

Etaleb



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**Project: Professional Standards Framework for Excellence  
in Teaching and Learning in Lebanese Universities  
E-TALEB**

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**Public Deliverable 1 - Report on Analysis of Teaching and  
Learning Practices in Lebanon**

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# Preface

This report documents the work carried out on the first work package of the project, named Etaleb. The institutions responsible for the first workpackage are the University of Balamand, Lebanon and the University of Roehampton, United Kingdom.

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## 1 Project Synopsis

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The Etaleb project aims to develop the skills of faculty members in enhancing the student learning experience by developing a national framework to identify and underpin good practice in teaching and supporting learning in higher education. This framework will draw on the UKPSF (United Kingdom Professional Standards Framework) as a reference point. The specific objectives of the project are as follows:

1. Provide support to teaching staff in the form of professional development with the goal of enhancing students' learning experience;
2. Foster dynamic approaches to teaching and learning through creativity, innovation and continuous development in diverse academic and/or professional settings;
3. Create a community of practice, from across a variety of academic disciplines, who share best practices in Higher Education teaching and learning;
4. Acknowledge and explore a host of quality teaching, learning and assessment practices that support and underpin student learning including online education and e-learning;
5. Assist individuals and institutions in gaining formal recognition for quality teaching and learning approaches.

In terms of specific outcomes, the project aims to:

- Identify areas of professional development for faculty members teaching at Lebanese Higher Education Institutions;
- Establish a framework for professional standards for teaching and learning in higher education;
- Set-up a Post-Graduate program for Teaching and Learning in Higher Education for faculty members;
- Issue certificates for inter-university activities centered on teaching and learning via training programs, conferences, and experience sharing;
- Create Centers for Teaching Excellence inside each of the participating universities with the purpose of supporting faculty and students in their teaching and learning activities;

- Support institutional accreditation efforts by having a formal continuous improvement process for standards related to teaching and learning;
- Support universities in promoting online education, instructional technology and e-learning;
- Develop a community of experts in T&L, which includes Lebanon and all Etabeb partners;
- Sustain the competitiveness of the Lebanese Higher Education sector;
- Establish and publish a Lebanese Journal on Teaching and Learning.

## 2 Deliverables of Work Package # 1

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The aim of the first work package, Work package 1, was to analyse current teaching and learning practices in Lebanese Higher Education Institutions. This was undertaken through a Needs Analysis to identify current practices from the points of view of faculty, administrators and students. The specific deliverables are as follows:

- 1.1 Generate techniques and tools for data collection and analysis
- 1.2 Conduct a needs analysis of Teaching and Learning current practices
- 1.3 Distribute work package tasks to members (Balamand and Roehampton)
- 1.4 Compile collected data for the needs analysis
- 1.5 Draft a summary of Teaching & Learning current practices and a summary of T&L areas of professional development
- 1.6 Carry out a national faculty survey on Teaching & Learning
- 1.7 Conduct a final analysis of Teaching & Learning and report a set of recommendations to inform the work of work package # 2 (Lebanese Professional Standards Framework).

## 3 Objectives of Needs Assessment

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### 3.1 WHY A NEEDS ANALYSIS?

A needs analysis of teaching practices constitutes a review of practices and approaches in common use to identify any development requirements. It is a recognized developmental tool that evaluates skills, knowledge and behaviors in order to address demands, together with an assessment of any current or anticipated gaps in practice and experience. The aim of a needs analysis is, therefore, to highlight any such gaps and then bridge identified gaps through structured, focused development.

A needs analysis is the first step in establishing an effective development plan as it serves to determine developmental needs, design effective development programs and empower those involved to enhance their practice. There are a number of benefits to a needs analysis and some are as follows:

- Managers are in tune with their staff developmental needs
- Staff take ownership of their own developmental needs and communicate those needs to their managers
- It allows an action plan to be put into place based on an actual (identified by faculty members and the student voice is prioritized too) rather than a perceived need;
- It can be used as a measurement of progress against objectives
- It encourages an evidence-based approach
- Individuals feel valued as part of the process and therefore develop ownership towards the outcomes
- Individuals feel supported as they are being listened to
- Teaching and Learning gets established as a priority!

### 3.2 OBJECTIVES

The main objective of the needs analysis used in the E-Taleb project was to establish the common practices in teaching and supporting learning in higher education in the Lebanon and any gaps in these practices. It also served to ascertain faculty confidence, the extent to which different practices are used and, concomitantly, students' experiences of these different practices and any teaching practices they would like to see in their studies. In turn, administrative colleagues were involved to gauge the rationale behind the use of these practices and relevant institutional priorities and foci.

The data from the needs analysis have allowed the research team to gain an insight into which training and/or development needs colleagues may have, which then permits a plan of action to be put in place. The specific objectives of the "Needs Assessment" are as follows:

- Identify current practices in Teaching and Learning (T&L) in Lebanon's HE sector;
- Bring forward students' experiences on T&L;

- Gather administrators' perspective on institutional priorities and areas of focus for the support of T&L;
- Inform the development of the LBPSF with the goal of enhancing teaching effectiveness and improving students' learning.

### 3.3 RESEARCH QUESTIONS

Key research questions were identified for the Needs Assessment study. They are as follows:

- I. What are the key learning and teaching issues for faculty teaching in Lebanese universities?

This broad question will address seven areas:

1. Delivery styles/approaches in the classrooms
2. Use of technology for teaching and support of learning
3. Development of transferrable skills in students
4. Assessment methods and approaches
5. Institutional resources and facilities to enable student progression and success
6. Evaluation of teaching in support of students' learning
7. Scholarship of teaching and learning

- II. What are the key training and/or professional development needs colleagues may have?

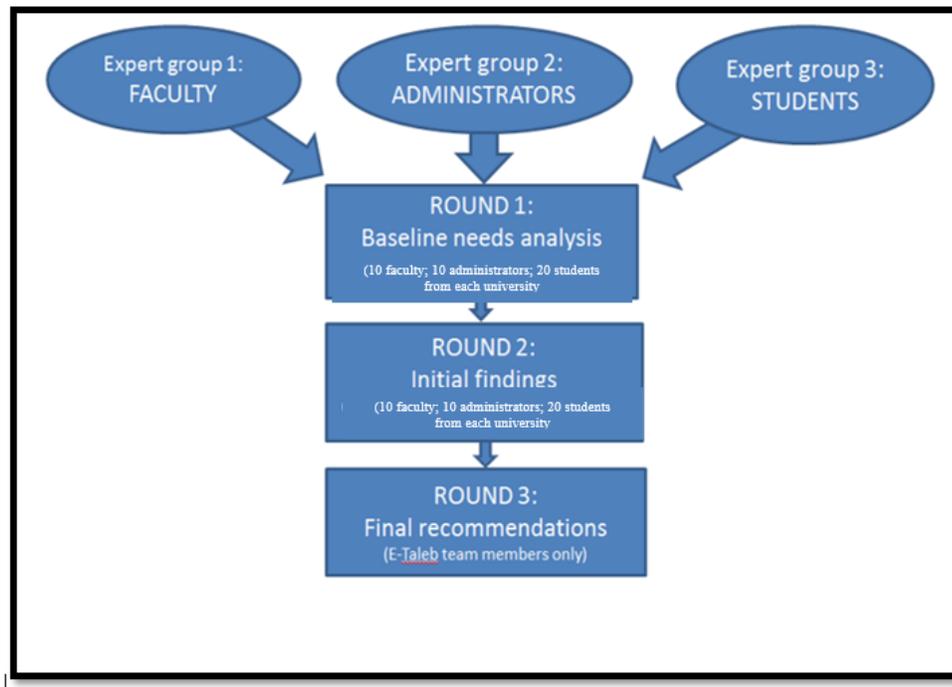
- III. What suggestions can administrators, faculty, and students usefully make about future faculty development programs?

