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To cite this article: Daniel Tan Lei Shek, Lu Yu, Florence Ka Yu Wu & Wen Yu Chai (2015) General University Requirements at Hong Kong Polytechnic University: evaluation findings based on student focus groups, *Assessment & Evaluation in Higher Education*, 40:8, 1017-1031, DOI: [10.1080/02602938.2014.960362](https://doi.org/10.1080/02602938.2014.960362)

To link to this article: <https://doi.org/10.1080/02602938.2014.960362>



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Published online: 01 Oct 2014.



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General University Requirements at Hong Kong Polytechnic University: evaluation findings based on student focus groups

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Under the new four-year undergraduate programme, a general education framework titled ‘General University Requirements’ (GUR) has been developed and implemented since 2012/2013 at Hong Kong Polytechnic University (PolyU). To evaluate the implementation and effectiveness of the GUR in its first year, focus group interviews with students were carried out. In 13 focus groups, 62 first-year students from eight faculties/schools who took GUR subjects in 2012/2013 academic year were interviewed by trained researchers. Results showed that students generally had good perceptions of the GUR in terms of the subject content, teaching methods and the overall effectiveness of the subjects. The interactive teaching and learning initiatives adopted in GUR subjects were particularly appreciated, although students expressed minor concerns on the administration of GUR subjects. The results suggest that the first-year implementation of the GUR at PolyU was generally smooth and successful from the perspectives of the students.

Keywords: general education; undergraduate education; Hong Kong; focus group

Introduction

Higher education in Hong Kong is experiencing a drastic system transformation. Since 2012/2013, the eight public universities funded by the University Grants Committee (UGC) in Hong Kong have changed their undergraduate degree programmes from three years to four years. Accompanying the new four-year undergraduate degree programme in each university is, typically, the inclusion of a general education curriculum. As the reform is rigorous, there is a need to look at the outcomes of the general education component in the new four-year curriculum. As one of the eight UGC-funded universities, the Hong Kong Polytechnic University (PolyU) has also developed a new general education framework named the ‘General University Requirements’ (GUR). The aim of this study is to evaluate the GUR at PolyU in its first-year implementation (2012/2013) based on student focus groups to gain a preliminary understanding about implementation, effectiveness and challenges.

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General education in higher education

General education has been an important component of American higher education since the early establishment of liberal arts colleges and universities in the United States (Levine 1978). It has been defined by the Harvard Committee in its 1945 report entitled ‘General Education in a Free Society’ as ‘that part of a student’s whole education which looks first of all to his life as a responsible human being and citizen’ (51). The central mission of general education is to cultivate in students the common knowledge, generic skills and attitudes to live in their society (Stone and Friedman 2002). General education has also been regarded as a ‘catalyst’ for the renewal of American undergraduate education to cope with the challenges of change (Miller 1988). Nowadays, the role of general education has become even more important. For example, the Task Force on Higher Education and Society (2000, 83) advocated that:

A general education is an excellent form of preparation for the flexible, knowledge-based careers that increasingly dominate the upper tiers of the modern labor force. With knowledge growing at unprecedented rates, higher education systems must equip students with the ability to manage and assimilate greatly expanded quantities of information.

More recently, the Association of American Colleges and Universities (AAC&U 2007) reiterated the importance of general education and specified several essential learning outcomes, such as broad scope of knowledge, critical and creative thinking, communication, problem-solving, lifelong learning and social responsibility. General education was regarded as vital in enabling students to cope with the challenges in the transforming society and world characterised by rapid knowledge innovation and economic globalisation (Centre for Studies in Higher Education 2007; Ratcliff et al. 2001).

Nowadays, general education has been gradually promoted in higher education institutions worldwide. In Asia, general education has been rigorously implemented in universities in Mainland China, Hong Kong and Taiwan (Xing, Ng, and Cheng 2013). Various liberal arts colleges and programmes have also been widely established in many European countries, aiming to expand the over-specialised undergraduate education and to nurture graduates with global views and generic skills (Wende 2011).

Reform of higher education and the initiative of general education in Hong Kong

In Hong Kong, higher education is now undergoing a ‘significant and monumental change’ (Jaffee 2012, 193). Commencing from 2012/2013, the eight UGC-funded public universities have transformed their undergraduate degree programmes from three to four years, with a new general education curriculum being developed as an integral part of the new four-year undergraduate programme (Freake 2013). Different universities have also redefined their desired graduate attributes and the intended learning outcomes of their respective general education subjects. Despite the variations, these learning outcomes generally focus on the breadth of knowledge, critical thinking, communication, problem-solving, civic responsibility, ethics, attitudes of lifelong learning and global outlook (Chen, Leung, and Cheng 2012; Freake 2013).

