disciplines (Table 4).

Table 4. Descriptive statistics for STEM & Non-STEM students.

| Measure | STEM | | Business/Humanities/ Social Sciences | | F (1, 229) |
|---|---|---|---|---|---|
| | M | SD | M | SD | |
| AUS_L01_Make Choice | 2.55 | 0.68 | 2.47 | 0.76 | 0.68 |
| AUS_L02_Equal Treatment | 2.52 | 0.53 | 2.52 | 0.68 | 0.00 |
| AUS_L03_Participation | 2.20 | 0.55 | 2.10 | 0.74 | 1.24 |
| AUS_L04_Motivation | 2.38 | 0.46 | 2.37 | 0.59 | 0.03 |
| AUS_L05_Self Efficacy | 2.14 | 0.65 | 1.96 | 0.91 | 2.84 |
| AUS_L06_Competence | 2.57 | 0.44 | 2.46 | 0.60 | 2.51 |
| AUS_L07_Teacher Support | 2.49 | 0.81 | 2.27 | 0.99 | 2.96 |
| AUS_L08_Peer Support | 2.18 | 0.69 | 2.05 | 0.76 | 1.53 |
| AUS_L09_Trust | 2.01 | 0.61 | 1.85 | 0.74 | 2.79 |
| AUS_L10_Influence | 2.55 | 0.42 | 2.51 | 0.60 | 0.26 |

1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

The study encountered challenges in achieving a satisfactory model fit. In this study, the AUS model exhibited poor fit across all items, as evidenced by the statistical results ($\chi2$ (64, N = 231) = 4272.41, $p < 0.001$, CFI = 0.672, SRMR = 0.376, RMSEA = 0.093). The factor loadings of the final CFA were based on 54 items, and the CFA results of the 10 factors are presented in Table 2. One of the possible reasons for this could be attributed to the negatively worded items necessitating data reversal. All negatively worded items revealed low factor loadings at 0.6 or lower, except in the Teacher Support (AUS_037, AUS_038, AUS_039), underscoring a lack of alignment with the corresponding AUS dimensions. In the context of language and the Asian perspective, the adaptation of the AUS model to better suit an Asian environment holds significant implications. By rephrasing negative items into positive equivalents or removing them, researchers can tailor the model to align more closely with the cultural nuances and communication patterns prevalent in Chinese language and logistics contexts. This adjustment could facilitate a more accurate assessment of student agency within the specific socio-cultural framework of Asia, offering insights that are more relevant and applicable to the educational and logistical dynamics.

Overall, the feedback provided by respondents in the study revealed a trend of lower ratings in the dimensions related to opportunities to make choices and equal treatment within the AUS model. Conversely, respondents expressed higher levels of satisfaction and positive perceptions in factors such as teacher support, trust, and opportunities to influence. These contrasting ratings shed light on the varying priorities and experiences of individuals within the educational context, emphasising the significance of support systems, trust-building, and avenues for meaningful impact in shaping the student experience.

Table 5. Confirmatory Factor Analysis results.

