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Running title: Undergraduate students' subjective outcome evaluation

Perceived effectiveness of a National Education Program for undergraduate students in Hong Kong: Subjective outcome evaluation

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Abstract: Based on students' subjective perception, the primary objective of the present research was to assess the effectiveness of a national education program within the framework of higher education in Hong Kong. Responding to the need to foster law abidance education among university students, we delivered a three-hour lecture on law abidance leadership addressing issues related to the Hong Kong National Security Law and invited students to answer an evaluation survey. A total of 1,155 students completed the post-lecture questionnaire. By analyzing the data using Confirmatory Factor Analysis, we found that the three-factor model (i.e., teaching qualities, lecture attributes, and students' law appreciation) was well established and students had positive perception of the lecture. Furthermore, we identified the three factors as significant predictors of students' overall perception of the national education program. Qualitative responses, echoing quantitative data, were also found to be positive. This study conducted further research to validate existing empirical evidence about the efficacy of the national education program in the higher education sector in Hong Kong.

Keywords: National education program, leadership subject, subjective outcome evaluation, undergraduate students, Hong Kong

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Introduction

The protest known as “The Anti-Extradition Law Amendment Bill” in 2019 had evident adverse social implications that significantly impeded the quality of life and well-being of those living in Hong Kong (1). Despite the protests being initiated with peace, most of them ended up with disturbance and violence, where demonstrators and criminal syndicates who took advantage of the chaos attacked bystanders and destroyed private and public properties. The Government of the Hong Kong Special Administrative Region (Hong Kong government) reported sharply increasing criminal cases during the second half of 2019, which reversed a consecutive downward trend of crimes since 2007 (HKSAR Government, 2020). Months-long social unrest

was believed to significantly contribute to the upheaval of crime statistics either directly or indirectly (2). Moreover, people believe that university students actively participated in the protests as violent altercations between demonstrators and police happened in educational institutions (3). According to the Hong Kong Police Force, 10,278 people had been arrested by June 2022, among whom 4,010 were students, accounting for 39% of the arrestees (4). Charges against protesters included rioting, unlawful assembly, arson, possession of offensive weapons, assaulting police officers, and stopping vehicles on the highway (5). These incidents reflected students' insufficient legal awareness and understanding of the value of law abidance, making them susceptible to external influences and more vulnerable to irrational expressions of arguments (6). Several local universities such as The Hong Kong Polytechnic University (PolyU) and The Chinese University of Hong Kong (CUHK) were occupied and damaged much during the riots. As reported, the estimated renovation fees of PolyU reached HKD 700 million, covering the reconstruction of broken building gates and windows, besmirched exteriors, and waterlogged indoor facilities (7). Meanwhile, the protests hindered the regular functioning of universities, leading to "conflictual academic environments on campuses, with several violent confrontations between students, demonstrators, and the police" (8), forcing the temporary cessation or substitution of lectures with online instruction, the rearrangement of examination schedules, and the deferment of new admissions (1,9). Furthermore, it also affected the positive image of Hong Kong universities for international students and academics (3). There was concern that the willingness of non-local students and outstanding academics to study and work at Hong Kong would be undermined (3). Therefore, it has become a very urgent and necessary task to restore social stability in Hong Kong and conduct education on national security in Hong Kong's tertiary institutions so as to raise the awareness of adherence to the law among university students and the public.

"The Law of the People's Republic of China on Safeguarding National Security in the Hong Kong Special Administrative Region" (also commonly regarded as the "Hong Kong National Security Law" or NSL) is one of the important means of restoring law and order in Hong Kong. Enacted by the Standing Committee of the National People's Congress on June 30th, 2020, the NSL aims to "establish and improve the legal system and implementation mechanism for safeguarding national security in the Special Administrative Region" (10) and empowers the Hong Kong government to take ad hoc actions to preserve national security and social stability. It also draws "political red lines against the spread and infiltration of Hong Kong independence on university campuses" (3). As reported, the number of violent crimes in 2020 dropped by 3.1% since the introduction of the NSL (11). In addition, to enhance the public's understanding of NSL and to fully grasp the legal values and rules, Article 10 of the NSL encourages "the Hong Kong Special Administrative Region (HKSAR) to promote national security education in schools and universities and through social organizations, the media, the internet, and other means to raise the awareness of Hong Kong residents of national security and of the obligation to abide by the law" (12). Thus, there is a requirement for colleges to implement national security education programs in order to clarify the significance of the NSL and raise students' awareness of appreciating the law.