## 4 Methodology

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For the purposes of E-Taleb, the methodology chosen was the E-Delphi technique. This technique is an electronic data gathering exercise that is based on a conventional Delphi study (Linstone & Turoff, 2002). By using E-Delphi, a consensual overview of the key topics that might be included in the proposed new programme for faculty teaching in Lebanese universities was gained. This ensures that students, faculty and administrators all have a say in the curriculum content (Tomkinson et al, 2008). E-Delphi is an iterative process which takes place

online over a number of weeks, whereby a large number of different participants' ideas and thoughts can be refined and reflected on in order to reach a consensual opinion on a complex or challenging topic, such as the content of a new curriculum (Moercke & Eika, 2002; Osborne et al, 2001). The E-Delphi technique is a good way to gather research data from a large group of geographically remote participants, as the groups do not need to meet face to face. The following diagram gives a brief overview of the process:



*Figure 1 Overview of the WPI process*

There are a number of ways in which an E-Delphi study can be organized, depending on the number of participants and the complexity of the research. However, all Delphi studies adhere to four main principles (Linstone and Turoff, 2002):

- There is full anonymity / confidentiality for participants
- Participants will have feedback at each stage of the research process
- The participants are seen as “experts”, as they have a close working knowledge of the topics being researched
- Eventually, a consensual opinion is reached through the use of statistics and data analysis

Several universities have already used the Delphi technique to interview students and staff about curriculum and programme design issues (Moercke & Eika, 2002; Tomkinson et al, 2007). The Delphi technique has four main advantages for use in educational settings:

- It uses group decision-making techniques, involving “experts” in the field, which have a greater validity than those made by an individual
- The use of online questions avoids the problems commonly associated with group interviews: such as deference to authority or a reluctance to express one’s opinions
- The consensus reached by the group reflects well-considered opinions as group members are required to consider logically the problem under study
- Opinions using the Delphi method can be received from a group of experts working or studying at different institutions

Thus, the above considerations drove the adoption of the E-delphi in this study. The survey was distributed in three stages:

In the first round, the survey was distributed to the three expert groups,

- Expert group 1: Faculty members (10 faculty members per institution representing the various disciplines/fields of study at participating institutions in the E-Taleb project<sup>1</sup>). Each institution, via its representative on the E-Taleb project selected these participants from the various faculty ranks and each institution was responsible for contacting these individuals to agree to participate and to respond for rounds 1 and 2 of the DELPHI study.
- Expert group 2: Administrators (10 persons including for example the provost (VP of academic affairs), director of teaching and learning center (if exists), Institutional Effectiveness/Research office director (if exists), QA officer (if exists) and some academic deans). Each institution, via its representative on the E-Taleb project, selected these participants based on its governance/management structure and each institution was responsible for contacting these individuals to agree to participate and to respond for rounds 1 and 2 of the DELPHI study.
- Expert group 3: Students (20 students per institution representing the various disciplines/fields of study at participating institutions in the E-Taleb project). Each institution, via its representative on the E-Taleb project, selected these participants from

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<sup>1</sup> Al- Manar University of Tripoli; Beirut Arab University; Holy Family University; Holy Spirit University of Kaslik; Jinan University; Lebanese American University; Lebanese University; University of Balamand

the student body keeping in mind that these students ought to have been exposed to university teaching/learning for one and a half to two years and every attempt should be made to have representation of gender, international students, etc. Each institution was responsible for contacting these students to agree to participate and to respond for rounds 1 and 2 of the DELPHI study.

The findings of the first round were fed in the second round questionnaire which was similarly distributed to the same expert groups.

Once done, the finding of both first, and second questionnaire were used to design the National Survey targeting full time faculty members from the census of the overall 45 licensed Lebanese universities listed on the Ministry of Education and Higher Education Website.

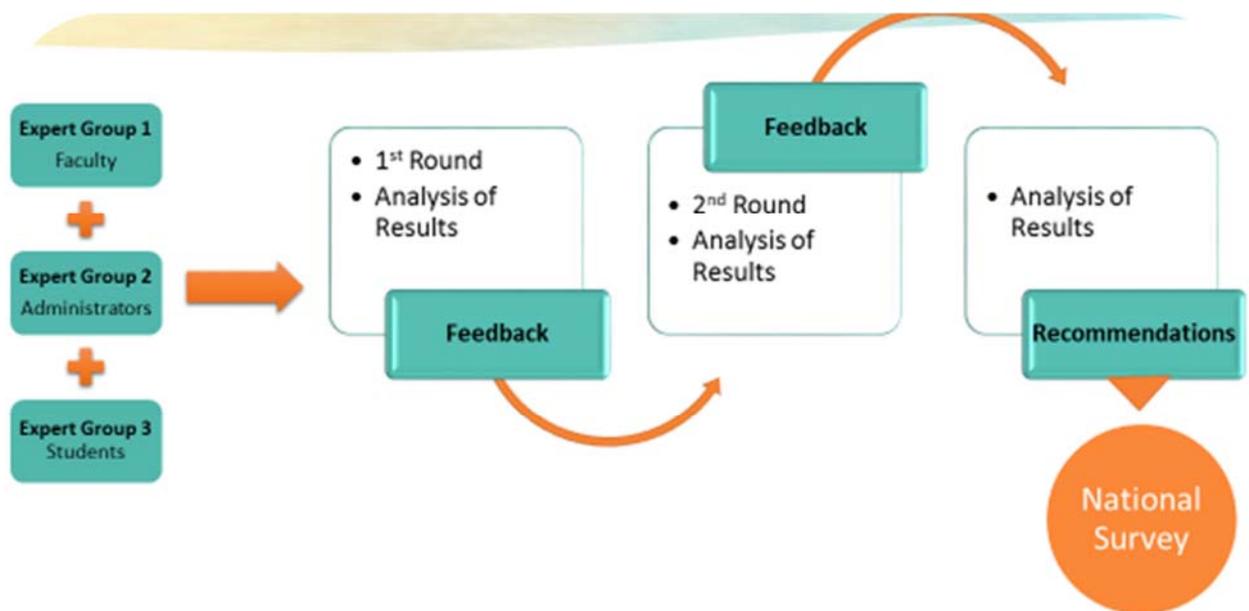


Figure 2 E-delphi process in this study context

The aim of the national survey is to obtain nationally representative answers to areas of professional development in the forms of seminars and workshops. The results of the DELPHI study and the national survey serve to inform the constructs of the Lebanese Professional Standards Framework (work package # 2).