| Item | Factor | R^2 | Item | Factor | R^2 |
|---|---|---|---|---|---|
| AUS_001 # | AUS_L01_Make Choice | 0.568 | AUS_028 | AUS_L06_Competence | 0.878 |
| AUS_002 | AUS_L01_Make Choice | 0.878 | AUS_029 | AUS_L06_Competence | 0.852 |
| AUS_003 | AUS_L01_Make Choice | 0.807 | AUS_030 | AUS_L06_Competence | 0.866 |
| AUS_004 | AUS_L02_Equal Treatment | 0.687 | AUS_031 # | AUS_L06_Competence | 0.487 |
| AUS_005 # | AUS_L02_Equal Treatment | 0.430 | AUS_032 # | AUS_L06_Competence | 0.496 |
| AUS_006 | AUS_L02_Equal Treatment | 0.705 | AUS_033 # | AUS_L06_Competence | 0.470 |
| AUS_007 | AUS_L03_Participation | 0.856 | AUS_034 | AUS_L06_Competence | 0.606 |
| AUS_008 | AUS_L03_Participation | 0.859 | AUS_035 # | AUS_L07_Teacher Support | 0.584 |
| AUS_009 | AUS_L03_Participation | 0.849 | AUS_036 | AUS_L07_Teacher Support | 0.748 |
| AUS_010 | AUS_L03_Participation | 0.741 | AUS_037 # | AUS_L07_Teacher Support | 0.659 |
| AUS_011 | AUS_L03_Participation | 0.820 | AUS_038 # | AUS_L07_Teacher Support | 0.622 |
| AUS_012 | AUS_L03_Participation | 0.718 | AUS_039 # | AUS_L07_Teacher Support | 0.666 |
| AUS_013 # | AUS_L03_Participation | 0.469 | AUS_040 | AUS_L08_Peer Support | 0.829 |
| AUS_014 | AUS_L03_Participation | 0.682 | AUS_041 | AUS_L08_Peer Support | 0.831 |
| AUS_015 | AUS_L03_Participation | 0.686 | AUS_042 | AUS_L08_Peer Support | 0.789 |
| AUS_016 # | AUS_L04_Motivation | 0.586 | AUS_043 | AUS_L09_Trust | 0.812 |
| AUS_017 | AUS_L04_Motivation | 0.773 | AUS_044 | AUS_L09_Trust | 0.856 |
| AUS_018 # | AUS_L04_Motivation | 0.552 | AUS_045 | AUS_L09_Trust | 0.853 |
| AUS_019 | AUS_L04_Motivation | 0.805 | AUS_046 | AUS_L09_Trust | 0.902 |
| AUS_020 | AUS_L04_Motivation | 0.804 | AUS_047 | AUS_L09_Trust | 0.731 |
| AUS_021 | AUS_L04_Motivation | 0.821 | AUS_048 | AUS_L09_Trust | 0.803 |
| AUS_022 | AUS_L04_Motivation | 0.802 | AUS_049 | AUS_L09_Trust | 0.800 |
| AUS_023 | AUS_L05_Self Efficacy | 0.885 | AUS_050 | AUS_L10_Influence | 0.943 |
| AUS_024 | AUS_L05_Self Efficacy | 0.833 | AUS_051 | AUS_L10_Influence | 0.940 |
| AUS_025 | AUS_L05_Self Efficacy | 0.870 | AUS_052 # | AUS_L10_Influence | 0.443 |
| AUS_026 | AUS_L05_Self Efficacy | 0.849 | AUS_053 | AUS_L10_Influence | 0.789 |
| AUS_027 | AUS_L05_Self Efficacy | 0.830 | AUS_054 # | AUS_L10_Influence | 0.476 |

# Reversed-coded item

The interconnectedness between the Trust and Peer Support factors can indeed be discerned through data analysis. It shows that when students trust their teachers and peers, it can foster a sense of camaraderie, collaboration, and mutual respect within the project, $r$ (229) = .616, $p < .001$. Also, students reported that they rarely experienced or articulated Contextual Resources in SaP projects. In the AUS scale, Contextual Resources involve the importance of two key factors: Opportunities to Influence and Opportunities to Make Choices. The former refers to what extent students can share their viewpoints to influence the curriculum design. It emphasises the significance of shaping their learning experiences and giving voices in determining the direction of their studies. Opportunities to Make Choices encompassed the sense of control of their learning progress, and the flexibility to choose from various pathways based on individual needs/backgrounds. Evaluating and enhancing the mechanisms through which students can access and leverage Contextual Resources within SaP projects is important. By fostering a culture that values student agency, choice, and engagement, a more personalised and enriching educational environment can be created in SaP projects.

