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The effects of students' perceptions of their learning experience on their approaches to learning: The learning experience inventory in courses (LEI-C)

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Abstract: The clarity of students' perceptions of their teaching/learning environment is regarded as an important quality indicator of good teaching. The Learning Experience Inventory in Courses (LEI-C) is a 12-item instrument that is designed to assess how clearly students perceive what it is they are required to learn, what they should be doing to learn it appropriately, and what the requirements and standards of assessment are; together yielding a Clarity of Perception Index (CPI). Exploratory and confirmatory factor analyses were used to establish the factor structure and internal consistency of the subscales comprising the LEI-C and the overall CPI. The LEI-C was administered to 1840 students in class in 37 courses in a Hong Kong university, together with the Study Process Questionnaire (R-SPQ-2F). A total of 1,002 valid responses were collected. Reliability and construct validity of the LEI-C were found to be satisfactory. The CPI was associated with high deep and low surface approaches to learning. These findings have important implications for quality assurance (QA) and especially quality enhancement (QE) of teaching. The LEI-C is a quickly administered instrument that can be used to assess the quality of ongoing teaching, and to pinpoint aspects of teaching that can be enhanced.

Keywords: Students' Perceptions of Their Learning Experience, Students' Approaches to Learning, Assessing Teaching Quality

1. Introduction

There are many requirements of good teaching. Biggs and Tang [1] states that discussions about good teaching should include that of alignment models underpinned by an integrative concept namely constructive alignment.

Constructive alignment is a pedagogical approach embedded in the constructivist theory [1-3], emphasizing the alignment between the intended learning outcomes (ILOs), teaching and learning activities (TLAs) and assessment tasks (ATs). By aligning these three components in courses, effective learning would be achieved through constructivism [1, 3]. In other words, important characteristics of a good teaching practitioner could be systematically operationalize with the adoption of constructive alignment [4]. To be specific, instructors who practice constructively aligned teaching should be able to:

1. clearly describe the intended learning outcomes (ILOs) in class,
2. create a learning environment and teaching and learning activities (TLAs) conducive to the ILOs which allow students to construct their knowledge to achieves the outcomes, and
3. establish assessment tasks (ATs) that enable evaluation to be made on how well students achieve the corresponding ILOs.

However, effective learning would only be taking place if students are clear about:

1. What they are to learn and how that learning is manifested (intended learning outcomes).
2. What they are supposed to do when learning appropriately (teaching activities).
3. What the requirements and standards of assessment are (assessment tasks) [3, 5, 6].

It is thus crucial to confirm that students are clear about the three components – ILOs, TLAs and ATs. More importantly, with the educational paradigm shifting from

teaching to learning [7], the design of the curriculum should be driven by the learning outcomes that students are expected to attain at the end of the courses and programmes [8, 9]. By assessing students' perceived clarity of the elements within the outcome-based teaching and learning environment, the quality of teaching and learning could be continuously evaluated and enhanced [10].

To this end, the Learning Experience Inventory in Courses (LEI-C) was designed to assess the clarity of students' perceptions of these three components: intended learning outcomes, teaching/learning activities and assessment tasks. A total score was produced, called the Clarity of Perception Index (CPI), which was related to students' approaches to learning to see if clarity of perception leads to more desirable learning. Since courses can also be classified in terms of how clearly their components are perceived by students, either as subscales representing each of these components or as their total (the CPI), the subscale and total scores can be used for quality assurance and quality enhancement purposes.

2. The Learning Experience Inventory in Courses (LEI-C)

Questionnaires such as the *Course Experience Questionnaire* [11] and the *Experiences of Teaching and Learning Questionnaire* [12] address important aspects of the quality of teaching and learning, but none focus specifically on how clearly the students perceive the three key aspects of teaching design: what is to be learned, appropriate learning activities and assessment. The *Learning Experience Inventory in Courses* (LEI-C) is based on the assumptions that, whatever the particular approach to teaching, outcomes-based or traditional, in good teaching the following aspects of the student experience should be addressed in course design:

1. Students should be clear as to what they are to learn.
2. Students should see that the teaching actively engages them in learning activities that are appropriate to achieving what they are supposed to learn.
3. Students should see assessment as addressing what they are supposed to have learned and be aware of the required standards.