The reform has several underlying rationales. First, it serves as a response to the challenge of the increasingly intense international competition among higher education institutions globally (UGC 2010). Second, the reform acknowledges the

current service-based economic structure in Hong Kong and the globalised knowledge economy, which requires high-quality knowledge workers with multiple and adaptable skills (UGC 2002). Third, Hong Kong has been changed from a British colony to a special administrative region of China, which makes it necessary to reform its educational system in alignment with the mainstream educational system in China, such as the four-year undergraduate education (Jaffee 2013). Fourth, the reform also responds to the needs emerged from a careful examination of the Hong Kong education system, such as the over-emphasis on examination-driven learning, insufficient critical thinking training, lack of lifelong learning and early specialisation (Hong Kong Education Commission 2000; Jaffee 2013).

These needs echo the concerns expressed by local employers. In the business sector, employers commented that Hong Kong university graduates were ‘technically knowledgeable upon entry to the workforce, but with limited ability to develop over time and adapt to new situations’. (Freake 2013, 107) A market survey revealed that more than 80% of Hong Kong employers were not confident that Hong Kong students acquired sufficient development in some important generic skills, such as leadership and interpersonal skills, analytical thinking, English communication, etc. (Freake 2013). Facing these concerns, the incorporation of general education in the four-year undergraduate programme was seen as a better way to promote students’ all-round development and to nurture capable graduates to contribute to the knowledge-based economic society (Jaffee 2013; UGC 2005)

While there are common goals and shared rationales, the specific general education curriculum structure varies across institutions (Jaffee 2013). In some universities, a mandatory interdisciplinary core curriculum has been developed for all students, whereas some institutions allow students to freely select general education subjects. Some universities incorporate both mandatory and disciplinary requirements (Chen, Leung, and Cheng 2012; Freake 2013). A common feature of these general education curricula is the adoption of a more engaging and student-centred pedagogy and ‘more authentic forms of assessment’ (Jaffee 2012, 203), such as group project and peer assessment. These teaching and learning initiatives are expected to ‘contribute to a major transformation of both faculty and student orientations toward the learning process consistent with the stated objectives of the reform’ (Jaffee 2012, 203). Although the reform is enthusiastic, there are also concerns about whether the active mode of teaching and learning pertaining to Western culture could be accepted by Hong Kong students who are primarily influenced by Chinese culture and learning styles, such as didactic teaching and rote memorisation (Jaffee 2012).

The GUR at the Hong Kong Polytechnic University

Starting from 2012/2013, PolyU has launched an official and comprehensive undergraduate education reform. Long before the formal implementation of the new four-year curriculum, different working groups were formed to design it. After several rounds of consultation and refinements, the blueprint of the new curriculum was approved by the Senate. In its new five-year strategic plan (2012/2013–2017/2018), PolyU redefined its undergraduate education goal as to help students develop in six desired graduate attributes: professional competence, effective communication, critical thinking, lifelong learning, problem-solving and ethical leadership (Hong Kong Polytechnic University 2012). Accordingly, a curriculum structure of general education – the GUR – was developed including six components: Freshman

Seminar, Language and Communication Requirements, Leadership and Intrapersonal Development, Cluster Area Requirements, Service Learning and Healthy Lifestyle (Hong Kong Polytechnic University 2013). The essence of each component is outlined as follows:

- Freshman Seminar offers students a mandatory subject which introduces background knowledge associated with their broad disciplines (e.g. applied sciences, business, humanities, social sciences, engineering) (3 credits).
- Language and Communication Requirements require each student to take a number of language subjects (in English and Chinese) that focus on the enhancement of students' language proficiencies (9 credits).
- Leadership and Intrapersonal Development component aims to cultivate in students intrapersonal and interpersonal knowledge and skills that are conducive to effective leadership (3 credits).
- Cluster Area Requirements ask students to take at least one subject from each of the four cluster areas of learning, with each cluster area corresponding to a field of knowledge and method of enquiry (12 credits) in order to expand students' intellectual capacity and reading and writing skills.
- Service Learning requires students to fulfil one subject with a significant service component to develop a sense of civic responsibility and competences to serve others (3 credits).
- Healthy Lifestyle requires students to take a non-credit-bearing subject related to healthy lifestyle to improve students' physical well-being and to acquire healthy lifestyle knowledge and skills (0 credits).