**Factors facilitating student agency in Hong Kong higher education: Student perspectives**

In the second stage of the study, 45 students (including 20 UG and 25 PG students who participated in the first stage of the study) accepted the invitation to rank three most important factors among the 10 factors of the AUS scale. Figure 2 shows the factors ranked by students (top three factors). It was

suggested that Hong Kong students displayed a tendency to prioritise Individual Resources, particularly focusing on considering aspects like personal interest, motivation, and competence beliefs, before identifying support from peers or teachers (Relational Resources), and finally department or university support (Contextual Resources). This emphasis on personal drive and self-perceived abilities underscores the proactive nature of these students in managing their academic endeavours. Additionally, it demonstrates how participants in Hong Kong universities displayed a blend of neoliberal, Mainland Chinese, and Western influences. It was demonstrated by the desire of SaP to maximise personal gains while still adhering to directions from teachers (Liang et al., 2024). This also explains why, the top three factors ranked by the participants among the 10 AUS factors are the Interest and Motivation, Competence Beliefs, and Trust factors. The top two belong to the Individual domain, while the third-ranked factor, Trust, is one of the Relational Resources.

According to Ryan and Deci (2017, 2024), Self-Determination Theory (SDT) posits that the fulfilment of three fundamental psychological needs—Autonomy, Relatedness, and Competence—is crucial for fostering well-being and motivation in various social contexts. In this regard, the two AUS factors (Interest and Motivation and Competence Beliefs) seem to support the needs for Autonomy and Competence in SDT. On the other hand, Trust factor in the AUS fosters a supportive learning environment with peers that also satisfies the needs for Relatedness in SDT.

The two factors in the Contextual dimension were generally ranked lower. By comparing the findings in Stages One and Two, it seems that students were less aware of Contextual Resources, thus might overlook the impact of these resources. Their overlook could be due to their less exposure to the supports in the Contextual dimension.

However, compared with Opportunities to Influence, Opportunities to Make Choices factor seems to be more important in this dimension, suggesting that students tended to agree that making choices or the sense of control of their learning is more important than the influence on curriculum development.

Interest and motivation play a crucial role in students' decision to participate and engage in SaP projects. Students require sufficient motivation, typically driven by topics that pique their interest, to actively engage in SaP projects. They also seek to develop Competence Beliefs and expect to be inspired and gain insights from the projects. Simultaneously, Competence Beliefs were ranked as the second most important dimension by students. Moreover, students also aspire to be equally treated by teachers in projects. This indicates students' strong need for emotional support from teachers in SaP projects, creating a sense of safety and the desire for fair treatment from teachers. The quality of teacher-student interactions and the establishment of a tolerant and emotionally secure atmosphere have a significant impact on fostering student agency (Jääskelä et al., 2020).

Apart from the Equal Treatment factor, the Trust factor is considered more important than the other two factors (Peer Support and Teacher Support). Based on the description of the items, these two factors are more action-based, while the Trust factor is more related to the feeling of welcome, encouragement, and the perception of collaboration and approachability in a project. To do this, teachers must facilitate interaction with students, provide students with the guidance they need, demonstrate a sincere interest in students' viewpoints, and use tools to gather and compile information about their experiences with their agency and learning environments (Jääskelä et al., 2020). When teachers create an environment where students feel respected, supported, and valued, and where they believe that teachers and the university have their best interests at heart, students are more likely to trust in their teachers and the SaP project as a whole (Mitchell et al., 2018). When students feel that their perspectives are acknowledged and respected, they are more inclined to engage actively in their studies, collaborate with their teachers and classmates, and take ownership of their learning journey.

Overall, it appears that Contextual Resources are ranked lower. However, within this dimension, the ranking of Opportunities to Make Choices is similar to that of Self-efficacy factor in the individual domain and even higher than peer support and teacher support in Relational Resources. This indicates that students desire the opportunity to autonomously choose how they complete activities more than the opportunities to influence, for example, course structure and contents. They wish to have the autonomy to make decisions during activities, enabling them to fully contribute and be prepared to learn from their experience and mistakes. This pursuit of autonomy reflects students' desire for engagement and a sense of responsibility in their learning process, while also highlighting their emphasis on personal growth and development. Hence, in SaP projects, it is advisable to offer students a variety of choices and autonomy in decision-making. By providing students with the opportunity to make choices and have a say in their participation, they are empowered to take charge of their learning journey. This increased level of sense of agency can lead to heightened motivation, active engagement, and a stronger sense of responsibility among students as they navigate their educational endeavours.