In fact, programs related to national security have become a significant addition to the social studies curriculum in high schools and higher education institutes worldwide (13). Particularly in some developed societies, national security education has been considered a substantial component of civic education. For example, in the U.S., both sides of the political spectrum have widely agreed upon national security education against international and domestic terrorism ever

since the attack of September 11. The United States government has since then initiated a national undertaking of protecting national security through education, where education covering skills and knowledge essential to national security protection, including computer programming, engineering, and crisis leadership, are to be offered to pre-college students (14-16). Similarly, national security education constitutes an indispensable part of civic education in Singapore, emphasizing how Singapore's prosperity has been established in a secure geopolitical environment (17). In Hong Kong, primary and high schools are given the responsibility to implement citizenship education (commonly known as "Moral, Civic and National Education [MCNE]") to enhance students' national security awareness, but almost no general education subject related to national security is implemented in the higher education sector (15).

In response to the call for national security education for university students, national security education program was incorporated into a subject entitled "Tomorrow's Leaders" at the Hong Kong Polytechnic University (PolyU). The program includes a 3-hour in-person lecture in conjunction with 7-hour self-study, with the objectives of briefly introducing "the history of modern Chinese history" ("Century of Humiliation"), "the concept of national security", and NSL with selected cases considered as its offense and other relevant issues to first-year undergraduate students. As a kind of law-related education (LRE), the program aims to develop more positive attitudes toward the law in university students through helping them acquire knowledge of legal concepts and promoting their spirits of law abidance. It could also facilitate students to understand the consequences of criminal offenses and charges under NSL in Hong Kong and enhance their respect for law abidance (18). It is well known that lack of information literacy (19) and self-autonomy awareness (20), and imitation of peer's criminal behaviors (21) are significant contributors to juvenile delinquency. In addition, insufficient legal education and competitive sociality jointly catalyzed local youngsters to be apt to release the pressure by committing violent crimes (6). Consequently, higher education institutes have the responsibility to "nurture students' awareness and understanding of the basic democratic principles and values on which our law, government and society are based" through law-related education in order to help them become effective citizens (22). The "US Office of Education" (23) described LRE as:

"Those organized learning experiences provide students and educators with opportunities to develop the knowledge and understanding, skills, attitudes, and appreciations necessary to respond effectively to the law and legal issues in our complex and changing society"

Scholars also identified multi-dimensional benefits of practicing legal education for university students, including familiarizing elementary knowledge of laws (intellectual dimension), regulating individual behaviors regarding laws (social dimension), and fostering awareness of maintaining public well-being (environmental dimension) (24,25). Moreover, the enhancement of legal education in terms of social administration renders the necessity of preventing potential illegality and social unrest.

Since the COVID-19 pandemic was no longer categorized as a public health emergency, the teaching mode of our national education program has shifted from hybrid to face-to-face in 2022/23 academic year. Scholars believe that face-to-face instruction can optimize the effectiveness of teaching sensitive or controversial topics, such as children's sexuality (26) and sexual violence (27), as well as politically sensitive ones, like religious beliefs and LGBTQ citizenship (28, 29). National security education may be a sensitive topic in contemporary Hong Kong. Therefore, the cultivation of high-quality learning experiences that include sensitive issues

is of utmost importance in fostering the resilience necessary for students to navigate the sensitive terrain that unavoidably emerges within academic and professional settings. As demonstrated, students generally benefit from such a learning process because controversial topics usually push them to reflect critically on perspectives from multiple and, in most cases, conflicting interest parties, whereby they realize how intricate social issues could be (30). Correspondingly, teachers also want to listen to more student voices and give students different opportunities to express themselves on complex and sensitive issues. In addition, studies on the pedagogy of sensitive topics in various disciplines commonly stress the significance of establishing a learning community to address any discomfort or misgiving that emerges throughout the learning process, and the key to successful teaching lies in the correct guidance of the teacher. In this sense, face-to-face instruction allows the convenience of constructing learning communities so that teachers can immediately address any concerns that emerge during teaching (28). Especially for undergraduate students whose values are taking shape, guiding students' emotions and understanding of controversial topics promptly during the learning process can help them think about themselves, the world, and others in new ways (31). Upon completion of the face-to-face lecture and online self-study, students' learning outcomes will be assessed via a multiple-choice quiz with 20 questions, where students are offered unlimited attempts until they achieve a passing grade (16 out of 20).

In previous academic years, the national education program has been successfully delivered to all students (including first-year undergraduates, senior-year students, and postgraduates) at the PolyU, and its teaching effectiveness has also been evaluated using different research approaches (6,18,24,32-34). The first-year undergraduates generally held favorable opinions of the lecture content and benefits and were satisfied with their teacher's performance. On these grounds, replicating the results over time is necessary to evaluate the effectiveness of the NSL education program by analyzing how students perceive the program under a face-to-face teaching mode, which provides more direct interaction between teachers and students or amongst peers. Silliman (35) suggested that politically sensitive issues are better taught in an environment that allows close interaction between students and instructors. It would be easier to encourage fruitful and thought-provoking discussion and reflection on topics among classmates when there is better and more conformable teacher-student interaction in the classroom, mainly when some of the critical socially acknowledged cases are utilized to underscore the fundamental principle of national security law (35). Furthermore, students could get the opportunity to witness their instructors' expertise in person and perceive their enthusiasm, openness, and concern toward students.

