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Running title: Perceptions of Online National Education

## Postgraduate Students' Perceptions on a National Education Program in Hong Kong: Evidence from Survey and Interview Findings

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**Abstract:** This study investigated postgraduate student satisfaction with an online National Security Law (NSL) education program at a university in Hong Kong in 2023/24 academic year using a mixed-methods design involving quantitative evaluation surveys and focus group interviews. A total of 2,966 postgraduate students completed the course evaluation form, and 75 students participated in focus groups. Results revealed that consistent with prior research, graduate students generally reported high satisfaction with the program. Students responded positively to the flexible, self-paced format and comprehensive content of the program. Results also showed that research postgraduates reported higher satisfaction than taught postgraduates, potentially due to learning style preferences; Chinese-instructed students demonstrated more positive attitudes toward national education. Students did not perceive the NSL education as brainwashing. These findings support the effectiveness of NSL education in promoting student law abidance, leadership, and understanding of relevant laws and history.

**Keywords:** National Security Law education, law abidance, e-learning, survey, interview, evaluation

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### Introduction

In recent years, a series of social events have occurred in Hong Kong, such as the “Anti-Extradition Law Amendment Bill Movement” in 2019. Protesters vandalized public amenities during the demonstrations, significantly impacting the daily life and activities of citizens in Hong Kong (1). In light of the escalating social turmoil, there is a growing concern regarding the participation of university students in these social movements (2). A recent qualitative effort by Lai-LaGrotteria (3) highlighted the impact of mass protests on students in Hong Kong, including adverse emotional impact of escalating tensions on students, disruptions of school activities, and possible legal consequences for participating in protests that could affect their future prospects. Furthermore, their engagement in protests could lead to divisions among individuals holding different political views within the community, resulting in a decrease in the overall social cohesion and setting the stage for future conflicts

(4).

In response to the social upheaval, the National Security Law (NSL) has been implemented in Hong Kong on June 30, 2020. The legislation, formally known as “The Law of the People’s Republic of China on Safeguarding National Security in the Hong Kong Special Administrative Region,” aims to restore social stability and maintain national security by preventing and penalising activities related to secession, subversion, terrorism, and collusion with foreign entities. The implementation of national security education in school and university curricula is stipulated in Article 10 of the NSL, aiming to cultivate awareness of national security and instil a sense of the importance of law-abidingness (5).

Education can help students develop their understanding of national security, its related legal requirements, and their obligations. Due to their limited understanding of political issues, college students are vulnerable to external influences and persuasive arguments, sometimes resulting in their participation in protests based on misinformation (6). Therefore, comprehensive NSL education for university students is essential to strengthen their understanding of the legislation, public issues, and the significance of the NSL in maintaining social order. This will equip them with critical thinking skills, enable them to take responsible actions on social and political issues, and make informed decisions (7, 8). Such educational initiatives are also important in shaping future generations to be able to make sense of societal challenges and contribute meaningfully to society in law-abiding ways (9).

Higher education institutions play a crucial role in promoting an accurate understanding of national security and fostering law-abiding behaviour among university students (10). The Hong Kong Polytechnic University (PolyU) offers a national education curriculum to undergraduate students, consisting of a three-hour face-to-face lecture and seven hours of self-study on National Education, covering modern Chinese history and the history of Hong Kong, the Constitution, the Hong Kong Basic Law, and the Hong Kong NSL. In addition, the curriculum explores the four main types of NSL offenses, addressing associated issues and dispelling common misconceptions. Students are assessed by a multiple-choice question test, and are allowed multiple attempts. A minimum of 16 out of 20 questions must be answered correctly to pass the assessment, which is a requirement for graduation.

For postgraduate students, NSL education is delivered via online mode. Online learning is the primary delivery mode for this program, allowing students to learn course material at their preferred speed, ensuring flexibility without compromising the quality of education (11). It also addresses the limitations of face-to-face interaction when teaching sensitive topics, providing a safe and inclusive environment for students to fully participate in the curriculum (12, 13). In addition to providing a risk-free environment, the interactive nature and rich resources of online learning can create an engaging learning experience while effectively enhancing teaching outcomes (14, 15).

While the benefits of online learning have been acknowledged, concerns and criticisms associated with self-paced learning have been raised, questioning its impact on student learning satisfaction and learning outcomes. These concerns include lack of motivation (16), limited internet access and technical support (17), limited interaction with lecturers and peers (18), and students’ self-regulation and attention span (19). Therefore, understanding student satisfaction and their evaluation of their learning experience is critical to identify areas that require additional support and improvement to increase the impact and effectiveness of the program (20).

Prior research on university students in Hong Kong regarding the NSL program has consistently shown positive feedback from students at all levels of study. The qualitative evaluation of undergraduate students by Li et al. (9) showed positive attitudes towards the program, with students expressing appreciation for the effectiveness of lectures, notes, videos, and assessments on their learning. For postgraduates, Dou et al. (21-23) evaluated the NSL

program for research postgraduate students and taught postgraduate students. Their findings revealed high levels of satisfaction and positive perceptions, highlighting the value of online NSL and the benefits of the self-paced learning mode. Students also noted in previous evaluations by Shek et al. (7) that the course helped increase their legal awareness, improve their understanding of national security, and eliminate misconceptions about the NSL. Students also welcomed the flexibility of online learning as it allows them to learn at their own pace and according to their needs.

Despite this positive feedback, students from different groups (i.e., research postgraduate students versus taught postgraduate students) may have different experience, hence influencing their learning needs and understanding of course materials. Factors such as educational history, cultural upbringing, language proficiency, socioeconomic status, and prior knowledge all play a role in shaping how students engage with and comprehend the content (24). However, much of the current research examines these groups independently, limiting insight into the specific ways NSL education may impact students differently across these two cohorts. By acknowledging these differences and tailoring instructional approaches to meet the specific needs of different student groups, educators can create a more inclusive learning environment and optimize students' understanding and learning outcomes.

Previous studies (i.e., 22, 25) have investigated students' experiences with self-paced e-learning programs through qualitative and quantitative methods, respectively. However, a single-method approach may not fully capture the complexity of students' perspectives. Therefore, it is crucial to employ a mixed-method design to enhance the depth of insight into students' learning experiences. Within this approach, quantitative analysis can reveal statistical differences across postgraduate degree types, while qualitative methods provide nuanced insights into students' experiences, including both their positive feedback and constructive critiques.