## 5 FIRST ROUND NEEDS ASSESSMENT SURVEY

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### 5.1 SURVEY DESIGN ROUNDS 1 AND 2

In Round 1, questionnaires included multiple closed questions with ticks to select out of listed options. The choice of the entries for categories and items were selected based on several resources including (OECD's TALIS Teaching and learning international survey - indicators, Kreber 2001, Nworie 2011).

Definitions and interpretations of selected entries were provided in the glossary of terms (**Glossary of Selected Terms Used In Questionnaires**). An open ended box in case an individual would like to add comments or explanations was included. Typed items were studied

for repetitiveness. Ratios of  $\frac{1}{3}$  or higher for repetitiveness were included in round 2. For Round 2, the top five (six in case of a tie) were selected in addition to added potential ordering modifiers while dropping the ordering non-modifiers in round 1 from round 2.

### 5.2 FIRST ROUND OF QUALITATIVE CODING AND THE IMPACT FOR THE SECOND ROUND DESIGN

The qualitative data of Round 1 was analyzed looking for recurrent themes. The seven sections of the three questionnaires (student, faculty and administrators) included open-ended sections in which the participants were asked to include additional comments. These responses were analyzed deductively and the themes were extracted for the purpose of informing the second Delphi round of ranking.

The faculty and administration responses, qualitative statements, did not yield any themes that would impact the second round of Delphi.

The students' responses were however noteworthy. Students' qualitative statements in Section One, 12 students out of 34, asked for more 'field work/practicum/internship experiences' to improve their learning experience. In Round 2, 'field experiences' was then added.

In Section Four, 9 out of 21 students asked for varied and multiple assessment techniques to ensure fairness in evaluation. While this did not impact Round Two, it is important to keep this theme in mind as a qualitative indicator of students' needs.

In Section Six, 18 of the 23 students acknowledged the importance of teacher evaluation. Of those 18 students, 12 commented that they would like to see the 'results' of their survey; i.e.

they would like to see that their professors/institution had addressed their concerns communicated in the teacher evaluation forms and had improved their teaching styles. While this did not impact Round 2, it is also important to keep this theme in mind as a qualitative indicator of students' needs.

### 5.3 FIRST ROUND QUANTITATIVE RESULTS ANALYSIS

The first step in the quantitative analysis is to identify terms that are highly selected in each of the seven sections for students, administrators, and faculty labeled as “commonly used” or “commonly needed”. The analysis was initiated in three directions. First, top five items were selected per category followed by a comparison within each section for students, administrators, and faculty. Second, the non-ranking modifiers were also selected to be dropped out of the second round. Third, high frequencies were drawn from qualitative to be included in the second round. Readers are invited to look at **Error! Reference source not found.** for more information.

When it comes to commonly used versus needed items per category, the comparison between the three populations revealed several common terms as depicted in the table below:

Table 1 Commonly Used and Commonly Needed Comparison: Faculty, Students, and Administrators for Round 1

<b>Section</b>	<b>Commonly used</b>	<b>Commonly needed</b>
<b>Delivery styles/approaches in the classrooms</b>	Active learning, Discussion/debates, Experiential learning, Traditional lecturing (Direct instruction)	Flipped classroom Web-enhanced instruction
<b>Use of technology for teaching and support of learning</b>	Multimedia tools Open educational resources Instructional technology systems	Interactive whiteboards
<b>Development of transferrable skills in students</b>	Ability to apply knowledge in practice, Research skills, critical thinking Communications skills(verbal and written)	Organizational skills Global/multicultural Awareness
<b>Assessment methods and approaches</b>	Instructor-assessed projects Essay examinations Case studies/problems Formative assessment	Self-evaluation Student-to-student Evaluation
<b>Institutional resources and facilities to enable student progression and success</b>	Library learning resources Workshops/seminars	Workshops/seminars Research infrastructure Career service center
<b>Evaluation of teaching support of students' learning</b>	Midterm evaluation Student's evaluation questionnaire Achievement of student teaching outcomes Student rating of teaching	E-portfolios

*SOTL was not included in Table 1 since it was only for faculty and administrators.*

## 6 SECOND ROUND NEEDS ASSESSMENT SURVEY

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### 6.1 QUANTITATIVE ANALYSIS OF ROUNDS 1 AND 2

**Error! Reference source not found.** presents raw data from R1 and R2 Faculty, Students, and Administrators surveys across all seven categories with a difference in the seventh category between students and faculty and administrators.

In R1, participants were asked about their current use of the teaching and learning strategies and about their need for training in these areas while in R2, they were asked only about their need for training in these areas and a ranking of their needs. The empty boxes in R2 represent the entries that were not included from R1 while the entries that were added in italics represent emerging themes that were added based on the qualitative data from R1. The colors in the table represent the rankings of the entries across the three types of participants and across the two rounds of Delphi. The green shaded area shows the 1<sup>st</sup> highest number of selected entry, yellow shows the 2<sup>nd</sup> highest, blue shows the 3<sup>rd</sup> highest, pink shows the 4<sup>th</sup>, and orange shows the 5<sup>th</sup> highest selected entry.

Table 2 Faculty, Students, and Administrators Responses to R1 and R2 Section 1, Analysis of Instructional Approaches

	Students	Faculty	Administrators
<b>Round 1</b>	1. Discussions and Debates	1. Active Learning	1. Active Learning
<b>Current Use:</b>	2. Active Learning	2. Discussions and Debates	2. Traditional Lecturing
	3. Collaborative Learning	3. Traditional Lecturing	3. Discussions and Debates
	4. Traditional Lecturing	4. Case-based Instruction	4. Experiential Learning
	5. Experiential Learning	5. Experiential Learning	5. Multimedia Instruction
<b>R1 Needs</b>	1. Games and Simulations	1. eLearning	1. Flipped Classroom
	2. World Café	2. Flipped Classroom	2. Hybrid Approaches & eLearning
	3. Multimedia Instruction	3. Web-enhanced Instruction	3. Web-enhanced Instruction
	4. Web-Enhanced Instruction	4. Hybrid Approaches	4. Competency-based teaching and learning
	5. Flipped Classroom	5. World Café	5. Problem-based learning
			6.
<b>Round 2</b>	1. Active Learning & Discussions and Debates	1. eLearning	1. Competency-based teaching
<b>Needs</b>	2. Experiential Learning	2. Problem-based learning	2. Problem-based learning
	3. Games and Simulations	3. Competency-based teaching	3. Collaborative Learning & eLearning
	4. Discovery-based Learning	4. Hybrid Approaches	4. Flipped Classroom
	5. Problem-based Learning	5. Team Teaching	5. Team Teaching
<b>Ranking of Needs:</b>	1. Experiential Learning	1. Team Teaching	1. Problem-based learning
	2. Discussion/Debates	2. eLearning	2. Team teaching
	3. Games and simulations	3. Hybrid approaches	3. eLearning
	4. Active learning	4. Competency-based teaching and learning & Flipped Classroom	4. Competency-based teaching and learning
	5. Problem-based learning	5. Problem-based learning	5. Collaborative learning