**Suggestions for implementation and further research**

The contrasting ratings obtained from this study can shed light on the varying priorities and experiences of individuals within the educational setting, emphasising the significance of robust support systems, trust-building measures, and opportunities for students to make decisions and meaningful contributions. To improve students' trust and agency, teachers are encouraged to actively foster interactions with students, offer essential guidance, and exhibit authentic concern for their viewpoints, while simultaneously cultivating an environment where students feel respected and valued, thereby ensuring that students believe that teachers and the institution consistently prioritise their best interests. This can markedly enhance students' confidence in teachers and the whole SaP project. Furthermore, evaluating and enhancing
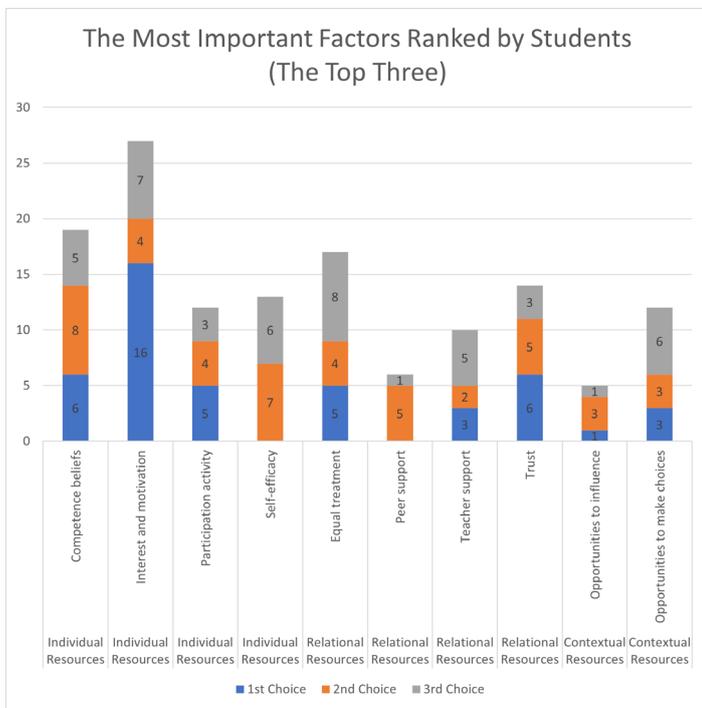
Figure 2. The top three factors ranked by students.

the mechanisms through which students can access and leverage Contextual Resources within SaP projects is important. By fostering a culture that values student agency, choice, and engagement, a more personalised and enriching educational environment can be created in SaP projects.

A practical suggestion for further research the Hong Kong context is to adapt the AUS scale and items by rephrasing negative items into positive equivalents. This adjustment would allow the model to align more closely with the cultural nuances and communication styles prevalent in Chinese language and logistics contexts, facilitating a more accurate assessment of student agency within the specific socio-cultural framework of Asia. With a modified AUS scale for Hong Kong or Asian students, it is believed that any differences between groups (such as gender, levels of study and discipline) could be explained in more details.

## Conclusions

In conclusion, this study has provided valuable insights into the concept of student agency within the Asian context in an age of digital futures, particularly focusing on SaP projects and student-faculty collaborations addressing themes such as pedagogical change during the pandemic, alternative assessment, and educational innovation, utilising digital learning and teaching strategies. The two-stage research design allowed for a comprehensive exploration of student perception of student agency levels among a diverse cohort of participants from local universities in Hong Kong.

The findings revealed interesting patterns and variations in student agency across different demographic factors such as gender, level of study and academic disciplines. Notably, graduate students exhibited higher levels of agency compared with undergraduate students, and female students perceived significantly more peer support. The

study also highlighted the importance of trust, teacher support, and opportunities for students to influence their educational experiences in fostering student agency.