The objective of this research was to investigate the potential predictors of students' overall satisfaction with the Law Abidance Leadership lecture, specifically focusing on their reported teaching quality, perceived lecture qualities, and appreciation of law. First, how students perceive teaching performance of the instructor has been regarded as a critical predictor of their general perception of learning experiences. The extent to which an instructor manages to articulate knowledge, maintain interactive atmosphere, and display personal charisma to convince the audiences are thus of high relevancy to how students evaluate the learning experiences (36). Second, students' perceived lecture attributes, consequently, contribute to ultimate satisfaction with their learning experiences. Other than the instructor's teaching strategies that embody during the class, lecture attributes serve as routine devices such as readings and lecture notes by which the instructor utilizes to facilitate knowledge transfer (37). Specifically, learning materials such as readings and lecture notes are usually students' first

encounter with the information they are about to receive as students are generally required or at least recommended to consult these materials before attending a lecture (38), hence their ultimate perception of learning experiences can be expected to covary with the lecture attributes they previously perceived. Lastly, students generally display satisfaction if they are connected with the values that a specific course has conveyed. Therefore, students would speak in favor of a lecture on legal issues and law abidance if they identify with the value of appreciating the laws.

Based on previous evaluation projects covering multiple positive youth development programs (in both secondary and tertiary education), we identified students' perceptions of lecture attributes (i.e., course contents, relevant materials, teaching structure, etc.) and teaching quality to be the predictors of students' overall subjective assessment of the courses they take (6, 18, 39-41). The third factor of students' appreciation of law has also been tested as a significant predictor of their overall satisfaction. Meanwhile, we also hope to alleviate the "replication crisis" in the social sciences (42), especially in psychology (43), by replicating our previous findings in the existing scientific literature. Based on the previous evaluation studies of current "Law Abidance Leadership" lecture, students have reported dominantly positive perception both in post-lecture satisfaction scales and open-ended comment boxes, indicating both quantitatively and qualitatively their overall satisfaction with the lecture (6, 18). As the students in this study were drawn from a different population, there is a need to see whether the previous findings can be replicated.

In this study, we examined students' perceptions of the national education program offered in the second semester of the 2022/2023 academic year at the PolyU through the post-lecture evaluation. The evaluation questionnaire contains 26 items and an open-ended question. Based on previous studies (6, 18, 40), the 26 items were further categorized into three dimensions: perceived quality of instruction, teacher performance, and student appreciation of law abidance leadership. In the current study, we aimed to further validate the first-year undergraduates' perception towards the law abidance leadership course and identify which components, including lecture attributes, teaching quality, and appreciation of law abidance, could predict students' satisfaction in face-to-face education programs. As a replication study, this study can draw an integrated picture of how students view national security education across various teaching and learning contexts. Three research questions were proposed as follows:

1. What are the psychometric characteristics of the 26-item questionnaire of students' subjective perception on the national education program? Based on established findings on the contribution of lecture attributes, teaching quality, and appreciation of law abidance (6), we hypothesized that the three-factor model would be supported (Hypothesis 1a) and the three factors significantly contribute to students' overall satisfaction of the program (Hypothesis 1b).
2. What are students' perceptions of the national security program in terms of course attributes (including course design, content, process, and benefits), teaching quality, and appreciation of law abidance? Drawing on our previous research (6,18), we expected students' responses to be positive across all the three dimensions (Hypothesis 2).
3. What are the qualitative responses of students to the three-hour lecture on law abidance leadership? Based on previous observations (6), we expected students' qualitative responses to be positive (Hypothesis 3).

Methods

All year 1 undergraduates from nine faculties and schools (e.g., Faculty of Engineering, Faculty of Health and Social Sciences) are required to attend a leadership subject, “Tomorrow’s Leaders” at the PolyU. This subject consists of 13 lectures including a 3-hour lecture on law abidance leadership (Lecture 8). After attending Lecture 8, students were invited to fill out an evaluation form to report their subjective experiences on this lecture in terms of their opinions on the teachers’ attributes, perspectives of the lecture attributes, and their appreciation of law abidance leadership. A total of 1,155 students completed the survey.

Instruments

The post-lecture evaluation survey was developed based on Shek and colleagues’ study (18). It had been used for several times in the previous studies and was demonstrated reliable and valid (6, 18). This survey included 26 quantitative items and one open-ended question. As for the quantitative part, item 1 to item 11 were employed as a subscale for students’ perception of the lecture attributes; item 12 to item 19 were for studying students’ appreciation of law abidance leadership; item 21 to item 26 were designed for the subscale of teaching quality; and item 20 was asking about students’ overall evaluation of this lecture. All quantitative items were rated on a 6-point Likert scale with higher scores indicating higher agreement (from 1 = “strongly disagree” to 6 = “strongly agree”). Scores higher than or equal to 4 were positive responses while those lower than 4 would be considered negative. As for the qualitative item, it asked students to write down their comments about the lecture or anything they learned from the lecture. They could also write “NIL” if they do not have any comments. Students’ responses were categorized as positive or negative/undecided.