This study aims to develop a questionnaire that assesses the clarity of students' perceptions of these aspects of their teaching/learning environment, and examines the extent to which the clarity of these perceptions affects their approaches to learning. There are two approaches to learning [13]; Deep Approach (DA) indicates a student is more likely to be motivated by intrinsic interests and engaged in a search for meaning, while Surface Approach (SA) indicates a student is more likely to be motivated extrinsically and would attempt to accomplish tasks with minimum duration and efforts [14]. A high DA score and a low SA score are considered to be indices of good learning. It would be expected that the clearer students are about these aspects of the teaching/learning environment the more they would be able to be reflectively and metacognitively engaged in their learning [3]. Thus we would expect clarity of perception to be related to higher deep and lower surface approaches to learning.

If these relationships could be established, the LEI-C as a quickly administered instrument could be a useful and important tool in the quality assurance (QA) and more importantly the quality enhancement (QE) of teaching, as discussed below.

3. Method

The LEI-C was designed to address students' perceived clarity of effective teaching and learning environments. Initial items were generated based upon literatures; with the intent of creating items that exhibit a high level of content and face validity, that then lead to an instrument with a high level of construct validity. These items were reviewed by outcome-based teaching and learning experts. Based on these evaluations, the wordings of several of the items were modified for better clarity. In order to encourage widespread use of the LEI-C by teachers, it was decided to keep the instrument as brief as possible.

A version of the LEI-C was then piloted in a university in Hong Kong with five items addressing students' perceptions of each of the three aspects: clarity of what is to be learned, how it is to be learned, and how it is to be assessed and to what standards required. The Cronbach alphas for each such subscale were all in excess of .80. In the interests of brevity for classroom administration, four items per subscale were trialed. Cronbach alphas were calculated iteratively, and combinations of four items for each subscale where coefficient alpha exceeded 0.80 were found. These items were used to develop the present LEI-C, the final form of which is given in Appendix 1.

Table 1. *Descriptive statistics of participating courses*

School	Number of Courses	Number of Students	Percentage
Arts	8	188	18.8
Visual Arts	3	46	4.60
Business	7	404	40.3
Communication	6	76	7.6
Science	6	84	8.4
Chinese Medicine	3	137	13.7
Social Sciences	4	67	6.7
TOTAL	37	1002	100

The study was carried out in the academic year 2011 – 2012 (semesters one and two) in a different Hong Kong university from the one in which the pilot study was carried out. The 12-item LEI-C emerging from the pilot study mentioned above was administered in class at the end of each semester to a total of 1840 students in 37 courses (852 students in 16 courses offered in semester one and 988 students in 21 courses offered in semester two). Additionally, the Revised Two Factor Study Process Questionnaire (R-SPQ-2F) [13] was administrated in class at the beginning and at the end of both

semesters to the same 37 courses. Twenty courses were at Year 1 level, ten at Year 2, five at Year 3, and two at graduate level. Descriptive statistics of these courses is shown in *Table 1*. A total of 1002 usable responses (with valid LEI-C, pre and post SPQ scores) were collected.