These GUR components, Freshman Seminar and Leadership and Intrapersonal Development in particular, also aim to help students make the adjustment from secondary school to university. For example, in Leadership and Intrapersonal Development subjects, students are guided to learn knowledge about intrapersonal and interpersonal development, and apply the knowledge and skills acquired to solve problems encountered in their adaptation to university lives. Students are provided with various opportunities to do self-reflection and practise self-leadership skills. The group project work in many Freshman Seminar subjects engages students in collaborative learning and independent thinking, both of which are critical for students' first-year transition. With regard to the teaching and learning methods, most GUR subjects adopt an interactive teaching and learning approach including hands-on workshop, field work, group activities, etc. In 2012/2013, a total of 107 GUR subjects were offered to first-year undergraduate students.

Evaluation of general education curriculum in Hong Kong

Although the general education reform in Hong Kong is significant, there has been a lack of systematic evaluation. Existing evaluation studies are preliminary and mainly focus on the pilot implementation of the new general education curriculum. For example, Hong Kong Institute of Education (2012) evaluated the implementation of a general education foundation course in its piloting stage, while no evaluative findings on the formal implementation of the course have been reported. Shek (2013) also documented the effectiveness of a subject entitled 'Tomorrow's Leaders' in the piloting stage prior to its full implementation.

Evaluation ‘demonstrates the continuous efforts to improve the quality of education and reveals strengths and weaknesses and thus influences the allocation of resources, especially where development is needed’ (Wong, Blankenship, and Wong 2012, 93). Rigorously designed evaluative studies can provide evidence for the effectiveness of a general education programme. Unlike those reforms in America normally based on an existing general education curriculum, the general education initiative in Hong Kong’s higher education ‘represents a unique case of comprehensive organisational change of higher education on an unprecedented scale’ (Jaffee 2012, 193), where more tensions might emerge. As such, systematic evaluation that helps identify the challenges and problems in the implementation of general education in Hong Kong is particularly needed. Specific to the GUR at PolyU, systematic evaluation is needed to assess whether this newly designed general education curriculum is running well and whether it could help students develop the redefined desirable attributes of PolyU graduates. Also, evaluation is helpful to identify whether the active teaching and learning approaches adopted in the GUR are conducive to students’ achievement of the intended learning outcomes.

To systematically evaluate the implementation and outcomes of the GUR, a longitudinal evaluation research has been conducted at PolyU in a five-year span since the inception of the new curriculum. Multiple evaluative methods have been employed in the research, including outcome evaluation based on online survey and Collegiate Learning Assessment Plus (CLA+) and on students’ feedback questionnaires, and qualitative evaluation based on document analyses and focus group interviews with students and teachers.

The current paper reports the findings from student focus groups based on the first-year implementation of the GUR. As a popular qualitative research method, focus group interviews have many advantages. First, they help researchers obtain an in-depth understanding of a wide range of participants’ views, attitudes and experiences in the group processes. Second, participants’ explanation and justification of their perspectives can be obtained through group discussions and interactions. Third, compared to individual interview, focus groups are more cost-effective (Centres for Disease Control and Prevention 2013; Krueger and Casey 2000). In education research, focus groups are regarded as particularly useful for planning and evaluation (Vaughn, Schumm, and Sinagub 1996). In the present study, focus groups were used to understand students’ views on the GUR in terms of its content, teaching and learning methods, implementation and perceived benefits. In designing and implementing the focus groups, the authors were fully aware of the methodological issues intrinsic to qualitative studies (Shek, Tang, and Han 2005). A generic qualitative orientation focusing on the subjective experience of the informants was adopted as the philosophical orientation of the study. For potential biases and ideological preoccupation, several colleagues were involved to avoid over-subjective interpretation, with social consensus being taken to resolve differences. Alternative explanations and limitations of the study were also examined.