In the context of advancing student engagement and empowerment within higher education in an age of digital futures, particularly through SaP projects, it is crucial to explore effective strategies and practices that can enhance the overall student experience. Recognising the importance of contextual resources and cultural sensitivity can lead to more impactful educational initiatives that resonate with the diverse needs of students. To effectively evaluate and enhance the mechanisms through which students can access and leverage contextual resources within SaP projects, it is essential to foster a culture that prioritises student agency, choice, and engagement, ultimately creating a more personalised and enriching educational environment.

Overall, the study underscores the significance of support systems, trust-building, and opportunities for students to make choices in shaping the student experience. By prioritising Individual Resources (including interest, motivation, and competence beliefs, etc.,) students in Hong Kong demonstrated a proactive approach to managing their academic endeavours in SaP projects. This study acknowledges certain limitations, including a relatively low response rate and concerns regarding the overall quality of the data collected. Furthermore, the structure of the five-point Likert scale, where a rating of 1 corresponds to "Strongly Agree" and a rating of 5 indicates "Strongly Disagree," may contribute to some confusion among respondents. This configuration can be perceived as counterintuitive, potentially impacting the clarity of participants' responses.

Moving forward, further research and adaptation of the AUS model to suit the Asian environment are essential for promoting a more personalised and enriching educational environment that empowers students to actively engage and take ownership of their learning journey, while addressing potential differences related to gender and age. This study lays a foundation for future exploration and enhancement of student agency within the unique context of Asian higher education.

## Acknowledgement

## References

Bandura, A. (1999). Social cognitive theory: An agentic perspective. *Asian Journal of Social Psychology, 2*(1), 21-41.

Colarossi, L. G., & Eccles, J. S. (2000). A prospective study of adolescents' peer support: Gender differences and the influence of parental relationships. *Journal*

of Youth and Adolescence, 29(6), 661-678. https://doi.org/10.1023/A:1026403922442

Cook-Sather, A., Bovill, C., & Felten, P. (2014). *Engaging students as partners in learning and teaching: A guide for faculty.* John Wiley & Sons.

Cook-Sather, A., & Matthews, K. E. (2021). Pedagogical partnership: Engaging with students as co-creators of curriculum, assessment and knowledge. In *University teaching in focus* (pp. 243-259). Routledge.

Curran, R. (2017). Students as partners—good for students, good for staff: A study on the impact of partnership working and how this translates to improved student-staff engagement. *International Journal for Students as Partners, 1*(2), 1–16. https://doi.org/10.15173/ijsap.v1i2.3089

Dai, K., Matthews, K. E., & Liang, Y. (2024). 'I wish to participate but...': Investigating students' perceptions of student-staff pedagogical partnerships at a Hong Kong University. *Higher Education, 87*(3), 779-793. https://doi.org/10.1007/s10734-023-01035-7

Dickerson, C., Jarvis, J., & Stockwell, L. (2016). Staff–student collaboration: Student learning from working together to enhance educational practice in higher education. *Teaching in Higher Education, 21*(3), pp. 249–265. https://doi.org/10.1080/13562517.2015.1136279

Evans, G., & Luke, K. (2020). Lecture capture and peer working: Exploring study practices through staff-student partnerships. *Research in Learning Technology, 28*. https://doi.org/10.25304/rlt.v28.2314

Flint, A. (2015). Students and staff as partners in innovation and change. *The Journal of Educational Innovation, Partnership and Change, 1*(1), 2–2. https://doi.org/10.21100/jeipc.v1i1.218

Gilligan, C. (1993). *In a different voice: Psychological theory and women's development.* Harvard University Press.