An analysis of Section 1, R1, current use of Instructional Approaches, suggests that the three groups, students, faculty and administrators agree that current instructional approaches involve “Discussions and Debates, Active Learning, Experiential Learning, and Traditional Learning” (the red entries). However, the count of selections by the three groups differed across entries. For instance, while the largest count of students selected “Discussions and Debates” as an approach by faculty who teach them, “Active Learning” was selected by the largest number of faculty and administrators as the most commonly used teaching approach. “Active Learning” was selected as the second most commonly used approach by faculty as suggested by students while “Discussions and Debates” was selected as the second most commonly used approach by faculty as reported by themselves and “Traditional Lecturing” as reported by administrators. Students also selected “Collaborative Learning” as the 3<sup>rd</sup> most commonly used strategy by faculty, while “Traditional Lecturing” came 4<sup>th</sup> and “Experiential Learning” ranked 5<sup>th</sup>. On the other hand, faculty selected “Traditional Lecturing” as the 3<sup>rd</sup> most commonly used approach for teaching followed by “Case-based Instruction” and similar to students’ selections, in the 5<sup>th</sup> place was “Experiential Learning.” Administrators selected the same instructional approaches as students and faculty although with a slightly different ranking. This suggests that all three samples of participants selected nearly the same entries for Instructional Approaches although the numbers of selections varied across groups.

On the other hand, an analysis of the need for training in Instructional Approaches in R1, shows that the common needs across the three groups were “Flipped Classroom and Web-Enhanced Instruction”. While students would like their professors to be more proficient in the use of “Games and Simulations” in the first place, faculty would like to explore “eLearning” as an instructional strategy, and administrators think that faculty should explore “Flipped Classroom” approaches. Students also selected “World Café, Multimedia Instruction, Flipped Classroom, and Web-enhanced Classroom” as teaching approaches they would like their professors to use in their courses. Faculty selected the same entries with the exception of “Games and Simulations” which was replaced by “Hybrid Approaches.” Finally, Administrators selected “Competency-Based

Teaching and Problem-Based Learning” as teaching strategies that faculty should attempt to use in their courses.

In R2 survey, “Problem-Based Learning” was commonly selected by the three groups as a need for training and for more use in courses. Identified needs were more common among faculty and administrators as opposed to students. Students would like faculty to use more “Active Teaching, Discussions and Debates, Experiential Learning, Games and Simulations, and Discovery-based Learning.” On the other hand, faculty and administrators would like to see more “eLearning, Competency-based teaching, Hybrid Approaches, Team Teaching, and Flipped Classroom” strategies in their classrooms. Most of these needs concur with R1 needs analysis. The needs from R2 were also ranked by the three groups by order of importance for professional development.

Since R2 survey ranking sections present the results of the survey responses from R1 and R2, the following tables and descriptions present the findings from all the other sections as presented by the rankings in R2 survey.

Table 3 *Faculty, Students, and Administrators Responses to R2 Section 2, Educational Technology Use*

	Students	Faculty	Administrators
<b>Ranking of Needs:</b>	<ol style="list-style-type: none"> <li>1. Instructor-recorded videos and lectures</li> <li>2. Interactive whiteboards/smartboards</li> <li>3. Apps</li> <li>4. Open educational resources</li> <li>5. Multimedia tools</li> </ol>	<ol style="list-style-type: none"> <li>1. Interactive whiteboards/smartboards</li> <li>2. E-learning</li> <li>3. Hybrid/blended courses</li> <li>4. Open educational resources</li> <li>5. Instructional technology systems (Course management systems, Moodle/Blackboard, etc.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Course Management System</li> <li>2. Open educational resources</li> <li>3. Interactive whiteboards/smartboards</li> <li>4. E-Portfolios</li> <li>5. E-learning</li> </ol>

Several needs emerged as a result of survey R1 and R2 regarding Educational Technology Use for Teaching and Learning. Students, faculty and administrators agreed that there is a need to train faculty to use Interactive whiteboards and open educational resources although these needs were ranked differently across the three different groups. Students asked for more use of Apps, instructor-recorded videos and lectures and multimedia tools while faculty requested training in elearning, hybrid course design and the use of learning management systems. Administrators requests converged with those of faculty except they asked for the integration of ePortfolios.

Table 4 *Faculty, Students, and Administrators Responses to R2 Section 3, Transferable Skills*

	Students	Faculty	Administrators
<b>Ranking of Needs:</b>	<ol style="list-style-type: none"> <li>1. Communication skills (verbal and written)</li> <li>2. Critical thinking</li> <li>3. Research skills</li> <li>4. Decisions making &amp; Problem solving</li> <li>5. Ability to apply knowledge in practice</li> </ol>	<ol style="list-style-type: none"> <li>1. Analytical thinking</li> <li>2. Communication skills (verbal and written)</li> <li>3. Research skills</li> <li>4. Decisions making &amp; Problem solving</li> <li>5. Ability to work autonomously/self-directed learning</li> </ol>	<ol style="list-style-type: none"> <li>1. Communication skills (verbal and written)</li> <li>2. Ability to apply knowledge in practice</li> <li>3. Critical thinking</li> <li>4. Leadership skills</li> <li>5. Research skills</li> </ol>

As for transferable skills, results from R1 and R2 surveys showed that there is a high priority across the board for training faculty to integrate communication skills and research skills in higher education teaching. Critical thinking and analytical thinking also emerged as a common need across the three groups. Students and Faculty agreed that decision making and problem solving skills should be reinforced while administrators and students agreed that faculty should teach students the practical application of knowledge in the fieldwork. Faculty on the other hand emphasized autonomous and self-directed learning and administrators thought that Leadership skills should be taught.

Self-evaluation and student-to-student peer evaluation were requested commonly by all three groups as a top need for training in Assessment methods in higher education. Students also requested more integration of case studies, externally-reviewed internships, and pre/post-tests. Both faculty and administrators requested training in instructor-assessed projects and exams and program-level written exams while faculty alone asked for training in assessment rubrics and administrators thought that external jury of student projects training would be useful for faculty.