The present study aims to replicate and expand upon previous studies conducted by Shek et al. (7, 8) by examining the post-lecture evaluation of PolyU's online national education programs for postgraduate students in the 2023/24 academic year, employing a mixed-method approach. The underlying research questions are as follows:

RQ1: What is the overall satisfaction of students with the course?

RQ2: Do students perceive that the course improves their understanding of national security?

RQ3: Do students perceive that the course improves their personal abilities, such as law abidance, leadership, critical thinking, and problem-solving?

RQ4: Are there any differences in the perceptions of research postgraduate students and taught postgraduate students receiving instruction in English or Chinese?

## **Method**

### **Participants**

During the 2023/24 academic year, a total of 2,966 postgraduate students completed the course evaluation form after passing the assessment, resulting in a response rate of 43.9%. Among them, 366 were research postgraduate students, 2,534 were English-instructed Taught Postgraduate Students, and 66 were Chinese-instructed Taught Postgraduate Students (as shown in Table 1). The group comprised 1,521 male students (51.28%) and 1,405 female students (47.37%), with ages ranging from 18 to 63 years ( $M_{\text{age}} = 25.61$ ;  $SD = 0.9$ ). The Institutional Review Board at the authors' university has reviewed and approved the present study (Ref number: HSEARS20230903001).

Table 1

## **Procedures**

### ***Post-program evaluation***

Following the module's completion, students were invited to voluntarily and anonymously complete an online course evaluation questionnaire. The questionnaire was administered through an online survey platform to facilitate easy data collection while ensuring anonymity and data privacy.

## **Instruments**

The current study utilized the previously mentioned course evaluation questionnaire to assess the perceptions of students from different programs. The survey consisted of 20 items that evaluated various perspectives of the e-learning module, with a 6-point scale used for each item (1 = *strongly disagree*; 6 = *strongly agree*). These 20 items were divided into four domains: "Perception of course attributes" (items 1-6), "Understanding of National Education and law-abiding behaviours" (items 7-15), "Evaluation of self-paced learning mode" (items 16-19), and a general perception (item 20) regarding the e-learning module.

### ***Focus group interviews***

A semi-structured interview approach was employed to gather students' thoughts and perspectives on the content, presentation style, assessment methods, and outcomes of the online national education program. Participants who completed the e-learning module and passed the test were invited to take part in focus groups to discuss different elements, such as the learning materials (e.g., three-hour e-learning lectures and seven-hour self-study notes), content, assessment procedures, and the self-paced online learning mode. In total, 75 students joined the interview. Additionally, students were prompted to share their insights on the program's advantages, challenges, noteworthy features, and perceived importance. The focus groups were conducted in Cantonese, Mandarin, and English sessions, enabling students to choose their preferred language for participation. All participants were well informed of the purpose, confidentiality, and compensation for the focus group interviews and then provided their consent to participate.

## **Data Analysis Plan**

The quantitative data were analysed using SPSS Statistics 28. Descriptive analyses, including means, standard deviations, and response rates for positive items, were performed to provide an overview of student satisfaction with the national education program. Bivariate correlations were then conducted to examine the associations among the four domains.

The qualitative data were analysed using thematic analysis, a method widely used in qualitative research on interview narratives. The interviews were transcribed prior to analysis by the research assistant following the procedures outlined by Braun & Clarke (26). This process involves familiarising oneself with the data, identifying, assessing, describing, labelling, and categorizing themes. Consistent with prior research by Dou et al. (22), a categorization strategy within the thematic analysis was employed to determine themes based on participants' attitudes. When evaluating the positivity of responses, responses were classified as "positive," "negative," or "neutral." For instance, students' feedback on e-learning lectures, such as "comprehensive," indicating positivity, was labelled as "positive," and feedback such as "struggling with specialized terminology," indicating dissatisfaction, was labelled as "negative." Responses that did not fit into either category were considered "neutral."

## **Results**

### **Post-Program Evaluation**

### ***Research Postgraduate Students***

Table 2 presents the views of research postgraduate students regarding the course from multiple perspectives. Overall, students were mostly positive about the course, with the percentage of positive responses to the items (rated  $\geq 4$  on a Likert scale of 1-6) falling within the range of 94.46% to 99.45%.

Table 2

Concerning course attributes, most research postgraduate students gave positive evaluations, with 97.52% of students recognizing the course's contribution to their personal development. Furthermore, a substantial proportion of students (98.34%) deemed that the course was well designed, provided them with many opportunities for reflection (98.60%), and enhanced their critical thinking skills (95.25%).

Additionally, the course received high praise for its effectiveness in enhancing research postgraduate students' understanding of the history of Modern China and Hong Kong, concepts related to national security, and the significance of the Hong Kong National Security Law. Positive response rates for these aspects ranged between 98.89% and 99.17% (items 7-13). Furthermore, students expressed strong intentions to uphold their obligations as law-abiding citizens (99.45%) and socially responsible leaders (98.89%) following the completion of the course.

When evaluating the self-paced learning mode, the majority of research postgraduate students expressed high satisfaction with items 16 to 19, indicating a positive perception of the self-paced learning mode. This perception was further reinforced by the flexibility offered by the mode (99.45%). Overall, the course received a very high positive perception (98.90%) from our research postgraduate students (item 20).

### ***Taught Postgraduate Students (English)***

The perspectives of English-instructed taught postgraduate students for the course reflected a similar pattern. As shown in Table 3, students expressed predominantly positive evaluations, with the percentage of positive responses to all items (rated  $\geq 4$  on a Likert scale of 1-6) ranging from 92.86% to a high of 98.19%.

Table 3

When it comes to the attributes of the course, a considerable number of English-instructed taught postgraduate students held positive opinions. Most students recognized the course's impact on their personal growth (94.02%). Additionally, a significant portion of students (94.91%) agreed that the course design was favourable, providing abundant chances for reflection (94.39%) and improving their critical thinking abilities (93.29%).

Likewise, the course was highly commended for its efficacy in improving their comprehension of the history of Modern China and Hong Kong, concepts associated with national security, and the importance of the Hong Kong National Security Law, with the positive response rates for these aspects ranging from 96.38% to 98.15% (items 7-13). Moreover, they expressed a strong commitment to fulfilling their responsibilities as law-abiding citizens (98.72%) and socially responsible leaders (97.79%) after completing the course.

The students' feedback regarding the self-paced learning mode was predominantly positive (items 16-19). They specifically highlighted the flexibility of this mode (99.45%). Moreover, the overall perception of the course among English-instructed postgraduate

students was highly positive, as indicated by a significant positive response rate of 95.98% in item 20.

