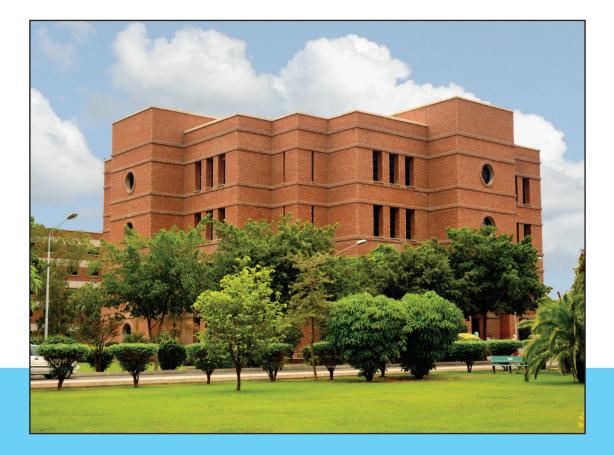
BUILDING THE FUTURE OF PAKISTAN AN EFFORT TO BRING RELEVANCE IN HIGHER EDUCATION

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Social Enterprise Development Centre (SEDC) Lahore University of Management Sciences (LUMS)







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A Project Funded by the Citi Foundation







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Acknowledgments

We would like to acknowledge the generous support of the Citi Foundation in providing the funding to enable us to undertake this project. Administrative support and encouragement by the Social Enterprise Development Centre (SEDC) at the Lahore University of Management Sciences (LUMS) also played a key role in ensuring the successful completion of this project.

We also owe deep gratitude to nearly 200 individuals from various organizations for giving their valuable time and sharing their insights and experiences with us. This work would not have been possible without their input.

Special thanks to Dr Ishrat Hussain, Dean and Director, Institute of Business Administration (IBA), Karachi and Dr S M Junaid Zaidi, Rector COMSATS Institute of Information Technology, Islamabad for supporting the initiative and generously hosting the follow-up seminars that facilitated the exchange of ideas among different higher education institutions.

We are especially grateful to Syed Babar Ali, Pro Chancellor LUMS and Syed Sohail Naqvi, Former Executive Director HEC, for their inspiring and thought provoking keynote speeches at the workshop that was organized to share initiatives taken by various institutions to enhance their relevance and identify ideas for new initiatives.

Special thanks are also due to Sara Mobashir for her support in conducting the field work and compiling the data, and to Aqila Zaman for editing and revising this report.

We would also like to thank the SEDC and LUMS management for providing an enabling environment to make this project possible.

Dr Syed Zahoor Hassan Professor and Former Vice Chancellor LUMS Suleman Dawood School of Business (SDSB) Lahore University of Management Sciences (LUMS)

Preface

SEDC-LUMS embarked on a one-year project supported by the Citi Foundation in December 2011. The goal of the project was to assess and create awareness about the state of university, industry and community linkages within higher education institutions (HEIs) in Pakistan and thus promote the employability of graduates from HEIs. Specifically, one of the aims was to understand the processes through which these linkages could enable HEIs to produce more socio-economically productive graduates. This report titled *Building the Future of Pakistan: An Effort to Bring Relevance in Higher Education* discusses the state of collaboration between HEIs, industry and community and offers ideas to improve the relevance of HEIs in Pakistan.

Over 130 academicians, industry executives and members of civil society participated in the project. Data was collected from a representative sample of 20 HEIs from across Pakistan on industry and community engagement in the areas of *Governance, Curriculum Design and Development, Teaching and Learning Practices, Mentoring and Placement Activities* and *Alumni Involvement*. The selected institutions represent a mix of public and private institutions, business schools, engineering schools, schools of arts and sciences, fine arts and different industries. The industry and community perspective on effective collaboration with HEIs was captured through focus group sessions and face-to-face interviews. Participants in these sessions belonged to various industries, private and public sector organizations and committees addressing educational issues in Pakistan.

Our findings reveal that HEIs are indeed collectively concerned about the extent of interaction between university, industry and community. However, in the absence of institutionalized processes there is wide variance in the manner in which HEIs engage industry and community. Whereas, HEIs have a positive outlook towards the current state of industry and community engagement, practitioners feel that a lot more can be achieved if formal mechanisms are introduced to leverage industry and community resources. The report provides an overview of the current initiatives being undertaken at various institutions, and offers suggestions for further improvement of university, industry and community linkages in Pakistan.