Results from R1 and R2 surveys regarding institutional resources and facilities suggested that career services, research infrastructure, and workshops/seminars were commonly requested by the 3 groups as a training need for faculty. On the other hand, students requested more study abroad opportunities and student support services. Faculty and administrators requested training for faculty to integrate library/learning resources while faculty alone requested training in IT infrastructure and administrators thought that community service learning is essential.

As for Teaching Evaluation, results from R1 and R2 survey suggested that all three groups request faculty training in the areas of course evaluations, and peer evaluation of teaching performance. Students also reported that faculty should be trained in using achievement of student learning outcomes, Lecture-by-lecture objectives, and focus groups on teaching/learning, which were also shared by administrators. Faculty on the other hand, requested training in Key performance indicators (KPI) set up by instructor, rubrics (matching teaching to learning), and self-designed feedback questionnaires. Again administrators reported that faculty should be trained to use student ePortfolios.

Table 5 Faculty, Students, and Administrators Responses to R2 Section 4, Assessment Methods.

	Students	Faculty	Administrators
<b>Ranking of Needs:</b>	<ol style="list-style-type: none"> <li>1. Case studies/problems</li> <li>2. Self-evaluation</li> <li>3. Student-to-student (Peer) evaluation</li> <li>4. Externally-reviewed internship</li> <li>5. Pre-and post-tests</li> </ol>	<ol style="list-style-type: none"> <li>1. Instructor-assessed projects, exams, etc.</li> <li>2. Assessment rubrics</li> <li>3. Program-level written comprehensive exams</li> <li>4. Self-evaluation</li> <li>5. Student-to-student (Peer) evaluation</li> </ol>	<ol style="list-style-type: none"> <li>1. Self-evaluation</li> <li>2. Student-to-student (Peer) evaluation</li> <li>3. Program-level written comprehensive exams</li> <li>4. External jury of student projects</li> <li>5. Instructor-assessed projects, exams, etc.</li> </ol>

Table 6 Faculty, Students, and Administrators Responses to R2 Section 5, Institutional Resources and Facilities

	Students	Faculty	Administrators
<b>Ranking of Needs:</b>	<ol style="list-style-type: none"> <li>1. Workshops /seminars (technical/nontechnical)</li> <li>2. Study abroad opportunities</li> <li>3. Career service center (real-world linkages and placement assistance)</li> <li>4. Research infrastructure</li> <li>5. Student support services</li> </ol>	<ol style="list-style-type: none"> <li>1. Workshops /seminars (technical/nontechnical)</li> <li>2. Research infrastructure</li> <li>3. Library/learning resources</li> <li>4. IT infrastructure</li> <li>5. Career service center (real-world linkages and placement assistance)</li> </ol>	<ol style="list-style-type: none"> <li>1. Research infrastructure</li> <li>2. Workshops /seminars (technical/nontechnical)</li> <li>3. Library/learning resources</li> <li>4. Career service center (real-world linkages and placement assistance)</li> <li>5. Community service learning (civic engagement and extra-curricular activities )</li> </ol>

Table 7 Faculty, Students, and Administrators Responses to R2 Section 6, Teaching Evaluation

	Students	Faculty	Administrators
<b>Ranking of Needs:</b>	<ol style="list-style-type: none"> <li>1. Student rating of teaching (Student feedback form or course evaluation forms)</li> <li>2. Peer evaluation of teaching performance</li> <li>3. Achievement of student learning outcomes</li> <li>4. Lecture-by-lecture objectives</li> <li>5. Focus groups on teaching/learning</li> </ol>	<ol style="list-style-type: none"> <li>1. Course evaluation form (Student feedback form)</li> <li>2. Key performance indicators (KPI) set up by instructor</li> <li>3. Rubrics (matching teaching to learning)</li> <li>4. Self-design feedback questionnaires</li> <li>5. Peer evaluation of teaching performance</li> </ol>	<ol style="list-style-type: none"> <li>1. Course evaluation form (Student feedback form)</li> <li>2. Peer evaluation of teaching performance</li> <li>3. Student E-Portfolios</li> <li>4. Lecture by lecture objectives</li> <li>5. Focus groups on teaching/learning</li> </ol>

Table 8 Faculty and Administrators Responses to R2 Section 7, Scholarship of Teaching and Learning

	Faculty	Administrators
<b>Ranking of Needs:</b>	<ol style="list-style-type: none"> <li>1. Attending/presenting in T&amp;L conferences</li> <li>2. Promoting research-informed teaching</li> <li>3. Holding seminars/workshops on T&amp;L</li> <li>4. Life-long learning activities in T&amp;L</li> <li>5. Supervising graduate student research in T&amp;L</li> </ol>	<ol style="list-style-type: none"> <li>1. Promoting research-informed teaching</li> <li>2. Life-long learning activities in T&amp;L</li> <li>3. Writing books/Chapters in books</li> <li>4. Induction to college teaching for new faculty members</li> <li>5. Intellectual property matters (copyright, fair use, avoiding plagiarism, Internet use, research integrity, etc.)</li> </ol>

Both faculty and administrators reported that training is needed in the area of promoting research-informed teaching and life-long learning activities in teaching and learning. Faculty alone reported that they need training in attending and presenting in T&L conferences, holding seminars and workshops in T&L, and supervising graduate student research in T&L. On the other hand, administrators thought that faculty need training in writing books/chapters, induction to college for new faculty members and intellectual property matters.

Table 9 *Students Responses to R2 Section 7, Learning Preferences*

<b>Students</b>	
<b>Ranking of Needs:</b>	<ol style="list-style-type: none"> <li>1. Internships/ On the field training</li> <li>2. Solving problems related to a course content</li> <li>3. Creating a project/product</li> <li>4. Engaging in class discussions</li> <li>5. Writing research papers</li> </ol>

All in all, students preferred modes of learning resides in experiential learning (on the field training), problem-based learning, creating projects, engaging in class discussions and writing research papers. Qualitative Data Analysis Rounds 1 & 2 (R1&R2)

Further to the pre-established categories and sub-categories in the survey, each of the seven sections in the three questionnaires, faculty, students, and administrators, included an open-ended section that asked the participants to include additional comments. The number of responses along with the analysis is presented in Table 10.

Table 10 A Comparative Analysis of the Number of Open-ended Responses by Faculty, Students, and Administrators in Round 1 (R1) and Round 2 (R2) and the Analysis of Their Responses.