Method

Participants and procedure

A stratified random sampling was used in the present study. Students were randomly selected in each faculty/school based on its student proportion to PolyU student population, i.e. Faculty of Business (FB: 15.6%), School of Hotel and Tourism

Management (SHTM: 12.8%), Faculty of Engineering (FENG: 31.4%), Faculty of Health and Social Sciences (FHSS: 19.3%), School of Design (SD: 5.5%), Faculty of Construction and Environment (FCE: 5.2%), Faculty of Humanities (FH: 4.0%) and Faculty of Applied Science and Textiles (FAST: 6.2%). Accordingly, the number of participants in each faculty/school was: FB (6), SHTM (10), FENG (12), FHSS (22), SD (4), FCE (1), FH (2) and FAST (5). Among the 62 participants, there were 19 males and 43 females. Fifty-four students were local and eight were from mainland China. Based on faculty/school, 12 focus groups were formed. For two groups, only one out of four students attended the scheduled focus groups because of unexpected time conflicts. Therefore, one extra group was formed as a make-up session for these participants. The participants for each group ranged from 1 to 12. As group size may influence the group dynamics in interview, the authors take caution in interpreting findings obtained from groups of different sizes, particularly the two one-participant groups.

All focus groups were conducted at the end of 2012/2013 academic year. The length of the interviews ranged from 50 min to 3 h. For each interview, two trained researchers with rich qualitative study experiences were present: one moderator hosted the interview and one observer took notes during group discussion. The interview was guided by a focus group protocol developed by the research team, which was comprised of five major categories of questions on participants' GUR perceptions: (a) general impression about the GUR, (b) comments about the content of GUR subjects, (c) comments about the teaching and learning of GUR subjects, (d) perceptions of the overall implementation of the GUR and (e) perceived benefits of the GUR. All the focus group interviews were audio recorded.

Data analyses

The language used in all the interviews was Chinese which is the mother language for all participants. The audio records of all the interviews were transcribed into full texts in Chinese by a research assistant. Two researchers carefully checked the transcription texts to ensure the accuracy of the data. All transcription texts were analysed using NVivo Software Version 10, which coded the raw data into different themes and categories based on both the texts and the focus group protocol. Interrater reliability on the coding was calculated. A research assistant with a master's degree, who was not involved in the coding process, coded 20 randomly selected narratives (four randomly selected narratives from each theme) without knowing the original positive or negative codes given. The inter-rater agreement percentage calculated on the derived themes from the coding was 85%. This method has been widely used in the previous evaluation studies (Shek 2012). Doubtful coding was resolved through discussion amongst the researchers. For all quotations used in the present paper, standard translation and back translation procedures were adopted to keep the authentic meaning of the data.

Results

Students' general impression of the GUR

In general, students perceived their experiences in studying GUR subjects as enjoyable and reflective. Most respondents expressed that they enjoyed the GUR. A few

GUR subjects, such as Leadership and Intrapersonal Development subjects (Tomorrow's Leaders), successfully balanced the stress caused by students' major study and made them feel relaxed. For example:

GUR subjects were more vivid and diversified. In many of my major subjects, we just sit there to listen as passive learners. However, the design of GUR subjects such as Tomorrow's Leaders was more vivid and joyful. It did not just have us sat there to listen but have interactions. (Student 20)

I feel very nice to have GUR subjects because these subjects are more relaxing. If you focus on your major studies too much but do not have any other balance, you will become too stressful. (Student 54)

GUR subjects are more interesting than many of my departmental subjects. In these subjects, we did presentations and also met many students from different departments. I think these subjects are good. (Student 10)

These narratives indicated that students' general impression of the GUR was positive. Especially, students perceived the GUR subjects as more interesting and interactive, with more class activities and discussions compared to their major subjects.

Students' perception of the subject content of the GUR

Overall, students had positive comments on the subject content of different GUR components. Participants had various perceptions of the Freshman Seminar offered by their respective departments. Some students expressed that their Freshman Seminar experience was unforgettable because the subjects provided them with knowledge about the broad disciplines of their career. Meanwhile, a few respondents felt that their Freshman Seminars could be more practical by further emphasising the prospect of their future development, while less focusing on discipline history. Another concern was that the content of some Freshman Seminars was a bit too theoretical for first-year students, and more practical cases could be demonstrated to facilitate students' understanding.