Data analysis

To replicate the three-factor model, Confirmatory Factor Analysis (CFA) was conducted using MPlus. To analyze the impacts of the three variables on students’ overall perception of the lecture, we employed a structural equation modeling (SEM) to examine the structural model. The model fit was assessed based on several indicators, including the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA; 90% CI), and the Standardized Root Mean Squared Residual (SRMR). CFI and TLI greater than 0.9, RMSEA less than 0.06, and SRMR less than 0.08 would be considered satisfactory (44-46). Moreover, a one-sample Chi-square test was conducted to check if the possibilities of students holding positive or negative/undecided opinions on this lecture were equal.

Table 1

Results

The descriptive statistics and inter-correlational relationships among the three variables, namely students’ perceived lecture attributes, appreciation of law abidance leadership and teaching quality, and overall satisfaction are summarized in table 1. It was found that the inter-correlations among the three variables ($r_s > .82$, $p_s < .001$) were significant. We also found that the inter-correlation between three variables and overall satisfaction were significant ($r_s > .80$, $p_s < .001$).

The overall fit of the three-factor model was acceptable: $\chi^2(272) = 1130$, CFI = .938, TLI = .932, RMSEA (90% CI) = .054 (.051, .057) and SRMR = .032. All factor loadings were high, ranging from .83 to .93 for perceptions of the lecture attributes, .85 to .94 for appreciation of law abidance leadership, and .87 to .93 for teaching quality. All items’ values of skewness were

smaller than 2 and values of kurtosis were lower than 7, which were far below the criteria of being moderately nonnormal and satisfied the prerequisite of normality (47). Details were reported in table 2. Hypothesis 1a was well supported.

Table 2

The SEM results revealed that all attributes of the scale (i.e., perceptions of the lecture attributes, appreciation of law abidance leadership and teachers' attributes) were significantly related to students' overall satisfaction towards the lecture. The overall fit of the structural model was acceptable: $\chi^2(294) = 1164$, CFI = .940, TLI = .934, RMSEA (90% CI) = .052 (.049, .056), and SRMR = .031. Specifically, the study found that there is a notable positive correlation between perceptions of the lecture attributes, appreciation of law abidance leadership, teachers' attributes, and students' overall satisfaction ($\beta = 0.34, p < .001$; $\beta = 0.50, p < .001$; $\beta = 0.10, p < .05$; respectively). The SEM model was depicted in Figure 1. In short, the design of the lecture, including the lecture attributes and the content of law abidance leadership, and teachers' teaching quality was significantly related to students' perception towards the lecture, supporting Hypothesis 1b.

Table 3

The positive responses rate for each item was also calculated as shown in Table 3. Consistent with our expectation, most students responded positively to each question. The means of all questions were higher than 4 and many of them were approaching 5 (scores higher than 4 indicate positive perceptions). Meanwhile, the positive response rates of all items were approximately 90% and some (item 18 and 26) even reach 95%. To be specific, 90% and 88% of students thought the design and atmosphere of this lecture was pretty great. Meanwhile, students agreed that they had much interaction with their peers (87%) and the lecturer (91%). They had many opportunities for participation (87%) and reflection (88%) during the lecture. Moreover, students thought that the lecture benefited their personal development (86%), especially their ability of solving problem (85%), communication (84%), and critical thinking (88%). Besides, students also thought that this lecture helped them understand more about the importance of successful leaders' attributes (88%), the importance of law abidance for social stability (92%) and leadership (90%), the concepts of national security (92%), the principles (93%) and importance of Hong Kong National Security Law (89%). More importantly, students received that this lecture clarified their previous myths surrounding National Security Law in Hong Kong (90%) and signified that they would do their best to be a law-abiding citizen (95%) and a leader with social responsibility (94%). As for views on teachers' attributes, students generally expressed high recognition. The positive response rates for items in this subscale were all as high as 95%. Specifically, students appreciated that the lecturer mastered the materials used in the lecture, encouraged students with various methods, livened up the classroom climate and promoted mutual respect, and helped all students understand all the knowledge effectively. Thus, hypothesis 2 was well supported.