3.1. Data Analysis

In developing the Learning Experience Inventory in Courses (LEI-C), the validation was conducted in two steps:

1. Exploratory factor analysis (EFA) was used to uncover the underlying structure of the initial items generated [15-19] including Parallel Analysis (PA) [20] so as to identify the number of factors to extract using oblique rotation. Then confirmatory factor analysis (CFA) was carried out to confirm the structure and dimensionality of the LEI-C by testing several hypothesized measurement model(s) resulting from the exploratory factor analysis. The data (n = 1,002) was divided randomly into two samples of equal size of 501 cases (Samples A and B), which well exceeds the recommended minimum sample size for the EFA and CFA [21]. Sample A was used for the EFA, and Sample B for the CFA.
2. After confirming the initial structure of the LEI-C, the Clarity of Perception Index (CPI) was obtained by calculating the total of all constituent items. The CPI for any given course quantifies the extent to which students in that course are clear as to what they are to learn, and that they see the teaching/learning activities and the assessment tasks they have experienced as addressing their perceptions of what they should be learning. A validation of the LEI-C would be to show that the CPI is associated with superior approaches to learning. Multivariate analyses of covariance were used to examine these relationships.

4. Results

4.1. Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) was conducted followed by oblique rotation using promax with parallel analysis [20] to decide how many factors to extract. PA was conducted using SPSS [22] to randomly generate 1000 random data matrices using principal axis component method, each with 500 cases and 12 variables. In the original sample A, the first 3 eigenvalues (and associated % of variances) were 3.67 (30.6%), 2.48 (20.6%), and 1.41(11.75%). These eigenvalues exceeded the eigenvalues that emerged from PA, suggesting an optimal 3-factor structure. On this basis, three factors were extracted (*Table 3*). No items were removed. The subscales and total CPI scale, with associated Cronbach's coefficient alphas, inter-factor correlation, mean and standard deviation are given in *Table* 2. It will be seen that with this larger and different sample, the alpha coefficients are considerably larger than the .80 minimum set in the pilot study, while that for the 12-item CPI is high at .93.

Table 2. *Reliabilities of LEI-C (CPI and subscales)*

Scale/subscales	Cronbach's coefficient alpha	N	Mean	SD
Clarity of Perception Index	.93	501	39.27	4.95
Clarity of what to learn	.98	501	15.04	2.30
Clarity of how to learn	.83	501	13.20	2.64
Clarity of how learning may be assessed	.91	501	11.02	3.19

Table 3. *Results of exploratory factor analysis (EFA)*

	Three Factor Solution Pattern Matrix		
Items Item Text	Factor 1	Factor 2	Factor 3
Clarity of learning (Clarity of what to learn)			
1. I had a clear idea of what I was to learn	.74	-.19	.19
2. I found that what I learnt was what I had expected of this course	.74	.03	-.05
3. I was given a clear idea of what I had to be able to do with the topics learnt.	.71	.13	.00
4. Topics covered in the course addressed what I understood the course was meant to be	.71	.06	-.13
Effective Teaching/Learning Activities (Clarity of how to learn)			
5. The teaching and learning activities provided me the opportunities to learn through active participation.	.04	.80	-.05
6. The teaching and learning activities helped me learn what I was supposed to learn.	-.05	.69	.06
7. Instructions for learning activities were clear and specific.	.17	.65	.01
8. The teaching and learning activities addressed my learning needs.	-.11	.63	.10
Effective Assessment of Learning (Clarity of how learning may be assessed)			
9. The assessment methods addressed what I was supposed to learn.	.03	-.06	.79
10. The assessment standards were clear enough to help me self-assess the quality of my work.	.01	.07	.71
11. I have achieved what I was supposed to learn in this course.	-.02	.02	.67
12. I received useful information or feedback on how well I was doing in this course.	-.01	.09	.53

4.2. Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was then performed on Sample B to confirm dimensionality of the LEI-C through an examination of three different models using structural equation modelling techniques (SEM). Model 1 is a first-order model, in which one factor (the CPI) is hypothesized to account for all the common variance among the 12 observable variables. In this model, the three categories, as identified in the exploratory factor analysis (perceptions of expected learning, effectiveness of teaching/learning activities and of assessment) are hypothesized to be within the same first-order construct, in which case the CPI may be obtained by adding the item scores. Model 2 hypothesizes that the three item categories are unrelated. Model 3 hypothesizes three first-order factors, corresponding to the initial three categories and one second-order factor, the CPI.