### ***Taught Postgraduate Students (Chinese)***

In a similar vein, Chinese-instructed taught postgraduate students also shared predominantly positive evaluations for the course (as shown in Table 4). The percentage of positive responses to the evaluation items (rated  $\geq 4$  on a Likert scale of 1-6) ranged from 93.94% to 100%.

Table 4

Regarding the attributes of the course, there was an overall consensus on the course's positive impact on their personal growth (96.88%). Additionally, a significant proportion of students (98.34%) agreed that the course design was exceptional, with notable benefits for their critical thinking abilities (96.92%).

Furthermore, the course received strong recognition for its effectiveness in enhancing students' understanding of the history of Modern China and Hong Kong, concepts related to national security, and the significance of the Hong Kong National Security Law, shaping their strong commitment to fulfilling their responsibilities as law-abiding citizens and socially responsible leaders. The positive response rates for these aspects, as reflected in items 7-15, were all 100%.

The self-paced learning mode received mostly positive feedback from the students (items 16-19). The flexibility of the online mode was specifically acknowledged, with a 100% positive response rate. Overall, Chinese-instructed taught postgraduate students held a considerably positive perception of the course, with a 100% positive response rate in item 20.

### ***Correlation Analyses***

The results of correlation analyses conducted among the three groups of students are presented in Tables 5 to 7. Among research postgraduate students, there is a significant positive correlation between perceptions of course attributes and overall evaluation ( $r = .83, p < .001$ ). Additionally, there was a positive correlation between understanding of national education and law-abiding behaviour and overall evaluation ( $r = .82, p < .001$ ). The evaluation of the self-paced learning mode was significantly positively correlated with the overall evaluation ( $r = .79, p < .001$ ). Furthermore, there were positive correlations between perceptions of course attributes and understanding of national education and law-abiding behaviour ( $r = .80, p < .001$ ), as well as the evaluation of the self-paced learning mode ( $r = .75, p < .001$ ). Lastly, understanding of national education and law-abiding behaviour was significantly positively correlated with the evaluation of the self-paced learning mode ( $r = .80, p < .001$ ).

Table 5

Among English-instructed taught postgraduate students, significant positive correlations were found between perceptions of course attributes and overall evaluation ( $r = .85, p < .001$ ). Additionally, understanding of national education and law-abiding behaviour was significantly positively correlated with overall evaluation ( $r = .85, p < .001$ ). Moreover, the evaluation of the self-paced learning mode had a significant positive association with overall evaluation ( $r = .81, p < .001$ ). Furthermore, students' perceptions of course attributes were significantly positively correlated with understanding of national education ( $r = .85, p < .001$ ) and with the evaluation of the self-paced learning mode ( $r = .77, p < .001$ ). Lastly, there was

a significant positive correlation between understanding of national education and law-abiding behaviour and the evaluation of the self-paced learning mode ( $r = .83, p < .001$ ).

Table 6

Among Chinese-instructed taught postgraduate students, a significant positive correlation between perceptions of course attributes and overall evaluation was observed ( $r = 0.60, p < .001$ ). Furthermore, a positive correlation was shown between understanding of national education and law-abiding behaviour and overall evaluation ( $r = 0.64, p < .001$ ), and the evaluation of the self-paced learning mode exhibited a significant positive relationship with overall evaluation ( $r = 0.89, p < .001$ ). Moreover, positive correlations were identified between perceptions of course attributes and understanding of national education ( $r = 0.51, p < .001$ ), as well as the evaluation of the self-paced learning mode ( $r = 0.60, p < .001$ ). Lastly, a significant positive correlation was found between understanding of national education and law-abiding behaviour and the evaluation of the self-paced learning mode ( $r = 0.70, p < .001$ ).

Table 7

### ***Differences in the Experiences of Different Student Groups***

To compare the opinions of different student groups regarding various aspects of the course, Welch's ANOVA was employed for each variable due to the violation of the assumption of homogeneity of variances. In the analysis of the perception of course attributes, results indicated a significant difference among the student groups, with an F-value of 4.83 ( $p < 0.01$ , see Table 8). The effect size, measured by eta squared, was calculated to be 0.003, suggesting a very small effect. The Games-Howell test was used for post hoc comparisons due to unequal variances and sample sizes, providing a more accurate assessment of differences between groups while minimizing the risk of Type I error. The results revealed that research postgraduate students had a significantly higher perception of course attributes compared to English-instructed taught postgraduate students, with a mean difference of 0.16 ( $p < 0.001$ , see Table 9). However, no significant differences were found between the other groups.

Table 8

Table 9

After adjusting the degrees of freedom, Welch's ANOVA compared the means of the three student groups to determine whether there were significant differences between them. For "understanding of national education," the analysis indicated significant group differences, with an F-value of 10.40 ( $p < 0.001$ , see Table 10). The eta squared value for this analysis was 0.007, indicating a small effect size. Post hoc tests showed that Chinese-instructed taught postgraduate students scored significantly higher than English-instructed taught postgraduate students, with a mean difference of 0.24 ( $p < 0.001$ , see Table 11). Additionally, research postgraduate students scored significantly higher than English-instructed taught postgraduate students, with a mean difference of 0.17 ( $p < 0.001$ ).

Table 10

Table 11

Results also revealed significant differences in the evaluation of self-paced learning mode among the groups, with an F-value of 6.43 ( $p < 0.01$ , see Table 12). The effect size for this analysis was  $\eta^2 = 0.004$ , indicating a small effect. Post hoc comparisons showed that research postgraduate students scored significantly higher than English-instructed taught postgraduate students, with a mean difference of 0.14 ( $p < 0.001$ , see Table 13).

Table 12

Table 13

Lastly, the analysis for “overall evaluation” showed significant differences, with an F-value of 7.19 ( $p < 0.001$ , see Table 14). The eta squared value was 0.005, indicating that the effect size is very small. Post hoc comparisons indicated that research postgraduate students scored significantly higher than English-instructed taught postgraduate students, with a mean difference of 0.18 ( $p < 0.001$ , see Table 15).

Table 14

Table 15

## **Focus Group Interviews**

### ***Opinions on the 3-Hour E-learning***

Students generally gave positive feedback on the 3-hour online learning on national education. They appreciated that the content was comprehensive and well organized, as it introduced them to new knowledge that they did not know before, which they found to be closely relevant to their lives. For example, some students stated, “The NSL is something we haven’t encountered before. It is new to us and closely related to our lives. The course is quite helpful.” In addition, they found that “the topics covered throughout the course are very comprehensive and very clear and well-structured.”