Table 4

Finally, we conducted a one-sample Chi-square test to assess if students were equally likely to

share positive or negative/undecided opinions on this lecture. There was a total of 90 students providing responses to the qualitative question: "Please write down your comments about this lecture (e.g., what you have learnt in this lecture)". Amongst all the opinions collected (see table 4), almost all of them were positive ($n = 85$) while only 5 were negative or neutral. The Chi-square value was 71.11 ($p < .001$), suggesting that there were more positive responses than negative or neutral responses at a significant level. Despite of some general positive answers, such as "it is a good lecture which broaden my horizons" and "it is a meaningful lesson", many students offered more specific opinions. For instance, 59 students in total said that they learnt a lot of knowledge through this lecture. The knowledge they mentioned mainly referred to the content and the importance of Hong Kong National Security Law and personal development, such as "how to be a good people" or "a socially responsible leader". Meanwhile, students also shared their appreciation of teachers' attributes ($n = 3$). Students "felt grateful" and deemed the lecturer "observant and tactful". On the contrary, some students held negative or neutral views on the lecture ($n = 5$). Instead of the content of the lecture, students' comments were basically about the length of the lecture, the passing rate of the examination, the lack of interaction, and the gender indication question in the examination, which was also in line with previous studies (24). In short, the lecture was largely well-received by the students. Hence, hypothesis 3 was well supported.

Discussion

Based on post-lecture evaluations, this study investigated how undergraduate students perceived a law-related education program conducted via face-to-face teaching mode in Hong Kong. In addition, as the 3-hour lecture is to foster undergraduate students' consciousness of law-abidance, the present research additionally conducted a special examination of students' viewpoints about the lecture, focusing on the delivery of the course and specific elements pertaining to education on national security. This research has two distinct qualities. First, after the COVID-19 outbreak ceased to be an event of international concern, this study shifted the focus from online/hybrid (6, 18) to the face-to-face mode of delivery. By evaluating students' perception of their classroom learning, it provides new insights into how students perceive national education under different teaching modes. Second, the study used a three-factor model to measure students' perceptions of the national security program, which proved its validity in predicting students' attitudes toward the program and echo previous studies (6,18).

Several conclusions could be derived from the findings. First, consistent with our previous studies on the same topic using different learning mode (e.g., online and hybrid mode), the findings demonstrated that the majority of students gave favorable responses on this national education program, indicating that the national education program had been accepted by undergraduate students. Students were found to be satisfied with teaching quality, lecture attributes, and appreciation of law abidance leadership. In terms of students' perception of the lecture attributes, the atmosphere in the classroom was particularly well received by the students, with frequent peer interaction and excellent teacher-student interaction. Furthermore, students felt that they gained a good sense of engagement throughout the face-to-face teaching process. They believed that the 3-hour lecture on law abidance leadership will be beneficial for their whole-person development and equips them with law-abiding and responsible social citizenship. We therefore believe that the law-related education was seen as being of high quality, informative, important, and beneficial in assisting students to comprehend the value of national security and Hong Kong NSL. The qualitative comments also triangulated the effectiveness of

law-related education in promoting students' legal awareness. Accordingly, due to the scarcity of research on the efficacy of the face-to-face learning approach to law-related education, our finding expanded the existing body of knowledge.

Second, the current results further showed that lecture attributes, teachers' attributes, and law abidance appreciation as effective predictors of students' evaluation of education programs as such. Lecture attributes and teaching qualities have been validated by scientific literature in education studies as two of the major contributors of students' satisfaction with their specific learning experiences, respectively. With regard to lecture attributes, an evaluation study has identified students' perceived effectiveness of lecture design is the strongest predictor of students' general satisfaction with the courses taken (48). Other evaluation studies of students' learning satisfaction have validated that the effectiveness of teaching perceived by students displays the strongest relationship to their overall satisfaction to specific educational experiences. Particularly, an evaluation study conducted in the United States revealed that the more students conceive that they gained desirable skills and knowledge from instructors' teaching, the more they construe the learning experiences decent (49). Such findings resemble the cases in psychology courses where students' evaluation of teaching quality also shows the highest explanatory power towards their overall learning satisfaction (36). Moreover, our findings are in line with several evaluation studies that spontaneously examine the two factors of lecture attributes and teaching quality. Shevlin and colleagues (50) identified lecturer's charisma and module attributes as joint contributors to students' teaching evaluation in UK's higher education, where the former contributes more significantly than the latter. Other works reported such relationships vary across disciplines, where the contribution of lecture attributes to students' subjective evaluation of courses is the most significant in social sciences education (51).

Going beyond conventional predictors, our previous analyses of students' subjective perception of law abidance leadership and NSL education add the extent to which students are willing to abide the laws to current social scientific literature on specific education programs of this kind (e.g., legal education for non-law school students) (6,18). Until now, this three-factor model has been applied to evaluation of programs in various kinds and demonstrated promising usefulness (18,39,40). Again, replicated results reaffirmed the efficiency of national security education in the context of Hong Kong. We also expect our efforts on reproducing and re-verifying previous outcomes will confirm the validity of the predictors and the measurement over time.