Chi-square statistics of all models were statistically

significant *($p < 0.001$)*, which is not what we want, but as this may be due to the large sample size we consider these other indices (*Table 4*). Model 2 provided a relatively poor fit to the data in terms of Normed chi-square and RMR ($\chi 2/df=5.13$; RMSEA=.09; GFI=.91; AGFI=.87). Both Model 1 ($\chi 2/df=2.34$; RMSEA=.05; GFI=.96; AGFI=.94) and Model 3 ($\chi 2/df=2.10$; RMSEA=.05; GFI=.96; AGFI=.95) demonstrated a good fit to the data with desirable goodness-of-fit indices (around 2.0). The goodness-of-fit indices for these two models were quite similar. Thus, as both models are acceptable, Model 1 is the justification for the CPI, while Model 3 allows use of the individual component subscales. The different models serve different purposes as seen below. *Table 4* compares the fit indices of the three alternative models.

Table 4. *Goodness of fit indices for competing models (n=501)*

	Chi-Square [21]	Normed chi-square (χ^2/df)	Absolute fit measures			Incremental fit measures
			RMSEA	GFI	RMR	AGFI
Model 1: One Factor	126.59 (54)	2.34	.05	.96	.02	.94
Model 2: Three Factors Uncorrelated	280.36 (54)	5.13	.09	.91	.25	.87
Model 3: Three Factor Correlated	106.89 (51)	2.10	.05	.96	.02	.95

After examining the overall model fit, we turn to examine the parameters estimates for Model 1 since the sum of total score (CPI) is used to examine the impacts on learning. Referring to *Figure 1*, most items in Model 1 have satisfactory loadings (0.65 or above) on their underlying latent factor, with t-values higher than 2.00. Each item thus explains almost 50 percent of the variance of a particular construct. Cronbach's coefficient alphas for each of the subscales and for the Clarity of Perception Index have already been provided in *Table 2*. Consequently, the data sets were then combined for the analyses to examine the effects of the CPI on student's learning.

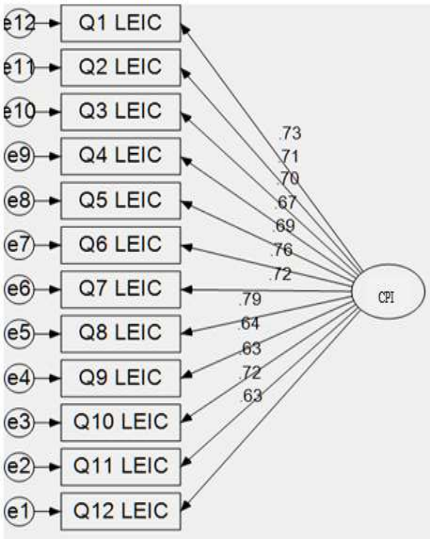

Figure 1. *Factor loadings of model 1*

4.3. Impacts of Clarity of Perception Index (CPI) on Students' Approaches to Learning

The question arises as to the unit of analysis to use: course or individual student [20, 23]. Our first concern is how the individual students' perceptions of what they are supposed to learn, how they learn it and how well they see their learning being assessed, relate to their approaches to learning, so here the analysis is by the individual student. However, we are also interested in the usefulness of the CPI in QA and QE, which are concerned with courses. In this case, the clarity of perception index is essentially an estimate of a quality pertaining to courses, on the basis of the aggregate of the perceptions of students in a given course. Accordingly we report here analyses using both the individual student as the unit and the course as the unit.

First we look at relationships between students' perceptions expressed as the CPI, and their approaches to learning, as assessed by the Revised Two Factor Study Process Questionnaire (R-SPQ-2F) [3].

This version of the SPQ yields two scores: Deep Approach [24] and Surface Approach (SA). A high DA score indicates that the student intends to engage the task appropriately and meaningfully, while a high SA score indicates that the student intends to get the task out of the way with minimum trouble: a high DA score and a low SA score are thus considered to be indices of good learning. The SPQ was administered at the beginning of the semester to all 37 courses, providing the DA1 and SA1 scores; and at the end, providing DA2 and SA2. Valid responses of 1002 (valid pre-post SPQ scores) was collected.