Sections	Faculty		Students		Administrators		Recurring Themes	
	R1	R2	R1	R2	R1	R2	R1	R2
<b>S1: Instructional Approaches</b>	14	10	34	28	16	13	Students: field work/practicum/internship Administrators: Workshops & e-learning	Students: Active learning strategies; experiential learning Admin.: professional development opportunities for faculty (workshops, seminars...) Focus on projects as way to develop competences
<b>S2: Use of Educational Technology</b>	9	5	27	25	12	12		Students: The use of technology to further engage students. Lack of advanced technology tools: hardware and software Faculty and Admin.: training need for technology. Encourage more simulations and problems based teaching.
<b>S3: Transferable Skills</b>	5	7	23	24	7	8		Students: Team work Apply theory into practice. Admin.: Communication skills Faculty: Need for all skills
<b>S4: Assessment of Students' Work</b>	2	6	21	24	7	9	Students: Varied assessment techniques	Students: feedback; project-based assessment; peer evaluation. Faculty: different timing and different forms of assessment Faculty and Admin: Varied assessment techniques
<b>S5: Resources and Facilities</b>	4	4	20	22	5	9		Students: Career services; outreach to other universities. Faculty and Admin: Support centers to promote outreach.
<b>S6: Evaluation of Teaching Effectiveness</b>		3	24	21	5	7	Students would like to see the course evaluation results and would like to know if their professors take their comments into consideration	Students: implement changes in teaching according to student feedback. Faculty: teaching evaluation linked with professional development. Admin: Continuous evaluation for students and instructors. Varied forms of evaluation.
<b>S7: Learning Styles</b>			21	26				Students: Experiential Learning

Deductive thematic analysis for the open-ended responses was conducted looking for recurring themes. Many of the answers reflected the entries that were proposed by the survey sections. There were other individual responses that did not have high count to be considered as recurring. There were only a few recurring themes in the students and administrators surveys.

In the students' survey, integrating field experience and internships was a recurring theme regarding instructional approaches in Round 1 as well as in Round 2. Students asked for more hands on experience on the field. This item was excluded from round 1 survey so it was added to round 2 survey. In R2, students asked for more engaging teaching strategies in the classroom, which some of them named as Active Teaching. In the same section, several administrators expressed the need for workshops to train faculty in effective teaching methods in both R1 and R2.

In section 2, R2, the use of Educational Technology, students recommended the use of technology to further engage them in their courses while administrators suggested a training need for faculty to integrate technology in their teaching. Students also reported that they lack advanced technology tools, strong wireless connection, and advanced software. As for section 3, transferable skills, R2, students emphasized the need for team building skills and applying the theoretical knowledge they learn in their courses into practice. On the other hand, administrators highlighted communication skills as a basic need that should be developed in students.

In section 4, assessment techniques, R1, students recurrently asked for varied assessment techniques to assess their learning rather than one technique. This item was not part of R1 survey, so it was added to R2. In R2, students requested individualized feedback on their assessments along with the grade, and they emphasized peer evaluation. Some students also mentioned project-based assessment as an effective type of assessment. Faculty, on the other hand, reported in R2 that assessment should be ongoing and faculty should use different forms of assessment, a finding that resonated the students' comments in R1.

In R2, section 5, resources and facilities, students asked for more support from career services and outreach to other universities and companies. A few students also asked for study abroad opportunities that are not supported at their university.

In both R1 and R2, section 6, evaluation of teaching, students said they would like to see the course evaluation results and would like to know if their professors take their comments into consideration. This was mentioned repetitively by students; however, it did not impact the entries in R2 survey. Faculty, in R2 suggested that teaching evaluations should be linked with professional development and teaching portfolios. Admin, on the other hand, stated that continuous and varied teaching evaluation for students and instructors is necessary.

Although there were no striking findings in the qualitative data, the findings suggested that students are more eager than faculty to see change in the way content is being taught. The qualitative data strengthened many of the pre-established categories and sub-categories that were presented in the survey. On one hand, the repetition of the terms in the open-ended, qualitative section showed emphasis and a high need to training in these areas. On the other hand, the participants used the open-ended section to elaborate on the pre-established survey entries which validated the findings in the survey.

Based on the findings in the qualitative and quantitative sections, it could be suggested that a Lebanese framework for teaching and learning in higher education should take into consideration students', faculty, and administrators' perceptions of teaching and learning needs. The triangulation of needs from the three groups could validate the development of a framework. Students who are main stakeholders in the process of teaching and learning have repeatedly requested innovative and active teaching methods in their courses while faculty have reported other needs. Combining these needs in one framework could strengthen both processes for teaching and learning.

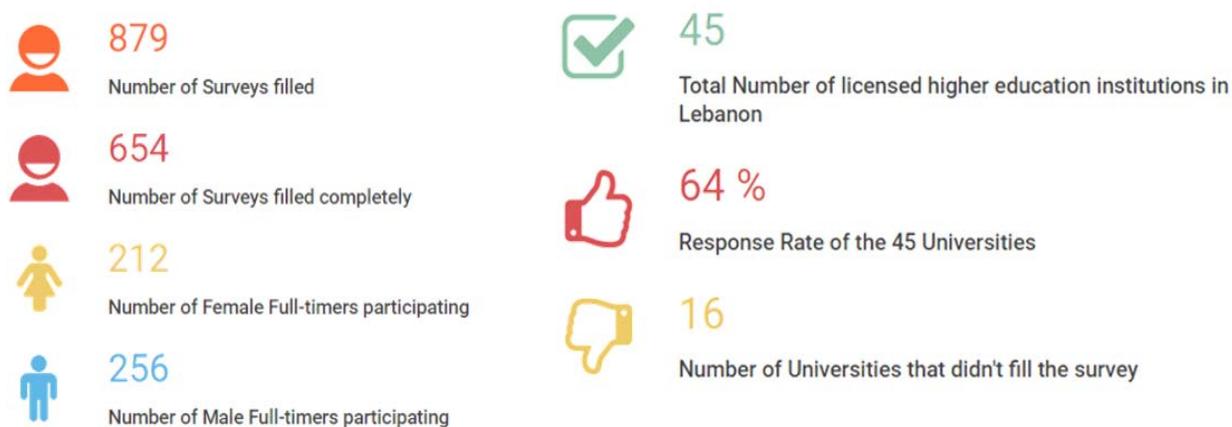
## 7 NATIONAL SURVEY

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### 7.1 SURVEY DESIGN

In order to gather input from the wider higher education system in Lebanon and to allow faculty from the wider spectrum of higher education institutions to communicate their developmental needs, a national survey was developed. The findings of the second round Needs Assessment survey were fed into the National survey by using the top ten selected entries of the ranking question, within each section. Some of the ranking of the first round was also added to the listing of the National survey in the case where less than ten items were depicted in the second round listing.