However, some students expressed concerns about the course. They noted that “the videos could only be played in sequence, and they could not save their progress, which makes it inconvenient for them to resume watching from where they left off.” Additionally, there were concerns about the length of the material, the lack of interactivity, and the difficulty of understanding technical terms, especially for non-native English speakers. Therefore, they suggested the content be modified to accommodate the different familiarity of students from different backgrounds. They proposed that “in the modern history section, the content that mainland students are already familiar with can be shifted to the part of national security law that mainland students are relatively unfamiliar with.”

### ***Opinions on the 7-Hour Self-Study***

Many students appreciated the flexibility of the online format, as it allowed them to “learn at their own pace and digest content effectively.” The lecture notes also received positive feedback, such as “The notes were well-structured and focused so that relevant information can be found more effectively.” In terms of the learning process, some students prefer to “focus on the materials, completing them, and then take the test directly,” while others prefer to “read the questions, figure out what is unclear, then concentrate on the materials, and then take the test.”

However, some students found that the lecture notes were a bit dull, and the dense text made it difficult to focus. Additionally, a few students overlooked the lecture notes and relied entirely on online searches or video content. For example, “I didn’t notice the existence of

lecture notes. I watched the videos and then answered the questions directly. If I didn't understand something, I searched for the answers on Baidu.”

### ***Content of this Program***

Students were particularly impressed by the section on crimes endangering national security, finding it engaging. Some students mentioned, “The part that covers crimes endangering national security, including case studies that explain under what circumstances one can be convicted, has provided a clearer and deeper understanding of the charges.” Additionally, some students were surprised to learn about the national security legislation in Hong Kong, stating, “I was taken aback by the specific legal provisions in this area and the practical actions taken in recent years.” The students also appreciated the bilingual notes, which highlighted key points. As some students noted, “The notes that included charts and timelines made the information more organized and concise, allowing me to gain a significant amount of information in a short period of time.” Furthermore, the use of videos was commended for their ability to engage multiple senses and capture attention. As expressed by some students, “The videos are more vivid and easily capture my attention.”

### ***Effectiveness of the E-Learning Modules and Self-Study Mode***

Regarding the benefits of the e-learning module and self-study, students believed that the self-learning mode improved their “ability to search for information within PDF documents and conduct online searches.” In terms of the history of modern China, the course “awakened previous historical knowledge, consolidating and refining the understanding in this area, deepening impressions.” Moreover, the course provided them with a comprehensive understanding of national security, allowing them “to have a more holistic perspective on the security of the country.” It also helped them “avoid unconsciously jeopardizing national security.”

Regarding the Hong Kong National Security Law, many students felt that they previously had a vague concept of the law. However, “this course has provided them with a lot of detailed knowledge about the National Security Law, deepening the understanding of the law” and enabling them to “know what kind of behaviour can endanger national security and regulate own words and actions.”

Finally, regarding the section on myths and facts surrounding the NSL, students mentioned that the course helped them “realize that it is normal to have both critical and supportive voices regarding a particular matter” and they “learned how to consider these issues more objectively, which trained the ability of critical thinking.”

### ***Difficulties Encountered in Completing the Whole Learning Module***

Students encountered several difficulties while completing the whole learning module. The most commonly mentioned challenge was “struggling with specialized terminology and relying on external searches for clarification.” In addition, some students experienced difficulties in reading English or traditional Chinese materials, which led to a loss of interest. However, there were students who “did not encounter any difficulties and successfully passed the assessment after completing the learning materials.”

### ***Perceptions of the Multiple-Choice Assessment***

Students generally had positive perceptions of the multiple-choice assessment in the course. The difficulty level was mostly considered appropriate, and many students were “able to pass after one or two attempts.” The chance to attempt the assessment multiple times with different questions is seen as a good way to enhance understanding. Some students stated, “[taking the multiple-choice assessment] for several times can consolidate their knowledge,

as students are prompted to review and analyse their mistakes, leading to a deeper understanding of the content.”

### ***Perceptions of Self-Paced Online Mode***

Students generally perceive the self-paced online learning mode as helpful. They appreciate the ability to control their learning time, find it more engaging, and achieve higher efficiency in learning the materials at different time points. The flexibility of this mode also allows them to learn at their own pace. For example, “everyone can choose the time to watch the videos, whether to skip or not.”

### ***The Necessity of Gaining a Comprehensive Understanding of the NSL***

Students generally believed that gaining a comprehensive understanding of the NSL is highly necessary, as emphasized by multiple students. Students underscored the importance of studying the NSL to “shape the thinking and ideologies of young people who are easily influenced.” Additionally, some students stated that “promoting NSL education is crucial for maintaining social stability, strengthening identity recognition, reducing negative discourse, and fostering national unity,” as well as helping them “to better regulate their own actions.”

### ***Is This NSL Education Program “Brainwashing”?***

Regarding whether the NSL Education Program is considered “brainwashing,” the overwhelming majority of students expressed that they did not feel brainwashed. They emphasized that the program merely “provided factual information, allowed for individual judgment, and focused on education rather than indoctrination”. Many students viewed the program as “a normal course, appreciating its historical understanding and objective presentation of information without harbouring any resentment”. Some students suggested that “those who perceived brainwashing might already possess biased views, indicating that the perception could be influenced by pre-existing beliefs.”

## **Discussion**

The present mixed-method research investigated the post-lecture evaluation of an online national education program among postgraduate students at PolyU. Quantitative and qualitative data were collected on students’ learning experience, course satisfaction, as well as the effectiveness of the program in increasing understanding of national security and personal development. The results yielded several valuable findings. Firstly, among postgraduate students in different programs at PolyU, a considerable proportion of students held positive views on the online national education program, including their views on the attributes of the course, their understanding of national education and law-abiding behaviour, and their evaluation of the self-paced learning mode, and an overall evaluation of the program. These results are consistent with previous studies by Shek et al. (7), showing that PolyU students have high levels of satisfaction with the national education program. Additionally, the positive and significant correlation between course attributes and overall satisfaction proved the effectiveness of e-learning in providing learning resources and improving students’ overall learning experience. In the focus group interviews, students responded positively to the flexibility of the self-study format, appreciating that it allowed them to learn at their own pace and absorb content effectively. The positive feedback confirms that the use of e-learning platforms can enhance the presentation of learning materials, resulting in positive learning outcomes and improving student satisfaction (27-29). In addition, students appreciated the comprehensive and well-structured content and felt that the content was relevant to their daily lives, which increased their understanding of the curriculum. The inclusion of interactive elements, including videos, case studies, bilingual

notes with diagrams and timelines, was recognized for its effectiveness in improving understanding and student engagement. These results echo those of Callı et al. (30), that is, high-quality visual and written content will positively affect students' tendency to use electronic resources for learning.