It would be expected, then, that a high CPI would be associated with:

1. Increased deep approaches to learning by the end of the course (DA2),

2. Decreased surface approaches to learning by the end of the course (SA2).

Correlations between the CPI and the DA1, DA2, SA1 and SA2 were calculated. Correlations existed between the CPI and DA1 and SA1, so partial correlations between CPI and deep and surface approaches to learning (DA2 and SA2), with the effects of DA1 and SA1 removed, were calculated. These partial correlations between the CPI and DA2 were $r = .51$ *($p<.000$)* and with SA2, $r = -.13$ *($p<.000$).* These figures are significant and in the expected direction, but those for the SA2 are lower than we had expected.

The second issue is to look at the CPI as a property of courses. The mean of the CPIs of all the students in a given course was taken as an index of the clarity of teaching in that course, which here became the unit for analysis. The courses were grouped into three levels of CPI on the basis of the distribution of the CPI scores. The overall mean CPI for all

courses was 40.85: five courses with CPI scores one standard deviation (3.80) below the mean score of comprised Group 1 (Low Clarity), 26 courses with CPI scores between one *SD* below and above the average mean score of the CPI distribution (40.85 – 48.45) comprised Group 2 (Medium Clarity), and the remaining 6 courses with CPI scores one *SD* above the mean score (48.45) comprised Group 3 (High Clarity). Multivariate analyses of variance and covariance were calculated to probe relations between students' perceptions of the clarity of teaching design in the course and the students' approaches to learning in that course. The effects of CPI on final deep and surface approaches to learning (DA2 and SA2) were examined using MANCOVA with DA1 and SA1 as covariates (see *Table 5*)

Table 5. *MANCOVA test of CPI on deep and surface approaches to learning (DA1 and SA 1 as covariates)*

Dependent Variable	Clarity groupings		Mean difference	*p*
Deep Approach 2	1	2	-0.60	ns
		3	-4.21***	0.001
	2	1	0.60	ns
		3	-3.61***	0.000
	3	1	4.21***	0.001
		2	3.61***	0.000
Surface Approach 2	1	2	-1.88	ns
		3	1.95	0.248
	2	1	1.88	ns
		3	3.83**	0.006
	3	1	-1.95	ns
		2	-3.83**	0.006

Table 6. *Differences between first and second administrations of deep and surface approaches to learning by low (Group 1), medium (Group 2) and high (Group 3) students' perceived level of clarity in teaching*

Clarity groupings	Difference between 1st and 2nd administrations of	Mean	*t*	*df*	*p(t-tailed)*
1	Deep Approach	-.399	-1.001	162	.318
	Surface Approach	1.212	2.850	164	.005
2	Deep Approach	1.117	5.327	690	.000
	Surface Approach	1.871	7.857	682	.000
3	Deep Approach	3.186	7.373	139	.000
	Surface Approach	-2.528	-4.530	141	.000

The main effects of CPI on both deep and surface approaches to learning are significant ($\bar{x}$ = 29.51; $F_{(2)}$ =9.08; $p < .001$ and $\bar{x}$ = 33.32; $F_{(2)}$ =4.92; $p < .05$, respectively), Wilks' Lambda = .34, $F_{(4)}$ = 10.20, $p < .01$). The significance and direction of these main effects match the partial correlations above. However, as seen in *Table 6* paired comparisons show that the deep approach increases consistently through Groups 1, 2 and 3 in linear fashion, whereas the surface approach decreases only between Groups 2 and 3. In other words, low and medium perceived clarity in courses seem to have little effect on students' surface approach to learning, but under high clarity conditions the surface approaches decreases. This would explain why partial correlations between CPI and SA2 were relatively low as there appears to be a nonlinear relationship between CPI and surface approach.