The survey was distributed to all full-time faculty members within all the licensed Lebanese Higher Education Institutions, listed on the Ministry of Education and Higher Education website, a total of 45 [Refer to **Error! Reference source not found.**]. Sixteen universities did not fill the survey leading to a university response rate of 64%. The respondents were 879, of which only 654 respondents filled out the entire survey and out of which 212 were female, 256 male, and 186 (28.4 %) were not full timers [ Figure 3 Survey Fact Infograph ]



*Figure 3 Survey Fact Infograph*

Unlike R1&2, respondents were anonymous hence the need to study their demographics. Demographics allow for further data analysis of developmental needs for specific age groups (junior/senior faculty members), gender, and other differentiating factors.

The survey captured other faculty demographical data including age, title, highest degree attained, and overall years of teaching experience is illustrated in Figure 4.

Similar to the previous surveys, the National survey consisted of seven sections, each with ten items to be addressed, using a 7-point likert scale ranging from low to high need.

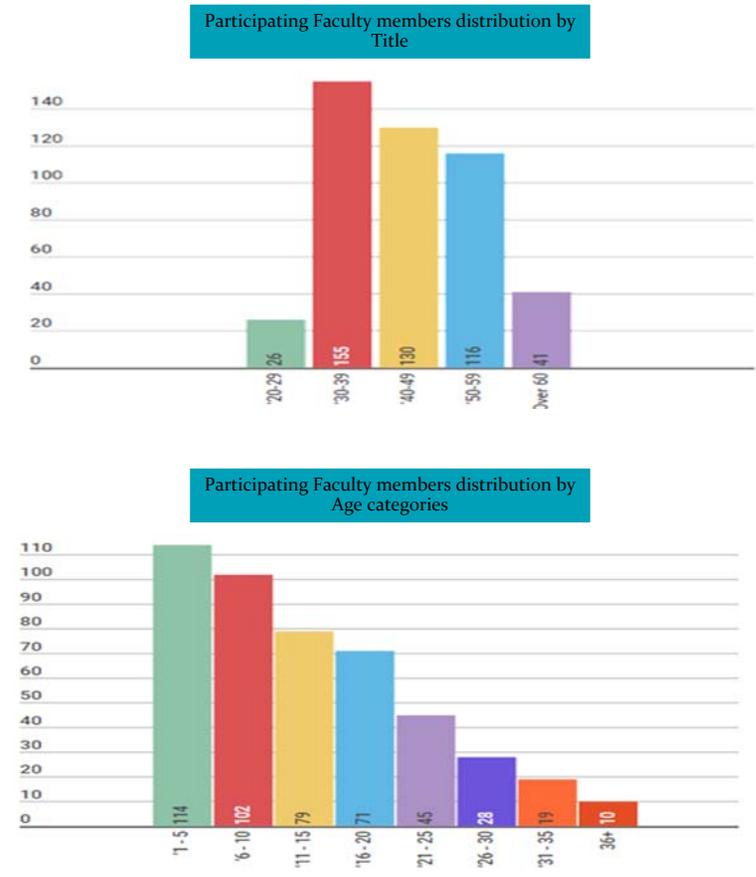
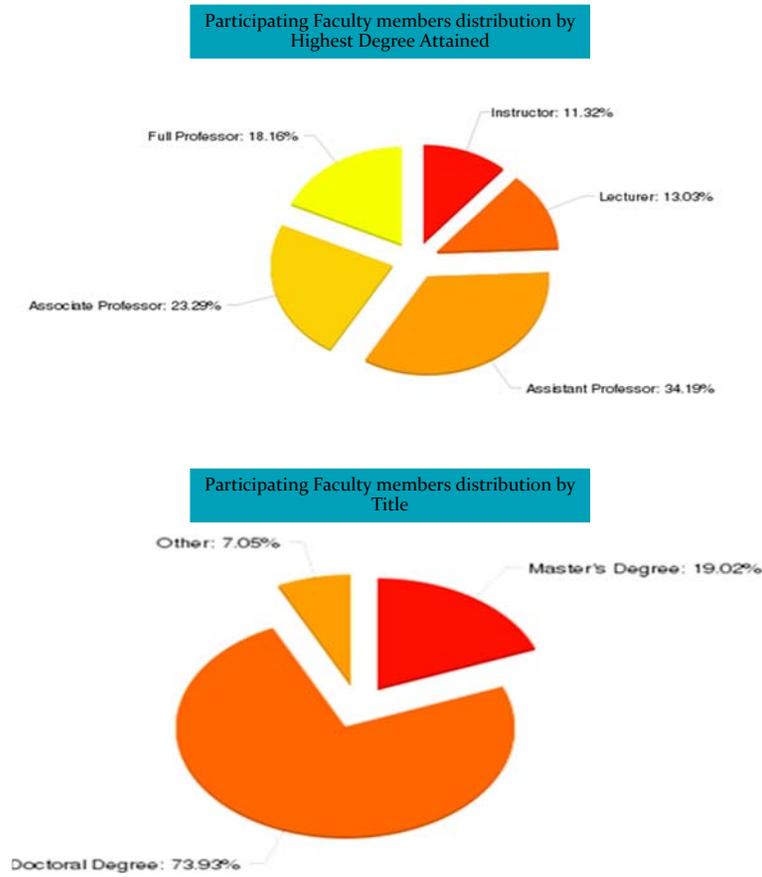


Figure 4 National Survey Faculty Members Demographical Data

## 7.2 NATIONAL SURVEY QUANTITATIVE RESULTS ANALYSIS

In order to analyze the output, mean and standard deviation were calculated for each of the answers for the seven categories [Refer to Tables **Error! Reference source not found.,Error! Reference source not found.,Error! Reference source not found., Error! Reference source not found.,Error! Reference source not found.,Error! Reference source not found.,Error! Reference source not found.**]. The major findings are depicted in the smart art below.

Table 11 Major Finding for the National Survey

<b>Instructional/Delivery Methods</b> <ul style="list-style-type: none"><li>•Faculty members indicated an "average" need for Professional Development</li><li>•Faculty favor receiving training in: Hybrid Approaches, E-learning, and Flipped Classroom</li></ul>
<b>Technology Integration/ Usage</b> <ul style="list-style-type: none"><li>•Faculty members indicated an "average" need for Professional Development</li><li>•Faculty favor receiving training in: Interactive white boards, E-portfolios, Hybrid/blended courses, and E-learning</li></ul>
<b>Development of Transferable Skills in Students</b> <ul style="list-style-type: none"><li>•Faculty members cite, on average, that all transferable skills are key in developing students</li><li>•Faculty highlighted "Research skills" as the most needed transferable skill to be developed in students., followed by "Communication and Team Work skills"</li></ul>
<b>Assessment Methods and Approaches</b> <ul style="list-style-type: none"><li>•Faculty members cite average need for training on assessment methods and approaches</li><li>•Faculty highlighted the need for training in conducting: "Peer evaluation, oral exams, development of rubrics, and self evaluation".</li></ul>
<b>Institutional Support(Resources and Facilities)</b> <ul style="list-style-type: none"><li>•Among the 7 categories, this category: Institutional Support/Resources/Facilities obtained the highest level of importance</li><li>•Faculty believe that Research infrastructure is the most important institutional resource/facility to enable student success and development, followed by Library and Learning resources and policies on academic integrity and plagiarism.</li></ul>
<b>Evaluation of Teaching/Teaching Effectiveness</b> <ul style="list-style-type: none"><li>•Faculty members cite average need for training on evaluation of teaching approaches</li><li>•Faculty highlighted the need for training in : "E-boards" evaluation method, followed by "setting KPI's", and student "E-porfolios".</li></ul>
<b>Evaluation of Teaching/Teaching Effectiveness</b> <ul style="list-style-type: none"><li>•Faculty members cite average need for training on evaluation of teaching approaches</li><li>•Faculty highlighted the need for training in : "E-boards" evaluation method, followed by "setting KPI's", and student "E-porfolios".</li></ul>