The results of the correlation analyses support the effectiveness of the program in enhancing students' understanding of national security. There is a significant positive correlation between self-paced learning and understanding of national security and law-abiding behaviour, demonstrating that active participation in self-paced learning can promote a deeper understanding of these concepts. This finding shows how online learning can create an effective environment for students to explore sensitive political topics at their own pace, thereby promoting engagement and fostering a more complete understanding (12, 13). Moreover, feedback from student focus groups shows that the online materials were not only well-structured, but also highly comprehensive for their learning. This further demonstrates the importance of well-designed online courses in facilitating knowledge acquisition and improving student learning outcomes (31).

The results also support the program's effectiveness in contributing to students' personal development (7, 8). The significant positive correlation between students' perceptions of course attributes and self-paced learning supports the view that students can engage in critical thinking and reflection through flexible e-learning (32). Several students shared in focus groups that the online platform provided opportunities for reflection and critical thinking, which also demonstrated the effectiveness of the e-learning program in enhancing students' personal development.

The results of the Welch's ANOVA analyses reveal that research postgraduate students showed notably higher ratings across all domains of evaluation compared to English-instructed taught postgraduate students. This may be due to the fact that the latter are more accustomed to a structured classroom learning model, while the former's usual learning model emphasizes more on an independent learning style. This difference may make research postgraduate students more likely to adapt to e-learning modules and increase their overall satisfaction. Furthermore, as focus group discussions revealed, Chinese-instructed taught postgraduate students showed a better understanding of national education, possibly because of their prior knowledge of Chinese history and related topics.

Although the program received generally positive feedback, student feedback highlighted several areas for improvement in the future. In particular, students expressed a desire for increased interaction in the curriculum and clearer interpretation of complex terms, which is in line with Rajaram (33), who emphasizes the importance of increasing real-life interaction to support online lectures and facilitate deeper comprehension. Additionally, the suggestion to tailor content to different student backgrounds supports research conducted by Alshammari et al. (2015), which shows that student satisfaction and learning outcomes can be improved when course materials are adapted to individual needs.

While this study provides valuable insights, these results should be interpreted with caution. The high proportion of English-instructed taught postgraduates raises concerns about the generalizability of the findings, especially as the association is slightly stronger within this subgroup due to the large sample size. It is worth noting that the highest level of satisfaction is found among Chinese-instructed postgraduate students, followed by research postgraduate students and English-instructed postgraduate students, as reflected by their mean scores across all domains. This difference in satisfaction levels may be due to factors such as cultural alignment, language proficiency, and prior knowledge (24). For example, compared to other student groups, Chinese-instructed taught postgraduate students are often made up of mainland Chinese students with knowledge of relevant disciplines, which might have influenced their learning outcomes and experiences. Understanding these nuances can

shed light on how alignment in the language and content of instruction affects the learning experience. Additionally, the study only focused on PolyU students. Further analysis of students from other Hong Kong universities is needed to deepen our understanding of the factors that cause differences in satisfaction among different student groups, thereby improving the overall student learning experience and outcomes.

In addition, while the results from Welch's ANOVA provide valuable insights into the differences in the experiences among different student groups regarding course attributes and educational understanding, it is worth noting that the effect sizes are relatively small. One possible reason for these modest effect sizes could be attributed to the general homogeneity of educational backgrounds and expectations within the student population. Although differences in perceptions and evaluations were observed, the limited differences in scores may indicate shared experiences among graduate students.

The limitations of the study are twofold. First, the present study focuses only on students' perceived effectiveness, which may not fully capture the course's impact on improving their understanding of national security and personal abilities. Second, only cross-sectional data were used in the present study. Future research should consider examining these effects over time to gain a more comprehensive understanding of the long-term effectiveness of NSL education for graduate students.

In conclusion, this study enhances our comprehension of student satisfaction and the impact of e-learning on national education delivery across diverse academic groups. The insights gained can guide the refinement of course content and teaching methods in self-directed online programs, while also validating the reliability of previous findings and contributing to the existing knowledge base. However, further research is warranted to delve deeper into the effectiveness of online national education programs, identify best practices, and explore innovative approaches to facilitate better outcomes for students.

## References

1. Creery J. Over a million attend Hong Kong demo against controversial extradition law, organisers say. *Hong Kong Free Press*. 2019.
2. Lee FL, Yuen S, Tang G, Cheng EW. Onsite survey findings in Hong Kong's anti-extradition bill protests. 2019.
3. Lai-LaGrotteria S. The Impact of Mass Protests on Hong Kong Educators, Parents, and Students. *Journal of Loss and Trauma* 2023;28(1):21-35.
4. Shek DTL. Protests in Hong Kong (2019-2020): a Perspective Based on Quality of Life and Well-Being. *Appl Res Qual Life* 2020;15(3):619-35.
5. ChinaDaily. Full text: The Law of the People's Republic of China on Safeguarding National Security in the Hong Kong Special Administrative Region, <https://www.chinadaily.com.cn/a/202007/01/WS5efbd6f5a310834817256495.html>; 2020.
6. Pan S. Identity, civic engagement, and learning about citizenship: university students' experiences in Hong Kong. *Compare: A Journal of Comparative and International Education* 2021;51(7):945-64.
7. Shek DTL, Zhu X, Dou D, Li X. National Security Law Education in Hong Kong: Qualitative Evaluation Based on the Perspective of the Students. *International Journal of Environmental Research and Public Health* 2023;20(1):553.
8. Shek DTL, Dou D, Zhu X, Li X. Law abidance leadership education for university students in Hong Kong: Post-lecture evaluation. *Frontiers in Psychology* 2022;13:994448.
9. Li X, Shek DTL, Wu X, Zhang S. Qualitative evaluation of law-abidance leadership