5. Discussion and Conclusions

One of the key quality indicators for teaching at university and college level is that students are clear about the requirements of the teaching/learning environment. *The Learning Experience Inventory in Courses* (LEI-C) is designed to assess how clearly students perceive what they are to learn, what they have to do to learn appropriately, and how they are to be assessed and to what standard, along three self-rated subscales. Confirmatory factor analysis was used to determine the most appropriate factor structures. Three models were tested and two were found to provide satisfactory fits. One model suggested one latent variable comprising virtually equal weighting of all 12 items, thus forming the clarity of perception index (CPI). The second suggested that it is also justifiable to use the subscale scores – what is to be learned, how it is learned, and how it is assessed – as individual scores. Both the CPI and the subscales scores have their particularly uses as discussed below.

Partial correlations between CPI and approaches to learning showed that students who saw clearly the requirements of the course adopted a deep approach to learning and tended to avoid a surface approach but the relationship with surface approach while significant was not as high as expected. Some light was thrown on this when courses were classified into High, Medium and Low Clarity, on the basis of the means of the students' CPIs within each course. Deep approaches to learning increased steadily in students in courses taught with perceived low through medium to high clarity, but surface approaches decreased only in the courses taught with high clarity, which explains why the correlation with surface approach while significant was low as the relationship is nonlinear. In other words, to avoid students adopting a surface approach their perceptions of what to learn, how to learn it, and how their learning is to be assessed, need to be very clear.

The fact that the LEI-C's clarity of perception index related strongly to students' approaches to learning suggests that it could be an important instrument, not only for quality assurance (QA) purposes, but for quality enhancement (QE) [14]. QA is concerned with the static question of whether the design and teaching of course at present meets required standards, QE with the dynamic question of how teaching may be enhanced. The LEI-C may contribute to QA by seeing if a particular course provides a clear teaching and learning environment, as perceived by the students. As an

acceptable level of clarity is likely to differ across institutions, the institutional CPI mean would need to be determined. For example, the mean CPI for the 37 courses in the present study was 40.9 (a mean of 3.4 on the 5 point Likert scale) with a standard deviation of 3.8. Using rule of thumb we took low clarity to be one SD below that mean, and high clarity one SD above, and classified the courses accordingly. We suggest that such a procedure could be used to see where the courses in an institution currently stand. The challenge for QE is then to improve the CPI for the low and middle categories.

The subscales of the LEI-C are more relevant to QE. Using the same procedures to determine baselines for each of the three subscales, we could see where the course mean of any subscales are a standard deviation say below the overall mean for all courses so that we can see where clarity is most lacking: in students' perceptions of what they are supposed to be learning, in how they might most appropriately be learning, in assessment requirements, or indeed all three. Having pinpointed the problem, it could be addressed with action research [25] and consequent staff development.

Outcomes-based education (OBE) is likely to assist students in these perceptions because it defines what-is-to-be-learned, expressed as intended learning outcomes (ILOs) in terms of how the teacher would intend the students' behaviour to change as a result of their learning not as a content topic or group of topics to be taught. Likewise, the assessment tasks [17] in OBE directly address what the students are intended to learn because the assessment and the outcome address the same activity. Grading would be achieved using agreed rubrics, to which the student is privy, by means of which the quality of the student's performance as a whole may be judged. In the traditional topic-based curriculum, on the other hand, assessment is in terms of the students' 'understanding' of the topic: what this understanding might mean, and how it is judged, is left to the assessor to decide and is frequently not made available to the students, which obviously leads to perceptions of low clarity of assessment.