Finally, this study clarified several constant misrepresentations concerning national education in Hong Kong. Most importantly, our findings argue against the idea that students in Hong Kong's universities dominantly disapprove NSL education. In terms of the structure of NSL education, it should be illustrated that it not only includes principles and significance of national security but also spirits of law and order. We have discussed the absence of legal education in Hong Kong society and its possible consequences in the introduction section, where previous studies have demonstrated that insufficient legal education can turn dissenters to violent reactions against perceived structural pressures (6,52). NSL education is then delivered to cover both absence of national security and legal education in Hong Kong higher education.

Some limitations of this study should be noted. Overall, high rate of positive response should be interpreted with caution, given the topic of lecture is controversial and that students might shy away from reporting their authentic feedback. Out of 1,424 students taking this subject, only 1,155 students (81.1%) responded to the post-lecture evaluation questionnaire. Hence, even if response rate is satisfactory, further efforts should be put on unvoiced students in the program. In

previous evaluations of the same program (24), we applied qualitative methods such as focus group approach to access students' experiences in detail. Qualitative responses were dominantly positive as expected, where students shared how they benefited from the lecture with regard to enhancing awareness of national security and law abidance. We have collected five negative responses in which insufficient interaction during the lecture was mentioned. For future design of lectures of this kind, we recommend including more interactive components to allow ideas exchange between instructors and students. We then expect conversation to be more effective than merely instruction. Finally, as we argued when interpreting previous evaluation results (18), it should be noted that optimistic survey results cannot be directly used to predict behavior improvement in real life. Replicative and longitudinal survey should be conducted on students who have taken NSL education lecture to examine whether lecture attendance eventually leads to appreciation of national security and law abidance.

In sum, the current study examined undergraduate students' responses to the learning experience of a 3-hour face-to-face lecture on law-abiding leadership and national security education at the PolyU. Based on the data gathered from 1,155 undergraduates via the post-lecture evaluation, the finding of this study demonstrated that the majority of students had a positive learning experience in the program in terms of their satisfaction with lecture attributes, teaching quality, and their appreciation of law abidance leadership. The findings triangulated our previous studies with different learning modes (6, 18) and provided a solid basis for further promoting national security education in Hong Kong.

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Table 1. Descriptive statistics and correlations among three factors and overall satisfaction

		Mean	SD	1	2	3
1	Perception of the lecture attributes	4.64	1.04			
2	Appreciation of law abidance leadership	4.80	1.01	.89***		
3	Teachers' attributes	4.91	0.90	.82***	.83***	
4	Overall satisfaction	4.72	1.14	.88***	.89***	.80***

Note. *** $p < .001$.

Table 2. Skewness, kurtosis, and standardized factor loadings for the TL post lecture evaluation form (n = 1155).

	Skewness	Kurtosis	Factor Loading	SE
Perceptions of the lecture attributes				
Item 1	-0.95	1.25	0.89***	0.01
Item 2	-0.92	0.96	0.88***	0.01
Item 3	-0.81	0.67	0.86***	0.01
Item 4	-0.85	1.07	0.83***	0.02
Item 5	-0.89	0.95	0.89***	0.01
Item 6	-0.93	1.02	0.92***	0.01
Item 7	-0.94	0.87	0.92***	0.01
Item 8	-0.90	0.77	0.92***	0.01
Item 9	-0.96	1.08	0.93***	0.01
Item 10	-0.84	0.62	0.92***	0.01
Item 11	-0.98	1.19	0.91***	0.01
Appreciation of law abidance leadership				
Item 12	-1.07	1.48	0.91***	0.01
Item 13	-1.06	1.64	0.91***	0.01
Item 14	-1.11	1.76	0.93***	0.01
Item 15	-1.18	2.05	0.92***	0.01
Item 16	-1.09	1.32	0.94***	0.01
Item 17	-1.12	1.53	0.93***	0.01
Item 18	-1.14	2.20	0.85***	0.02
Item 19	-1.15	2.28	0.87***	0.02
Teachers' attributes				
Item 21	-1.02	2.03	0.87***	0.02
Item 22	-1.05	2.02	0.92***	0.01
Item 23	-1.10	2.16	0.93***	0.01
Item 24	-1.09	2.26	0.93***	0.01
Item 25	-0.97	1.77	0.91***	0.01
Item 26	-1.04	2.01	0.93***	0.01

Note. *** $p < 0.001$.