- education for undergraduate students in Hong Kong: Focus groups. *International Journal of Child Health & Human Development* 2023;16(4).
10. Dong Y, Zeb S. Role of higher education system in promoting law abiding behavior among students. *Frontiers in psychology* 2022;13:1036991.
  11. Wanner T, Palmer E. Personalising learning: Exploring student and teacher perceptions about flexible learning and assessment in a flipped university course. *Computers & Education* 2015;88:354-69.
  12. King AS, Taylor JB, Webb BM. Promoting Productive Political Dialogue in Online Discussion Forums. *Journal of Political Science Education* 2021;17(sup1):724-50.
  13. Leston-Bandeira C. Using e-learning to promote critical thinking in politics. *Enhancing Learning in the Social Sciences* 2009;1(3):1-14.
  14. Bloomberg LD. *Designing and delivering effective online instruction: How to engage adult learners*. Teachers College Press; 2021.
  15. Mayer RE. Using multimedia for e-learning. *Journal of computer assisted learning* 2017;33(5):403-23.
  16. Zang F, Tian M, Fan J, Sun Y. Influences of online learning environment on international students' intrinsic motivation and engagement in the Chinese learning. *Journal of International Students* 2022;12(S1):61-82.
  17. Jiang H, Islam AA, Gu X, Spector JM. Online learning satisfaction in higher education during the COVID-19 pandemic: A regional comparison between Eastern and Western Chinese universities. *Education and information technologies* 2021:1-23.
  18. Han J, Geng X, Wang Q. Sustainable development of university EFL learners' engagement, satisfaction, and self-efficacy in online learning environments: Chinese experiences. *Sustainability* 2021;13(21):11655.
  19. Yusof FH, Fee LY. Mediation Effect of Self-Regulation in Relationship between Attention Span and Motivation in Online Learning during COVID-19 Pandemic among Undergraduate Students in The Faculty of Human Ecology, Universiti Putra Malaysia. 2022.
  20. Gray JA, DiLoreto M. The effects of student engagement, student satisfaction, and perceived learning in online learning environments. *International Journal of Educational Leadership Preparation* 2016;11(1):n1.
  21. Dou D, Wu X, Shek DTL. Focus group evaluation of national education in Hong Kong: Postgraduate students' perceptions. *International Journal of Child Health and Human Development, suppl Special Issue: Hong Kong National Security Law Education Programs* 2023a;16(4):335-51.
  22. Dou D, Wu X, Shek DTL, Leung G. Evaluating the effectiveness of an online National Education Program for Research Postgraduate Students in Hong Kong: A multidimensional approach. *International Journal of Child Health and Human Development, suppl Special Issue: Hong Kong National Security Law Education Programs* 2023b;16(4):289-301.
  23. Dou D, Wu X, Zhang S, Shek DTL. Evaluating the impact of a national education program for taught postgraduate students in Hong Kong. *International Journal of Child Health and Human Development, suppl Special Issue: Hong Kong National Security Law Education Programs* 2023c;16(4):279-88.
  24. Cortés A, Barbera E. *Cultural Differences in Students' Perceptions Towards Online Learning Success Factors*. 2013.
  25. Zhu X, Shek DTL, Xue W, Jun H. Online National Security Law (NSL) education in Hong Kong: Qualitative evaluation based on focus groups. *International Journal of Child Health & Human Development* 2023;16(4):321-33.
  26. Braun V, Clarke V. *Thematic analysis*. APA handbook of research methods in

- psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological. Washington, DC, US: American Psychological Association; 2012, p. 57-71.
27. Agyeiwaah E, Badu Baiden F, Gamor E, Hsu F-C. Determining the attributes that influence students' online learning satisfaction during COVID-19 pandemic. *Journal of Hospitality, Leisure, Sport & Tourism Education* 2022;30:100364.
  28. Alqurni J. Assessing the Usability of E-Learning Software Among University Students. *International Journal of Information Technology and Web Engineering* 2023;18:1-26.
  29. Zhuang Y, Ma H, Xie H, Leung ACM, Hancke GP, Wang FL. When Innovation Meets Evolution: An Extensive Study of Emerging e-Learning Technologies for Higher Education in Hong Kong. In: Wu T-T, Gennari R, Huang Y-M, Xie H, Cao Y, eds. *Emerging Technologies for Education*. Cham: Springer International Publishing; 2017:574-84.
  30. Callı L, Balcıkanlı C, Callı F, Cebeci HI, Seymen OF. Identifying Factors That Contribute To The Satisfaction Of Students In E-Learning. *Turkish Online Journal of Distance Education* 2013;14(1):85-101.
  31. Ho IMK, Cheong KY, Weldon A. Predicting student satisfaction of emergency remote learning in higher education during COVID-19 using machine learning techniques. *PLoS One* 2021;16(4):e0249423.
  32. Ng E. Successful implementation of E-learning in self-financed Higher Education: Experience from Hong Kong. *Journal of Educational Technology and Online Learning* 2020;3(1):91-107.
  33. Rajaram K. Flipped classrooms: providing a scaffolding support system with real-time learning interventions. *International Journal for the Scholarship of Teaching and Learning* 2019;9(1):30-58.
  34. Alshammari M, Anane R, Hendley RJ. Students' Satisfaction in Learning Style-Based Adaptation. *2015 IEEE 15th international conference on advanced learning technologies*. IEEE; 2015:55-7.

**Table 1***Demographic Information of the Participants (n = 2,966).*

<b>Variables</b>	<b>Frequencies</b>	<b>Valid percent (%)</b>
<b>Gender</b>		
Males	1521	51.28
Females	1405	47.37
<b>Program</b>		
Research postgraduate	366	12.34
Taught postgraduate (English)	2534	85.43
Taught postgraduate (Chinese)	66	2.23