We would like to acknowledge the contribution of all the university administrators and professionals who participated in the seminar and follow-up workshops to present the action plans that they intended to pursue at their respective institutions.

Finally, we would like to thank SEDC and the Citi Foundation for supporting this major initiative.

Dr Syed Zahoor Hassan Dr Muhammad Adeel Zaffar

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1. Introduction

In December 2011, the Citi Foundation and the Social Enterprise Development Centre (SEDC) at LUMS launched a project to study the role of Higher Education Institutions (HEIs) in socio-economic development through enhancing employability of their graduates. The project sought to understand the role of HEIs in connecting with industry and community at large to produce graduates who would have a more positive socio-economic impact, particularly in terms of increased earning potential. The project was divided into a series of stages, and work was initiated at the beginning of 2012. Table 1 provides an overview of the action plan for the project.

Table 1:	Table 1: LUMS-Citi Project Action Plan		
Phase	Description	Timeframe	
1	Project planning and launch	Dec 2011 – Jan 2012	
2	Data collection on university-industry-community linkages	Feb 2012 – July 2012	
3	Two-day workshop on "Making Higher Education Relevant for Industry and Community"	Sep 2012	
4	Follow up with all participating institutions on progress since the workshop	Oct – Nov 2012	
5	Half-day sessions on challenges and solutions for enhancing linkages	Nov – Dec 2012	
6	Comprehensive report discussing the outcome of the project, lessons learned and ideas for future work	Dec 2012	

The process of data collection (Phase 2) took about seven months during which over 130 senior academicians and practitioners were involved in an assessment of the current state of university-industry-community (UIC) linkages in Pakistan. After detailed analysis of the data, a two-day workshop was organized on 21-22 September 2012 at LUMS (Phase 3) to share insights and to provide a platform for the participants to exchange ideas about effective initiatives for enhancing UIC linkages. At the end of the workshop, participants were asked to identify new initiatives they would like to pursue at their respective institutions. Over the next two months, follow-up emails were sent to all institutions to encourage them to continue their efforts towards adoption of new initiatives (Phase 4). In Phase 5, half-day sessions were conducted in Lahore, Karachi and Islamabad to discuss the challenges and possible solutions regarding enhancement of UIC linkages. In the last phase (Phase 6), project findings were integrated and presented in this detailed report.

This report has been organized as follows:

- Section 2 contains a detailed description of the data collection process.
- Section 3 describes the findings of the report in detail with particular emphasis on the five major themes of the workshop, namely, industry-community involvement in *Governance, Curriculum Design and Development, Teaching and Learning Practices, Mentoring and Placement Activities, and Alumni Involvement.*
- Section 4 discusses the key findings of the project from different angles. It highlights the various approaches that have been taken by different institutions to ensure their relevance. It also offers reasons for the current state of institutional engagement with industry and community.
- Section 5 concludes the report by presenting some ideas on how institutions in Pakistan should further enhance their linkages with industry and community.

2. Data Collection

In order to understand the role of HEIs in building effective linkages with industry and community, it was important to study a representative sample of institutions in detail and capture the industry perspective as well. However, in view of the limited timeframe of the project, it was not possible to conduct an exhaustive investigation with all types of educational institutions and industries. Therefore, a sample of 20 higher education institutions was selected from across Pakistan. Table 2 provides a list of participating institutions.

Table 2	2: List of Participating Institutions
1.	COMSATS Institute of Information Technology, Islamabad
2.	FAST National University of Computer and Emerging Sciences, Lahore
3.	Fatima Jinnah Women University, Rawalpindi
4.	Forman Christian College University, Lahore
5.	Government College University, Lahore
6.	Institute of Business Administration, Karachi
7.	Institute of Business Administration, Sukkur
8.	Institute of Business Management, Karachi
9.	Lahore College for Women University, Lahore
10.	Lahore University of Management Sciences, Lahore
11.	National College of Arts, Lahore
12.	National Textile University, Faisalabad
13.	National University of Science and Technology, Rawalpindi
14.	NED University of Engineering and Technology, Karachi
15.	PAF Karachi Institute of Economics and Technology, Karachi
16.	Pakistan Institute of Fashion and Design, Lahore
17.	University of Agriculture, Faisalabad
18.	University of Engineering and Technology, Lahore
19.	University of Engineering and Technology, Taxila
20.	University of Management and Technology, Lahore
	Note: The list is alphabetically arranged

The selected institutions represent a mix of public and private institutions¹, business schools, engineering schools, schools of arts and sciences, fine arts and different industries (such as textile, agriculture). It was consciously decided to focus on a diverse set of HEIs while leaving out the very large public sector universities like University of Punjab and University of Karachi.