Regarding the Leadership and Intrapersonal Development subjects, especially Tomorrow's Leaders (TL), a subject offered to more than 2100 students across different disciplines, many participants gave positive comments. The participants perceived the subject of Tomorrow's Leaders as very encouraging/inspiring, with clear logic and well-arranged content. Students expressed that the examples shared in the lectures helped them to link the knowledge to their first-year university life. For example:

I perceived TL subject easy to master because I like its intensive and deep level contents. (Student 42)

It was when I studied TL subject that I had more opportunities to do self-reflection and gain more self-understanding. Leadership was scarcely mentioned in the subjects of my secondary school. However, TL not only asked us to write term paper, but also incorporated theories and self-reflections. Therefore, the learning in TL subject could be deeper and more advanced. (Student 7)

TL subject was more interesting. Firstly, it has fewer assignments. Also, in most classes, teachers used games to illustrate the topics. (Student 34)

Similarly, participants had positive perceptions of Cluster Area Requirements (CAR) subjects. The topics of these subjects were perceived as 'interesting', 'novel' and

‘attractive’. Participants enjoyed the freedom and initiative in selecting subjects to meet their own needs. Many subjects helped students explore their interested areas and broaden their knowledge base:

My most engaged GUR component is CAR. I have once studied a CAR subject on Daoism, Buddhism and Chinese culture. Actually I have once studied in Buddhist secondary school. But this subject gave me another angle to see what religion was. In my secondary school, I just read religion doctrine and history, but might not be able to perceive the relationships between religion ceremonies and our own culture. This subject broadened my horizon and brought me a new perspective to see all the things. (Student 6)

One of my gains from CAR subjects was that I learned more in different knowledge areas. For example, in last semester, my selected CAR subject was about Chinese literature. I watched Kunqu opera *Peony Pavilion* which I have never watched before. After watching the opera, I felt that I seemed to have learned one more area of knowledge. (Student 7)

On the other hand, students from humanities and social sciences backgrounds showed their concerns in studying science-based subjects in Cluster Area Requirements, i.e. subjects in ‘Science, Technology and Environment’. The content of these subjects was perceived as too advanced for students without sufficient baseline knowledge.

There are two sub-categories of Language and Communication Requirements: LCR-English and LCR-Chinese. Generally, students had a good impression about the subjects, particularly LCR-English which focused on oral and academic writing skills. The content was regarded as practical and meeting the needs of one’s university study and future career development. Less favourable comments were noted on the remedial subjects in both LCR-English and LCR-Chinese, offered as a compulsory requirement to students with unsatisfactory English or Chinese public examinations results. Participants commented that the remedial subjects focused on teaching simple sentence structure which cannot meet their urgent learning needs for academic writing. Oral communication in Putonghua was also perceived as ‘not urgent’ in students’ university lives.

These findings showed that students generally favoured the subject contents in different GUR components. The content met students’ needs for development in different aspects such as leadership, language capacity, personal interests, etc. Subjects that were practical-oriented, well-organised and demonstrated by cases were particularly welcomed by students.

Students’ perception of teaching and learning of the GUR

Results showed that almost all GUR components had incorporated interactive and innovative teaching and learning methods to promote students’ active learning, which were highly welcomed by the participants. Several effective teaching and learning methods were identified. The first was hands-on workshops which asked students to design or make products by using the knowledge learned in the subject. Participants commented that hands-on workshops made their learning interesting, enjoyable, practical and helped them ‘really learn something’:

For Freshman Seminar, I feel good and enjoyable. It provided opportunities for us to think and to do things related to our own stream. We did not know our major when we just enrolled in the university. But from this subject, we felt that we began to learn something related to our major. (Student 46)

The students' second preferred teaching and learning method was group project work (involving group discussions and presentations), adopted in Tomorrow's Leaders subjects and some Freshman Seminars. This method facilitated students' collaborative learning and developed their communication skills and self-confidence. The third method was the visualised method, such as short video sharing adopted in Tomorrow's Leaders and some Cluster Area Requirements subjects. This method helped students understand the knowledge better and reflect on their own experiences. The fourth was different games and role-play activities in Tomorrow's Leaders subjects, which according to students not only facilitated their understanding of the lecture contents but made students feel interested and relaxed in the class. Other innovative teaching and learning methods adopted in GUR subjects included reflective journal writing, individual project, lecturer's personal sharing and real case demonstration. All these methods gained positive comments from the participants for both the rich and deep learning experiences and the alignment of students' learning with the intended learning outcomes, such as lifelong learning and problem-solving:

One of my most impressive experiences was building blocks in Tomorrow's Leaders class. We were asked to build blocks based on the assigned topic 'Kong Rong Rang Li' (a traditional Chinese story about brotherly love) to express 'family bonding' and then present our work. I felt this activity trained our creativity, team work and presentation skills. Our group enjoyed much during the whole process. The atmosphere of the lecture was so good. The activity also helped us relate what we have learnt about the topics in class. (Student 6)