In the constructive alignment version of OBE [3], apart from aligning assessment to the intended learning outcomes, teaching is also aligned being specifically designed to engage students in teaching/learning activities (TLAs) that optimize the chances of their achieving the intended learning outcomes. We would expect then that students' perceptions of intended outcomes, teaching/learning activities and assessments would be clearer in constructively aligned courses. The evidence seems to support this. Wang and her colleagues [26] established that, as we find with students in courses they perceived clearly, students in highly aligned courses had higher deep approach and lower surface approach scores than students in low aligned courses. Several evaluation studies of the effectiveness of constructively aligned courses have been carried out that indicate constructive alignment produced improved learning outcomes, some mentioning that students were clearer as to what they were supposed to be learning [27-32].

There are several issues that need addressing in further research:

1 We need to investigate the CPI in different institutions and to explore possible differences in relationships between clarity and learning quality in different content areas, and from first to final year.
2 It seems likely that outcomes-based teaching, and constructive alignment in particular, would increase the clarity with which students perceive what it is they are supposed to learn, the way to go about learning most effectively, and what they are supposed to do for their learning to be assessed fairly. This needs further investigation.
3 The relationship of the CPI to other indices of quality learning needs to be established, especially with regard to student performance. We could not examine student performance here because the final grades in many of the courses were norm-referenced, which does not reflect absolute values of student performance. Even with criterion-referencing, however, it is difficult to compare student performance across different courses and content areas because the criteria by which performance is judged are necessarily different. One method would be to compare the same courses across different cohorts as the institution progressively implements aligned teaching; we are then comparing like with like as far as content and assessment of performance is concerned.
4 The use of the LEI-C's CPI and subscales for QE needs further investigation. It would seem particularly appropriate for the role of action research in enhancing the quality of teaching.

The present data are nevertheless encouraging in the search for a quickly administered instrument that can inform the quality assurance and quality enhancement of teaching and learning. In any good teaching environment, students should: (a) clearly perceive what they are supposed to be learning; (b) perceive the teaching/learning activities as helpful in achieving what is intended should be learned; and (c) perceive the assessment tasks as fair, effectively addressing what is intended they should be learning and to what standard.

Appendix 1. Learning Experience Inventory for Courses (LEI-C)

HONG KONG BAPTIST UNIVERSITY
Centre for Holistic Teaching and Learning (CHTL)

Student Number: _____

Learning Experience Inventory – Course (LEI-C)

This questionnaire is intended to gain feedback on your learning experience in ***this course***. We are asking you to rate statements about what you understood you were supposed to learn, about your experience of the teaching and learning activities in ***this course***, how you experienced the assessment, and how you felt about the course and how it may have helped you reflect on your learning.

You may be asked to complete the LEI-C for more than one course, please complete each one according to your experience in that particular course. Your answer is for research purposes only, and there is no right or wrong answer to the questions.

Thank you for your participation.

Using the scale provided, please rate the extent to which you agree or disagree with the following statements.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
01. I had a clear idea of what I was to learn.	⑤	④	③	②	①
02. I found that what I learnt was what I had expected of this course.	⑤	④	③	②	①
03. The teaching and learning activities provided me the opportunities to learn through active participation.	⑤	④	③	②	①
04. The teaching and learning activities helped me learn what I was supposed to learn.	⑤	④	③	②	①
05. The assessment methods addressed what I was supposed to learn.	⑤	④	③	②	①
06. Instructions for learning activities were clear and specific.	⑤	④	③	②	①
07. The assessment standards were clear enough to help me self-assess the quality of my work.	⑤	④	③	②	①
08. I was given a clear idea of what I had to be able to do with the topics learnt.	⑤	④	③	②	①
09. Topics covered in the course addressed what I understood the course was meant to be.	⑤	④	③	②	①
10. I have achieved what I was supposed to learn in this course.	⑤	④	③	②	①
11. I received useful information or feedback on how well I was doing in this course.	⑤	④	③	②	①
12. The teaching and learning activities addressed my learning needs.	⑤	④	③	②	①

Other comments on the course

The data you have provided herein are solely for preparing statistics or carrying out studies to enhance Teaching and Learning at HKBU, they will not be used for any other purposes. Results will NOT be made available in a form which identifies you.

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