## 8 CONCLUSION AND RECOMMENDATIONS

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The use of E-Delphi as a technique proved to be successful, for it helped identify current practices in Lebanese Higher Education Institutions and also areas for professional development. These areas were identified through several rounds of data collection which strengthened the validity of the results and ensures a certain level of consensus. Also the active participation of the Lebanese universities contributed to the richness of the data that was gathered. In the first two rounds of the data collection, the eight partner universities who selected experts from their institutions, helped narrow down teaching and learning needs in Lebanese Higher Education Institutions. In Round 2 E-Delphi questionnaire, the needs were ranked by order of importance to faculty, students, and administrators. These rankings will inform areas of professional development that should be addressed by priority. These needs were further confirmed by the national participation of universities in a national survey.

Findings of the E-Delphi study and the national survey will inform the constructs of the Lebanese Professional Standards Framework (work package # 2) and are expected to assist decision makers in setting up Teaching and Learning centers at their institutions.

Although there was a high level of consensus in terms of the professional development required in Lebanese universities, it is important that individual institutions take their unique context into account. Priorities will differ according to the vision, mission, values, etc of each institution and this should guide the professional development framework and opportunities in the different universities.

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## GLOSSARY OF SELECTED TERMS USED IN QUESTIONNAIRES

**Active Learning:** Active learning is a process whereby students engage in activities, such as reading, writing, discussion, or problem solving that promote analysis, synthesis, and evaluation of class content. Cooperative learning, problem-based learning, and the use of case methods and simulations are some approaches that promote active learning. (<http://www.crlt.umich.edu/tstrategies/tsal>)

**Adaptability:** The ability to change (or be changed) to fit changed circumstances.

**Competency-Based Teaching/Learning:** The competency-based education (CBE) approach allows students to advance based on their ability to master a skill or competency at their own pace regardless of environment. This method is tailored to meet different learning abilities and can lead to more efficient student outcomes. (<https://library.educause.edu/topics/teaching-and-learning/competency-basededucation-cbe>)

**Classroom Response Systems:** A classroom response system (CRS) is any system used in a face-to-face setting to poll students and gather immediate feedback in response to questions posed by instructors. Clickers and other online polling tools such as PollEverywhere are examples of CRS tools.

([https://www.cmu.edu/teaching/technology/whitepapers/ClassroomResponse\\_No\\_v07.pdf](https://www.cmu.edu/teaching/technology/whitepapers/ClassroomResponse_No_v07.pdf))

**Experiential Learning:** A process by which knowledge is acquired through a combination of grasping and transforming experience.

([https://books.google.com.lb/books?hl=en&lr=&id=rBuQAqAAQBAJ&oi=fnd&pg=PA227&dq=experiential+learning&ots=RwXSLfyhCt&sig=GAlVgxKK19O3ljHY0a6-zqysr0&redir\\_esc=y#v=onepage&q=experiential%20learning&f=false](https://books.google.com.lb/books?hl=en&lr=&id=rBuQAqAAQBAJ&oi=fnd&pg=PA227&dq=experiential+learning&ots=RwXSLfyhCt&sig=GAlVgxKK19O3ljHY0a6-zqysr0&redir_esc=y#v=onepage&q=experiential%20learning&f=false))

**Hybrid Approaches:** A teaching strategy that blends face-to-face class time with online learning activities. In this approach 25% to 50% or more of class time is spent on online activities. ([http://www4.uwm.edu/ltc/hybrid/about\\_hybrid/](http://www4.uwm.edu/ltc/hybrid/about_hybrid/))

**Just-in-time Teaching:** (JiTT) is a teaching and learning strategy designed to promote the use of class time for more active learning. JiTT relies on a feedback loop between web-based learning materials and the classroom. Students prepare for class by reading from the textbook or using other resources posted to the web and by completing assignments (called WarmUps and Puzzles) online. (<https://cft.vanderbilt.edu/guides-sub-pages/just-in-time-teaching-jitt/>) **Interpersonal Skills:** Interpersonal skills are the life skills we use every day to communicate and interact with other people, both individually and in groups. People who have worked on developing strong interpersonal skills are usually more successful in both their professional and personal lives. (<http://www.skillsyouneed.com/interpersonal-skills.html>)

**Inquiry-based teaching/learning:** It is an approach to teaching and learning that places students' questions, ideas and observations at the centre of the learning experience. Educators play an active role throughout the process by establishing a culture where ideas are respectfully challenged, tested, redefined and viewed as improvable, moving children from a position of wondering to a position of enacted understanding and further questioning.

([https://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS\\_Inquiry\\_Based.pdf](https://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_Inquiry_Based.pdf))

**Learning Management Systems Tools:** Learning Management Systems (LMS) are web-based systems that allow instructors and/or students to share materials, submit and return assignments, and communicate online. Blackboard and Moodle are examples of LMS.

(<http://www.sciencedirect.com/science/article/pii/S0360131509001006>)

**Multimedia Instruction:** Multimedia instruction consists of instructional messages that contain words (such as printed or spoken text) and media (such as illustrations, diagrams, photos, animation, or video).

([http://hilt.harvard.edu/files/hilt/files/background\\_reading.pdf](http://hilt.harvard.edu/files/hilt/files/background_reading.pdf))

**World Café/Knowledge Café:** A World Café is a creative approach to discussion based on clusters of people, sharing their thoughts around specific questions over a two-hour period. Participants have progressive rounds of conversation lasting approximately 20-30 minutes each. The idea is to brainstorm and write, doodle and draw key

ideas on the poster paper. Upon completing a round of conversation, one person remains at the table as the "host" while the others travel to a new table. The "travelers" carry key ideas, themes and questions and are encouraged to link and connect ideas from their previous conversations into their new conversations. After several rounds of deep conversation, the whole group gathers together to share their discussions and capture emerging themes and ideas so the whole room can reflect and explore their discoveries.

[http://wiki.ubc.ca/Documentation:World\\_Cafe/Background](http://wiki.ubc.ca/Documentation:World_Cafe/Background)