It is interesting in studying CAR subjects ... in one of my CAR subjects on Chinese literature in last semester, we were allowed to set our own writing topics and to search relevant literature by ourselves. Comparing to the writing tasks in our own major, those in CAR subjects were more flexible. For example, one of my enrolled CAR subject was about Chinese literature – Kunqu Opera *Peony Pavilion*. But I could write my essay from the sociological perspective to study social conflicts encountered by the characters in the opera. Therefore, I felt very motivated during the writing process. (Student 16)

Meanwhile, mere lecturing was perceived as less effective. Participants commented that lecturing in some individual courses made them feel 'bored', made it hard to comprehend the content and hard to concentrate, particularly in large classes and when the duration of the lecture was long.

In general, participants' views revealed that the interactive and engaging teaching and learning methods adopted in many GUR subjects were effective in promoting students' active and deep learning. These methods successfully helped students gain profound learning experiences.

Students' perception of the implementation of the GUR

Students perceived the implementation of GUR as generally smooth. They were satisfied with the progress of their GUR study. The majority of students indicated that they had successfully completed the required GUR subjects in their first year and did not encounter critical challenges. Students' engagement in GUR study was also perceived as high.

Meanwhile, several challenges and administrative issues were raised. One challenge was the subject registration in Cluster Area Requirements. Participants

expressed that the subject registration system was not fair to students in different departments. The current system assigned different registration times for students in different departments. Students assigned to a later time zone had little chance to successfully register their interested subjects because most of the places had been occupied by students assigned to an earlier registration timeslot. Furthermore, some of students' pre-assigned subjects have time clashes with subjects in Cluster Area Requirements. Another concern mentioned by some participants was the heavy workload in their first-year study due to the requirements of fulfilling both their major and GUR subjects. For example, the first-year curriculum for students in the department of rehabilitation sciences included a number of major subjects, which along with the required GUR subjects made students tired and have problems in time management.

Students' perceived benefits of the GUR

Participants generally perceived different GUR subjects as effective to their development. First, students' language and communication skills were largely improved in studying various GUR subjects. Subjects in Freshman Seminar, Leadership and Intrapersonal Development (Tomorrow's Leaders) and Language and Communication Requirements were perceived as most beneficial. The teaching and learning methods adopted in these subjects, such as group discussions, presentations, reflective journals and academic essay writing, effectively trained students in their language and communication skills. Second, participants perceived that GUR subjects, such as Freshman Seminar, Leadership and Intrapersonal Development and Cluster Area Requirements, helped them develop critical thinking and problem-solving ability. By introducing knowledge beyond students' majors, these subjects also broadened students' knowledge base. Third, students' understanding about leadership (including self-leadership) and the related interpersonal and intrapersonal skills were strengthened through Leadership and Intrapersonal Development subjects, particularly the subject of Tomorrow's Leaders:

Many GUR subjects did not solely teach academic knowledge, but provided a phenomenon to us and asked us to think about it and to discuss. In this respect, they trained our critical thinking. (Student 42)

I think LCR-English subject trained our basic skills in English writing. Therefore we could use these skills to write our assignments in our four-year university study. (Student 26)

I think generally the GUR helped us achieve the six learning outcomes of PolyU ... with regard to the critical thinking, many GUR subjects, not just TL, required us to search literature and write essays after the class. In this way, these subjects provided us with opportunities to think instead of passively receiving the messages. (Student 57)

These findings suggest that from students' perspectives, GUR subjects have effectively helped them develop the desirable graduate attributes defined by the university, such as critical thinking, effective communication, problem-solving, lifelong learning and ethical leadership. Together with the findings reported earlier, these results further indicate that the first-year implementation of the GUR at PolyU was successful.

Discussion

This study evaluated the implementation quality and effectiveness of a general education curriculum, the GUR at Hong Kong Polytechnic University in 2012/2013, based on student focus groups. The findings suggest that the first-year implementation of the GUR at PolyU was smooth and successful. Different GUR subjects effectively promoted students' all-round development in different areas. First, the curriculum was perceived in a positive manner. Students had a good general impression about the GUR. The rich and practical content and interactive teaching and learning methods of different GUR subjects were highly welcomed by students. Group projects, hands-on activities and personal experience sharing made students' learning experience enjoyable and effectively helped students achieve the intended learning outcomes.