The industry perspective on UIC linkages was also captured through focus group sessions with representatives from across different industries. Subsequently, a workshop was organized in September with the following objectives: (a) To share the current approach being followed by HEIs for promoting UIC linkages, (b) bring academia and industry on a common platform to discuss differences in expectations in the context of UIC linkages and (c) generate ideas for building effective, long-term UIC linkages. The following sub-sections provide more details.

^{1.} Institutions from KPK and Balochistan could not be included because of logistical issues encountered during the data collection process

2.1 Higher Education Institutions' (HEIs) Perspective

Data from each HEI was collected through an extensive and systematic process. In step one, a meeting was held with senior representatives of each institution. Rector, Pro-rector, Vice Chancellor, Deans of different schools, Directors of various centers typically attended these meetings which lasted for about two hours. A series of structured questions were asked during these meetings and follow-up questions were asked depending on the responses of the participants. Towards the end of the meeting, a short survey was given to quantitatively measure the institution's outlook on key issues. Appendix 1 provides detailed information about the questionnaire and survey used in this step. Extensive notes were taken during each meeting and an audio recording was made as well with the consent of the participants. In many cases, additional information was also collected from the HEIs through follow-up interactions. In step two, a short report was prepared for each institution that highlighted:

- 1. Institutional philosophy
- 2. Key initiatives and success stories involving industry, community and/or alumni input in the areas of:
 - a. Governance of the institution: participation of external members in the Senate, Board of Governors and Board of Studies
 - b. Curriculum design and development: participation of external members through offering new courses/degree programs, or modifications in existing ones
 - c. Teaching and learning practices: participation of external members through guest lectures, adjunct/visiting faculty and permanent teaching faculty
 - d. Mentoring and placement activities: engagement of external members through job fairs, workshops, internship and other placement programs
- 3. Planned activities to improve industry, community and alumni involvement within the institution across the four areas discussed above

In step three, this report was shared with the institutions for validation purposes to ensure that each institution's data had been accurately captured.

2.2 Industry Perspective

In order to capture the industry perspective on the state of UIC linkages, focus groups were held at LUMS and the Lahore Chamber of Commerce. Participants in these sessions belonged to various industries, private and public sector organizations and committees addressing educational issues in Pakistan. During these meetings, industry input was sought in detail on the range of different initiatives undertaken by academy and industry on collaborative projects. A prepared set of questions was used to specifically assess industry involvement in HEIs in the five key areas: *Governance, Curriculum Design and Development, Teaching and Learning Practices, Mentoring and Placement Activities* and *Alumni Involvement*. Towards the end of the meeting, participants were asked to respond to survey-based questions to quantitatively assess the state of UIC linkages. Appendix 2 provides detailed information about the questionnaire and survey used in these meetings. As in the case of meetings with academic institutions, extensive notes were taken during these sessions and audio recordings were made as well.

2.3 Industry and Academia on a Common Platform: Workshop on Making Higher Education More Relevant for Industry and Community

Once academia and industry perspective had been captured, preliminary analysis revealed that many positive steps were being taken by various institutions to enhance relevance but it also highlighted gaps and misunderstandings in the perceptions of UIC representatives. In order to provide a platform for exchange of ideas and discussion on ways to improve UIC linkages, a two-day workshop was organized at LUMS on 21-22 September 2012, titled "Workshop on Making Higher Education Relevant for Industry and Community". Keynote addresses were delivered by Syed Babar Ali, Pro-Chancellor, LUMS, and the Executive Director of HEC. About half the institutions were represented by their Vice Chancellors and the rest of the institutions were represented by the Rectors, Principals or Deans. Appendix 3 contains the schedule of the workshop.

The two-day workshop was organized as a series of panels that focused on (a) academia's perspective on the role of industry and community in *Governance, Curriculum Design and Development, Teaching and Learning Practices, Mentoring and Placement* and *Alumni Involvement* (b) industry perspective on how effectively HEIs are leveraging industry resources and making themselves responsive to industry and community requirements, and (c) the role of alumni in HEIs. Towards the end of the workshop, a group discussion session was organized in which the participating HEIs were asked to identify new initiatives that they would like to pursue at their respective institutions to further improve UIC linkages.