Table 3. Students' responses in the post lecture evaluation form (*n* = 1,155)

Questionnaire Item	Mean	Positive response rate%
Q1 The design of this lecture was very good.	4.71	89.96%
Q2 The classroom atmosphere of this lecture was very pleasant.	4.67	87.73%
Q3 There was much peer interaction amongst the students in this lecture.	4.62	86.82%
Q4 There was much interaction between the lecturer and the students in this lecture.	4.77	91.18%
Q5 There was much student participation in this lecture.	4.65	87.42%
Q6 There were many opportunities for reflection in this lecture.	4.66	87.98%
Q7 This lecture is helpful to my personal development.	4.59	86.09%
Q8 This lecture has improved my problem-solving ability.	4.56	85.48%
Q9 This lecture has improved my understanding of the importance of attributes of successful leaders (e.g., critical thinking, moral competence, law abidance etc.).	4.63	88.07%
Q10 This lecture has improved my interpersonal communication skills.	4.52	84.03%
Q11 This lecture has improved my critical thinking.	4.63	88.23%
Q12 This lecture helps me understand the importance of law abidance in leadership.	4.71	89.69%
Q13 I understand that law abidance is important for the stability of a society.	4.79	91.82%
Q14 This lecture helps me understand the concepts of national security.	4.80	91.98%
Q15 This lecture helps me understand the offenses and penalties surrounding the National Security Law in Hong Kong.	4.82	92.76%
Q16 This lecture helps me understand the importance of implementing the National Security Law in Hong Kong.	4.72	89.29%
Q17 This lecture helps me clarify some myths related to National Security Law in Hong Kong.	4.72	89.89%

Questionnaire Item	Mean	Positive response rate%
Q18 I will try my best to serve as a law-abiding citizen.	4.95	95.02%
Q19 I will try my best to serve as a socially responsible leader.	4.87	94.41%
Q20 Overall speaking, I have a very positive evaluation of this lecture.	4.72	89.63%
Q21 The lecturer had a good mastery of the lecture material.	4.90	94.93%
Q22 The lecturer used different methods to encourage students to learn.	4.90	94.67%
Q23 The lecturer was able to promote an atmosphere of mutual respect in the class.	4.96	95.20%
Q24 The lecturer was able to help students understand the knowledge covered in the lecture.	4.90	94.94%
Q25 The lecturer was able to effectively take care of all students.	4.91	94.94%
Q26 Overall speaking, I have a very positive evaluation of the lecturer in this lecture.	4.92	95.18%

Notes. All items were rated on a 6-point Likert scale, in which 1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, and 6 = Strongly Agree). Scores equal to or above 4 were considered positive responses while those lower than 4 indicate negative responses.

Table 4. The narrative responses to the qualitative questions regarding students' views on the lecture 8 (law-abidance leadership).

Qualitative responses	
Positive responses	responses
(85 responses)	
“General positive opinions” (22 responses)	#Thank you. It is a good lesson. #Very good. #Very good. #Very good. #Very good. #Good lesson. #This lesson was so great. #Nice. #Better than the University of Hong Kong. #It is good lecture which broaden my horizons. #Very good. #Good. #Good. #It is a meaningful lesson. #Very good. #Good. #Good. Very good. #Very good. #Ok. #Happy. #Good! Very interesting. #Lively and interesting.
“Learn a lot” category	
“National Security Law” sub-category (21 responses)	#Understand more about the laws deeply. #This lesson made me have more and deeper understanding on the National Security Law in our country and our region of Hong Kong. Such lesson is really essential. #National Security. #Refreshed my opinions on our country. #Know more about the knowledge of the National Security Law. #I learn NSL. #I know NSL much now. #The knowledge of NSL. #We have deeper understanding on the different aspects and details of NSL. #I learnt about NSL. #National Security Law. #Learn more about NSL. It is great. #National Security Law. #Have a clear understanding on NSL. #I learnt about NSL. That's good! #I learnt the NSL. #I learnt about the two different ways of enforcing the NSL. #I learnt about the laws in the NSL. #NSL. #I know deeper about NSL. #I have a deeper understanding of NSL.
“General knowledge” sub-category (9 responses)	#Learn a lot. #Very useful. #The lecture was quite informative. #Learnt many things. #Abundant. #Very meaningful and useful. #I learn a lot. #I got a lot. #I learnt a lot.
“The importance of national security or NSL” sub-category (12 responses)	#There are still many law-breaking citizens out there. We still need to work hard. #It helps me understand the importance of national security. #The importance of NSL. #I have learnt that the National Security Law is very important and cannot be replaced by any other laws since it is very important. It is our responsibility to obey the law. #I've learned the great importance of National Security Law and have a detailed understanding of National Security Law. #National Security Law is very important to me. #The importance of obeying the law. #Importance of national security. #The importance of NSL. #Importance of NSL and to be aware of unintentional actions that may be breaking the law. #National security is important. #I

know the importance of NSL.