Second, most students considered GUR subjects as beneficial in helping them develop the desirable graduate attributes. Through working on team projects, students improved their communication skills. They perceived themselves as more active and outgoing after GUR study. With specific reference to the Leadership and Intrapersonal Development component, the findings are consistent with the previous evaluation findings in the pilot stage, that the subject 'Tomorrow's Leaders' was able to promote the leadership and intrapersonal development qualities of the students (Shek 2013; Shek and Sun 2013a, 2013b, 2013c).

Existing research suggests that greater exposure to general education helps students develop general capacities (Anderson et al. 2007; Wolniak, Seifert, and Blaich 2013). Engaging pedagogies adopted in general education subjects were more effective than lecturing in facilitating students' learning (Kuh, Nelson, and Umbach 2004; Tsui 1999). Although scholars expressed concerns that interactive teaching and learning methods might not be well accepted by Chinese students due to the cultural tradition (Chan 1999; Jaffee 2012), the present study showed that such methods were effective in Chinese university teaching and were well received by students. This indicates that, although lecturing was once considered a cost-effective teaching method, it has become gradually ineffective in arousing students' interests, promoting active thinking and developing students' personal and social competences (Bligh 1998).

Several areas requiring further improvement were also noted, such as subject registration in Cluster Area Requirements and the balance between GUR and major study in the first-year undergraduate curriculum. These issues were reported to the higher management of the university (e.g. the Office of Undergraduate Studies), and corresponding strategies have been discussed and implemented in a timely manner. One strategy that has been implemented was the rearrangement of some Cluster Area Requirements subjects to the evening and Saturday. This has effectively alleviated the severe timetable clashes between students' pre-assigned major subjects and subjects in Cluster Area Requirements. Students now have more freedom to select their interested Cluster Area Requirements subjects. Follow-up studies will be conducted to examine students' views towards the strategy.

The present study also provides evidence for the effectiveness of using focus group interviews for educational evaluation. Focus groups enabled us to obtain a large amount of data about students' subjective evaluation of the GUR within a short period of time. Compared to other evaluation methods, such as individual interview or quantitative methods, focus groups are more economic and efficient. Due to the

good interaction among group members facilitated by the moderator, perspectives shared by students in focus groups were rich and more in-depth. There were also more opportunities to discuss reasons behind one's views while students interacted with each other. As stated by Twinn (1998, 655), 'the synergism created from this interaction is considered significant to the stimulation of new ideas and high levels of energy in discussion'. Previous evaluation studies in education contexts have revealed the strengths and application of focus group methods in Hong Kong (Shek 2012). Furthermore, findings of focus groups helped researchers to elaborate and enrich data collected by other evaluation means on the GUR. For example, secondary data analyses on student feedback questionnaire about GUR subjects showed that students' ratings on Freshman Seminar subjects were relatively lower than other GUR components. This result may be well explained by the finding of focus groups that students perceived Freshman Seminar subject content as having too many theories and being impractical.

Despite the usefulness of focus groups, several limitations of the study should be noted. First, since some group sessions contained few students, the group dynamics might be diminished in these settings. For the two focus groups with only one participant, the views gained might be biased by personal factors (e.g. one's physical status, such as fatigue/tiredness of the interviewee during the interview), and cannot sufficiently represent the diversified views of students from their respective school or faculty (Farnsworth and Boon 2010). However, as the students were randomly selected, this problem may not be great. Second, some individual views or controversial opinions might be hidden in the group context because of the dominant influence of some participants or conflict avoidance (Smithson 2000; Hennink, Hutter, and Bailey 2010). Third, to gain a comprehensive understanding about the implementation of the GUR at PolyU, findings based on views of other stakeholders, such as subject teachers and administrators, need to be incorporated to triangulate the current findings. Fourth, besides the interpretation that the GUR was successful, alternative explanations of the findings such as demand characteristics should be noted. Despite this, the current study provides preliminary evidence for the effectiveness of the GUR as a general education curriculum in promoting all-round development in undergraduate students in PolyU. Given the limited literature on the evaluation of general education in Hong Kong, the present study could be considered an important contribution to the field.

Funding

This work and the 'The Longitudinal Evaluation of the General University Requirements under the New 4-year Curriculum Project' are financially supported by the Learning and Teaching Committee at the Hong Kong Polytechnic University under Learning and Teaching Development Funding 2012–2015. The authors declare that there is no conflict of interest with any financial organisations regarding the material reported in this manuscript.

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