Hill, J. T., Thomas, C., & Brown, B. (2019). Research assistant as partner: Collective leadership to facilitate co-production. *International Journal for Students as Partners, 3*(2), 129–138. https://doi.org/10.15173/ijsap.v3i2.3674

Jääskelä, P., Poikkeus, A. M., Häkkinen, P., Vasalampi, K., Rasku-Puttonen, H., & Tolvanen, A. (2020). Students' agency profiles in relation to student-perceived teaching practices in university courses. *International Journal of Educational Research, 103*, 101604. https://doi.org/10.1016/j.ijer.2020.101604

Jääskelä, P., Poikkeus, A. M., Vasalampi, K., Valleala, U. M., & Rasku-Puttonen, H. (2017). Assessing agency of university students: Validation of the AUS Scale. *Studies in Higher Education, 42*(11), 2061-2079. https://doi.org/10.1080/03075079.2015.1130693

Judd, M. M., Spinelli, F., Szucs, B., Crisp, N., Groening, J., Collis, C., ... & Richards, A. (2021). Learning from the pandemic: The impacts of moving student-staff partnerships online. *Student Success, 12*(3), 73-83. https://doi.org/10.5204/ssj.1774

Kwan, A., Lau, P., Chan, K., Chong, K., Chu, B., Kwong, T., Lam, P., & Wong, C. (Eds.). (2022). *Redesigning student learning experience in higher education – HERDSA HK student project report 2021.* Higher Education Research and Development Society of Australasia (Hong Kong Branch). https://herdsahk.edublogs.org/

Liang, Y., Dai, K., & Matthews, K. E. (2024). Followers, customers, or partners? Comparing conceptualisations of students as partners in Australian, Mainland Chinese, and Hong Kong universities. *Higher Education*, 1-17. https://doi.org/10.1007/s10734-024-01215-z

Liang, Y., & Matthews, K. E. (2020). Students as partners practices and theorisations in Asia: A scoping review. *Higher Education Research & Development, 40*(3), 552–566. https://doi-org.eproxy.lib.hku.hk/10.1080/07294360.2020.1773771

Luke, K., & Evans, G. (2021). Students as partners in digital education: Exploring lecture capture in higher education through partnership between students and learning technologists. *International Journal for Students as Partners, 5*(2). https://doi.org/10.15173/ijsap.v5i2.4508

Luong, P. M., Tran, L. T., & Nguyen, H. T. T. (2023). Student agency and becoming in international programs in Vietnamese universities. In *Student agency and self-formation in higher education* (pp. 117-142). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-44885-0_5

Mitchell, R. M., Kensler, L., & Tschannen-Moran, M. (2018). Student trust in teachers and student perceptions of safety: Positive predictors of student identification with school. *International Journal of Leadership in Education, 21*(2), 135-154. https://doi.org/10.1080/13603124.2016.1157211

Organisation for Economic Co-operation and Development. (2019). *OECD future of education and skills 2030: Conceptual learning framework: Student agency for 2030.* OECD Publishing. https://www.oecd.org/content/dam/oecd/en/about/projects/edu/education-2040/concept-notes/Student_Agency_for_2030_concept_note.pdf

Peseta, T., Donoghue, A., Hifazat, S., Suresh, S., Beathe, A., Derbas, J., Mees, B., Suresh, S., Sugita, C., Mallawa Arachchi, T., Nguyen, E., Johnson, L., Clark, S., Ramegowda, R., Alford, J., Manthos, M., Jose, C., Caughey, E., Reed, V., & Ashcroft-Smith, M. (2021). Dancing with power in 'We are the university: Students co-creating change'. *Journal of University Teaching & Learning Practice, 18*(7), 258-274. https://doi.org/10.53761/1.18.7.16

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness.* New York: Guilford Publishing.