“Specific knowledge” sub-
category
(13 responses)

#Bill. #In this lecture, I have learnt concepts of national security, the importance of implementing the National Security Law in Hong Kong, etc. #Change the world map. #Strengthen my knowledge about law. Very good. #Laws are written by people. #Learn what national security is. #National security. #Learn about Chinese history. #This lecture made me know more about some events happened in our history and some law-related information in Hong Kong. Those are something I did not know or pay attention to. I think designing such a lecture is necessary for students who are studying in Hong Kong. #History of Hong Kong and the NSL. #I'm happy to see that we can learn about the nation security. Thank you. #Law is important everywhere. #We learnt a lot of abiding law.

“Personal development” sub-
category
(4 responses)

#Learn how to be a good people. #I learnt how to be a good citizen. #I would put more awareness on protecting myself. #I have learnt how to try my best to serve as a socially responsible leader.

“MCQ-related opinions” category
(1 response)

#I really liked the open-ended discussion, this helped me stay engaged and focused.

“Teacher attributes” category
(3 responses)

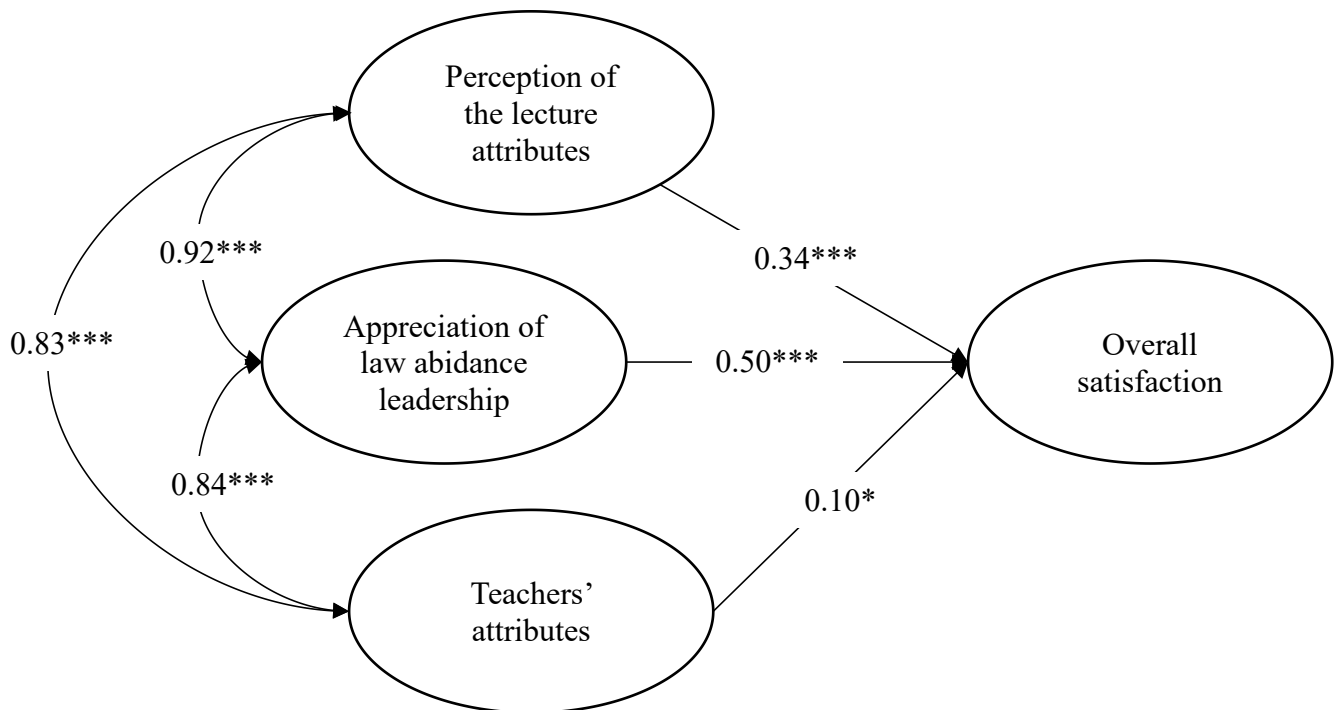
#The professor has put a lot of effort into making the lecture entertaining. She was very observant and very tactful in handling the lecture. #Teacher resisted much pressure and emotion and taught with heart. I felt very grateful. #I love the content and the teaching and communication styles that the teacher uses to convey the message and it helps develop a good understanding of the topic (NSL).

**Negative/Undecided Responses
(5 responses)**

#Answer 16/2 question correctly is too much Such a waste of my life to do these 2 MC My life would be much grateful to do another study instead of doing this dumb MC for a whole morning. #The first question regarding gender indication is not sensitive enough. Some people do not identify as male or female. #Still lack of understanding of national security laws and the importance of it. And the lesson is lack of interaction. #This is just a waste of my precious time. #Maybe a shorter lesson would be better.

Notes. Students were asked to write down any comments that they would like to share about the lecture or what they had learned from this lecture. They could write “NIL” for no comments.

Figure 1. Structural equation model



Note. * $p < 0.05$; *** $p < 0.001$.