**Table 2***Descriptive Results of Research Postgraduate Students' Perceptions of the Course (n = 366).*

Items	N	Mean	S.D.	Positive responses %
1. The design of this course was very good.	362	5.54	0.69	98.34%
2. There were many opportunities for reflection in this course.	361	5.45	0.75	98.60%
3. This course is helpful to my personal development.	363	5.42	0.84	97.52%
4. This course has improved my problem-solving ability.	361	5.22	1.02	94.46%
5. This course has improved my understanding of the importance of attributes of successful leaders (e.g., critical thinking, moral competence, law abidance etc.).	361	5.34	0.90	95.84%
6. This course has improved my critical thinking.	358	5.27	0.94	95.25%
7. This course helps me understand the knowledge of the history of Modern China.	360	5.67	0.65	99.17%
8. This course helps me understand the knowledge of the history of Hong Kong.	361	5.66	0.64	99.17%
9. This course has helped me understand the concepts of national security.	360	5.66	0.68	98.89%
10. I understand that national security is important for the stability of a society.	362	5.70	0.61	99.17%
11. This course has helped me understand the offenses and penalties surrounding the Hong Kong National Security Law.	362	5.68	0.62	99.17%
12. This course has helped me understand the importance of implementing the Hong Kong National Security Law.	362	5.66	0.64	98.90%
13. This course has helped me clarify some myths related to Hong Kong National Security Law.	359	5.60	0.71	98.33%
14. I will try my best to serve as a law-abiding citizen.	363	5.76	0.55	99.45%
15. I will try my best to serve as a socially responsible leader.	361	5.63	0.68	98.89%
16. The self-paced online learning course enabled me to learn more efficiently about this course.	363	5.62	0.68	98.62%
17. The self-paced online learning course allows me to learn the course materials according to my own situation.	363	5.67	0.63	99.45%
18. Overall speaking, I like the self-paced online learning experience.	360	5.64	0.66	98.89%
19. Generally speaking, there is sufficient support provided to help students pass assessments, such as sending reminder emails and organizing tutorial sessions.	361	5.53	0.76	98.06%
20. Overall speaking, I have a very positive evaluation of this course.	362	5.59	0.67	98.90%

*Note.* All items were rated on a 6-point Likert scale with 1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, 6 = Strongly Agree. Responses of 1–3 are considered negative. Responses of 4–6 are considered positive.

**Table 3**

*Descriptive Results of Taught Postgraduate Students' (English) Perceptions of the Course (n = 2,534).*

Items	N	Mean	S.D.	Positive responses %
1. The design of this course was very good.	2497	5.31	0.98	94.91%
2. There were many opportunities for reflection in this course.	2496	5.26	1.01	94.39%
3. This course is helpful to my personal development.	2493	5.25	1.05	94.02%
4. This course has improved my problem-solving ability.	2493	5.10	1.17	90.89%
5. This course has improved my understanding of the importance of attributes of successful leaders (e.g., critical thinking, moral competence, law abidance etc.).	2493	5.17	1.11	92.86%
6. This course has improved my critical thinking.	2489	5.19	1.11	93.29%
7. This course helps me understand the knowledge of the history of Modern China.	2485	5.47	0.85	97.87%
8. This course helps me understand the knowledge of the history of Hong Kong.	2488	5.46	0.86	97.59%
9. This course has helped me understand the concepts of national security.	2495	5.48	0.86	97.47%
10. I understand that national security is important for the stability of a society.	2494	5.52	0.86	97.31%
11. This course has helped me understand the offenses and penalties surrounding the Hong Kong National Security Law.	2493	5.51	0.82	98.15%
12. This course has helped me understand the importance of implementing the Hong Kong National Security Law.	2485	5.47	0.90	96.70%
13. This course has helped me clarify some myths related to Hong Kong National Security Law.	2488	5.43	0.90	96.38%
14. I will try my best to serve as a law-abiding citizen.	2492	5.64	0.72	98.72%
15. I will try my best to serve as a socially responsible leader.	2489	5.53	0.81	97.79%
16. The self-paced online learning course enabled me to learn more efficiently about this course.	2493	5.51	0.80	97.83%
17. The self-paced online learning course allows me to learn the course materials according to my own situation.	2488	5.52	0.79	98.19%
18. Overall speaking, I like the self-paced online learning experience.	2485	5.49	0.81	97.75%
19. Generally speaking, there is sufficient support provided to help students pass assessments, such as sending reminder emails and organizing tutorial sessions.	2489	5.40	0.91	96.38%
20. Overall speaking, I have a very positive evaluation of this course.	2488	5.41	0.94	95.98%

*Note.* All items were rated on a 6-point Likert scale with 1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, 6 = Strongly Agree. Responses of 1–3 are considered negative. Responses of 4–6 are considered positive.

**Table 4**

*Descriptive Results of Taught Postgraduate Students' (Chinese) Perceptions of the Course (n = 66).*

Items	N	Mean	S.D.	Positive responses %
1. The design of this course was very good.	66	5.53	0.73	96.97%
2. There were many opportunities for reflection in this course.	66	5.42	0.82	95.45%
3. This course is helpful to my personal development.	64	5.41	0.83	96.88%
4. This course has improved my problem-solving ability.	66	5.27	1.00	93.94%
5. This course has improved my understanding of the importance of attributes of successful leaders (e.g., critical thinking, moral competence, law abidance etc.).	66	5.26	0.92	95.45%
6. This course has improved my critical thinking.	65	5.40	0.84	96.92%
7. This course helps me understand the knowledge of the history of Modern China.	65	5.69	0.56	100.00%
8. This course helps me understand the knowledge of the history of Hong Kong.	66	5.67	0.56	100.00%
9. This course has helped me understand the concepts of national security.	65	5.75	0.47	100.00%
10. I understand that national security is important for the stability of a society.	65	5.80	0.44	100.00%
11. This course has helped me understand the offenses and penalties surrounding the Hong Kong National Security Law.	65	5.78	0.45	100.00%
12. This course has helped me understand the importance of implementing the Hong Kong National Security Law.	65	5.78	0.45	100.00%
13. This course has helped me clarify some myths related to Hong Kong National Security Law.	66	5.76	0.47	100.00%
14. I will try my best to serve as a law-abiding citizen.	66	5.82	0.43	100.00%
15. I will try my best to serve as a socially responsible leader.	65	5.65	0.60	100.00%
16. The self-paced online learning course enabled me to learn more efficiently about this course.	66	5.62	0.70	98.50%
17. The self-paced online learning course allows me to learn the course materials according to my own situation.	66	5.76	0.50	100.00%
18. Overall speaking, I like the self-paced online learning experience.	66	5.58	0.68	98.50%
19. Generally speaking, there is sufficient support provided to help students pass assessments, such as sending reminder emails and organizing tutorial sessions.	66	5.61	0.68	98.50%
20. Overall speaking, I have a very positive evaluation of this course.	64	5.59	0.64	100.00%

*Note.* All items were rated on a 6-point Likert scale with 1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, 6 = Strongly Agree. Responses of 1–3 are considered negative. Responses of 4–6 are considered positive.