Ryan, R. M., & Deci, E. L. (2024). Self-determination theory. In *Encyclopedia of quality of life and well-being research* (pp. 6229-6235). Cham: Springer International Publishing.

von Oertzen, T., Brandmaier, A. M., & Tsang, S. (2015). Structural equation modeling with ωnyx. structural equation modeling. *A Multidisciplinary Journal, 22*(1), 148–161. https://doi.org/10.1080/10705511.2014.935842

Yang, L., Lee, S., & Oldac, Y. I. (2023). Agency and student development in higher education: A cross-cultural and cross-disciplinary exploration. In *Student agency and self-formation in higher education* (pp. 67-87). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-44885-0_3

Zou, T. X. P., Kochhar-Lindgren, G., Hoang, A. P., Lam, K., Barry, T. J., & Leung, L. Y. Y. (2023). Facilitating students as partners: Co-researching with undergraduates in Asian university contexts. *Educational Review, 76*(6), 1562–1580. https://doi.org/10.1080/00131911.2023.2246674

# Appendix

### Agency of University Student (AUS) Scale

**Items**

#### AUS_L01 Opportunities to Make Choices

AUS_001. No possibility to choose between various ways of completing the course #

AUS_002. Possibility to choose the way to complete the course

AUS_003. Possibility to take a stand on working methods used in the course

#### AUS_L02 Equal Treatment

AUS_004. Equality among students

AUS_005. Other students have a stronger influence on the course #

AUS_006. Equal treatment of students by teachers

#### AUS_L03 Participation Activity

AUS_007. Asking questions and making comments in the course

AUS_008. Expressing opinions in the course

AUS_009. Taking responsibility by being an active participant

AUS_010. Enjoyment in taking initiative and collaborating in the course

AUS_011. Possibility to express thoughts and views without being ridiculed

AUS_012. Ease of participation in discussions

AUS_013. Difficulties participating in discussions #

AUS_014. Willingness to participate even when having other things to do

AUS_015. Courage to challenge matters presented in the course

#### AUS_L04 Interest and Motivation

AUS_016. The course was not inspiring #

AUS_017. High motivation to study in the course

AUS_018. The course was not inspiring because of unclear utility value #

AUS_019. The contents of the course were interesting

AUS_020. Desire to succeed in the course

AUS_021. Desire to learn in order to understand

AUS_022. Maintaining persistence in the face of the high effort demanded

#### AUS_L05 Self-efficacy

AUS_023. Belief in one's ability to succeed in the course

AUS_024. Belief in succeeding even in the most challenging tasks

AUS_025. Belief in successfully completing the course

AUS_026. Belief in attaining personal goals set for the course

AUS_027. Confidence in oneself as a learner in spite of challenges

#### AUS_L06 Competence Beliefs

AUS_028. Understanding of the course contents

AUS_029. Sufficient basis for participation in discussions in the course

AUS_030. Understanding of the constructs presented in the course

AUS_031. Experiencing course contents as too challenging #

AUS_032. Lacking basic knowledge for understanding the course contents #

AUS_033. Experience of a need for revision of basic concepts prior to the course #

AUS_034. Course demands have not been excessive

#### AUS_L07 Teacher Support

AUS_035. Belittling of students by teachers #

AUS_036. Teachers' friendly attitude towards students

AUS_037. Experience of being oppressed as a student #

AUS_038. Teachers' contemptuous attitude towards students #

AUS_039. Not enough room for discussion given by teachers #

#### AUS_L08 Peer Support

AUS_040. Experiencing other students as resources for learning

AUS_041. Providing support for other students in challenging study tasks

AUS_042. Asking for help from other students when needed

#### AUS_L09 Trust

AUS_043. Experience of being welcome in the course

AUS_044. Approachability of the teachers

AUS_045. Supportive course climate

AUS_046. Experience of being able to trust teachers

AUS_047. Encouraging students to participate in discussions

AUS_048. Experience of teachers' interest in students' viewpoints

AUS_049. Possibility to be oneself in the course

#### AUS_L10 Opportunities to Influence

AUS_050. Student viewpoints and opinions were taken into account

AUS_051. Student viewpoints were listened to

AUS_052. Experience of having to perform according to external instructions #

AUS_053. Possibility to choose contents that one finds interesting

AUS_054. No possibility to influence the course content #

# Reversed-coded item