**Table 5.**

*Correlations Among Variables in the Course Evaluation Questionnaire for Research Postgraduate Students (n = 366).*

<b>Variables</b>	<b>Mean</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>
1. Perception of course attributes	5.37	0.77			
2. Understanding of National Education and law-abiding behaviour	5.67	0.57	.80***		
3. Evaluation of self-paced learning mode	5.62	0.59	.75***	.80***	
4. Overall evaluation	5.59	0.67	.83***	.82***	.79***

*Note.* \*\*\*  $p < 0.001$

**Table 6.**

*Correlations Among Variables in the Course Evaluation Questionnaire for Taught Postgraduate (English) Students (n = 2,534).*

<b>Variables</b>	<b>Mean</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>
1. Perception of course attributes	5.21	1.00			
2. Understanding of National Education and law-abiding behaviour	5.50	0.77	.85***		
3. Evaluation of self-paced learning mode	5.48	0.76	.77***	.83***	
4. Overall evaluation	5.41	0.94	.85***	.85***	.81***

*Note.* \*\*\*  $p < 0.001$

**Table 7.**

*Correlations Among Variables in the Course Evaluation Questionnaire for Taught Postgraduate (Chinese) Students (n = 66).*

<b>Variables</b>	<b>Mean</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>
1. Perception of course attributes	5.37	0.77			
2. Understanding of National Education and law-abiding behaviour	5.74	0.40	.51***		
3. Evaluation of self-paced learning mode	5.64	0.55	.60***	.70***	
4. Overall evaluation	5.59	0.64	.60***	.64***	.89***

*Note.* \*\*\*  $p < 0.001$

**Table 8.***ANOVA Results for Perceptions of Course Attributes (n = 2,858).*

Dependent Variable: Perceptions of course attributes

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9.180*	2	4.590	4.834	.008	.003
Intercept	13310.683	1	13310.683	14017.107	.000	.831
Student types	9.180	2	4.590	4.834	.008	.003
Error	2711.116	2855	.950			
Total	81037.833	2858				
Corrected Total	2720.269	2857				

Note. \*R Squared = .003 (Adjusted R Squared = .003)

**Table 9.***Post Hoc Tests for Perceptions of Course Attributes (n = 2,858).*

Dependent Variable: Perceptions of course attributes

Games-Howell

Student types		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower	Upper
1	2	.1612*	.04590	.001	.0533	.2691
	3	.0023	.10496	1.000	-.2481	.2526
2	1	-.1612*	.04590	.001	-.2691	-.0533
	3	-.1589	.09867	.248	-.3954	.0775
3	1	-.0023	.10496	1.000	-.2526	.2481
	2	.1589	.09867	.248	-.0775	.3954

Note. 1 = Research Postgraduate Students; 2 = Taught Postgraduate (English) Students; 3 = Taught Postgraduate (Chinese) Students

**Table 10.**

*ANOVA Results for Understanding of National Education and Law-Abiding Behaviour (n = 2,828).*

Dependent Variable: Understanding of National Education and law-abiding behaviour

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11.558*	2	5.779	10.398	.000	.007
Intercept	15125.705	1	15125.705	27215.405	.000	.906
Student types	11.558	2	5.779	10.398	.000	.007
Error	1570.071	2825	.556			
Total	87960.531	2828				
Corrected Total	1581.629	2827				

Note. \*R Squared = .007 (Adjusted R Squared = .007)

**Table 11.**

*Post Hoc Tests for Understanding of National Education and Law-Abiding Behaviour (n = 2,828).*

Dependent Variable: Understanding of National Education and law-abiding behaviour  
Games-Howell

Student types		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower	Upper
1	2	.1674*	.03430	<.001	.0868	.2480
	3	-.0734	.05906	.431	-.2136	.0669
2	1	-.1674*	.03430	<.001	-.2480	-.0868
	3	-.2407*	.05299	<.001	-.3674	-.1141
3	1	.0734	.05906	.431	-.0669	.2136
	2	.2407*	.05299	<.001	.1141	.3674

Note. 1 = Research Postgraduate Students; 2 = Taught Postgraduate (English) Students; 3 = Taught Postgraduate (Chinese) Students

**Table 12.***ANOVA Results for Evaluation of Self-Paced Learning Mode (n = 2,888).*

Dependent Variable: Evaluation of self-paced learning mode

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	7.064*	2	3.522	6.432	.002	.004
Intercept	15261.743	1	15261.743	27793.535	.000	.906
Student types	7.064	2	3.532	6.432	.002	.004
Error	1584.186	2885	.549			
Total	88958.750	2888				
Corrected Total	1591.250	2887				

Note. \*R Squared = .004 (Adjusted R Squared = .004)

**Table 13.***Post Hoc Tests for Evaluation of Self-Paced Learning Mode (n = 2,888).*

Dependent Variable: Evaluation of self-paced learning mode

Games-Howell

Student types		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower	Upper
1	2	.1355*	.03499	<.001	.0533	.2177
	3	-.0249	.07499	.941	-.2035	.1536
2	1	-.1355*	.03499	<.001	-.2177	-.0533
	3	-.1604	.06981	.062	-.3275	.0066
3	1	.0249	.07499	.941	-.1536	.2035
	2	.1604	.06981	.062	-.0066	.3275

Note. 1 = Research Postgraduate Students; 2 = Taught Postgraduate (English) Students; 3 = Taught Postgraduate (Chinese) Students

**Table 14.**  
*ANOVA Results for Overall Evaluation (n = 2,914).*  
 Dependent Variable: Overall evaluation

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11.749*	2	5.874	7.186	<.001	.005
Intercept	14641.973	1	14641.973	17909.970	.000	.860
Student types	11.749	2	5.874	7.186	<.001	.005
Error	2379.835	2911	.818			
Total	88419.000	2914				
Corrected Total	2391.584	2913				

Note. \*R Squared = .005 (Adjusted R Squared = .004)

**Table 15.**  
*Post Hoc Tests for Overall Evaluation (n = 2,914).*  
 Dependent Variable: Overall evaluation  
 Games-Howell

Student types		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower	Upper
1	2	.18*	.040	<.001	.09	.27
	3	-.01	.087	.995	-.21	.20
2	1	-.18*	.040	<.001	-.27	-.09
	3	-.19	.082	.064	-.38	.01
3	1	.01	.087	.995	-.20	.21
	2	.19	.082	.064	-.01	.38

Note. 1 = Research Postgraduate Students; 2 = Taught Postgraduate (English) Students; 3 = Taught Postgraduate (Chinese) Students