Overall, interaction with members of academia and industry during the workshop revealed that HEIs were collectively concerned about the extent of interaction between university, industry and community. As the participants shared their experiences, it appeared that there was wide variance in the manner in which HEIs tried to engage industry and community. Furthermore, in the absence of institutionalized processes to facilitate linkages, participants reported mixed results. The following key points emerged from the data collection process and the workshop:

1. There is a lack of a shared understanding regarding the extent to which HEIs should be responsive to industry and community requirements. Based on the response of the participants, HEIs on average appear to have a more positive outlook of the success they have had in establishing and benefitting from UIC linkages than industry representatives. In a simple quantitative survey given to the participants (Appendix 1), HEIs responded with an average rating of 6 (on a scale of 1-10) when asked about the extent to which they were leveraging industry and community resources. Industry representatives responded with an average rating of 3 to the same questions (Appendix 2). There are two problems with these numbers: First, they are both low which means we are certainly not where we need to be. Second, there is a lack of consensus between academia and industry. This lack of consensus is telling because international research suggests that a lack of shared understanding is one factor that contributes to the gap between industry expectations and academic preparation of students². Table 3 contains the detailed results:

² Ramiller N. C., Swansnon E. B. and Wang P. "Research Directions in Information Systems: Toward an Institutional Ecology", Journal of the Association for Information Systems, 9(1), January 2008, pp. 1-22

Table 3: Differences between academia and industry perceptions of UIC linkages			
Survey Questions	Academic Perspective	Industry Perspective	
Leveraging community and industry to make your university's long term plans and strategy more in line with the needs of society and industry	6	3	
Use of industry and community resources for designing of specific programs, courses and curriculum components	6	3	
Use of industry and community in mentoring, coaching, career guidance and job placement of students	6	4	

The industry input has been summarized in Table 4. It captures the industry's perception of how well HEIs are trying to take advantage of industry resources to become more relevant.

Governance	
•	Industry members are rarely asked to serve on Boards and when they are, their input is typically limited to providing comments
Curriculum	Design
•	Input is seldom sought from industry members and does not always translate into courses or new programs
Teaching an	d Learning Practices
•	Formal mechanisms in place to engage industry are few. Typically, students are asked to seek out willing industry members on their own for course projects
•	Students are at times unable to define and meet project goals and deadlines
Mentoring a	nd Placement Activities and Alumni Involvement
•	HEIs typically do not have a formal policy in place to design useful internships in partnership with industry
•	Students are not technically mature enough to be assigned serious projects or tasks during short internships
Additional (Dbservations/Comments
•	HEIs and industry operate under a different set of expectations when it comes to timelines and ownership of intellectual property
•	There is a lack of trust between industry and HEIs which limits the possibility of conducting successful collaborations in future
•	The quality of people in some of the newer placement offices is not good
•	There is a lack of motivation on the part of faculty since they are evaluated on the basis of research output

- 2. There is also a lack of consensus over the basic set of skills that students should have when they graduate from HEIs. For example, the industry representatives increasingly suggested that students lack a breadth of non-technical, albeit highly important skills such as: communication skills, interpersonal skills and behavioral skills (particularly when it comes to attitude towards the employer, commitment to the job and overall work ethics). It would be worthwhile to investigate how many HEIs actually have courses geared towards imparting these skills to their students.
- 3. Although there are several instances where HEIs have had success in leveraging industry and community resources, more institutionalized processes are required across the board to ensure that a long-term relationship can be built between university, industry and community. Most of the efforts were championed by individuals and may not be sustainable in the long run. In this regard, the role of accreditation bodies and communities of practice, such as Pakistan Engineering Council, cannot be over-emphasized. They need to engage the concerned

HEIs and help establish feedback and response mechanisms to ensure the continued relevance of HEIs.

- 4. There is greater need to engage with communities, particularly those where the HEIs are located. There were some institutions in the workshop that shared ideas about informal engagement with community. However, there is a need to institutionalize this process.
- 5. It was also observed that formal structures and processes for providing career counseling and placement support to students are at a relatively early stage of development.
- 6. Finally, it was observed that a number of institutions had just taken the first steps to formally engage alumni. In institutions where the alumni were involved, their input was generally only solicited for mentoring and placement activities close to the time of students' graduation.

2.4 Follow-up Activities

The findings from the process of data collection and discussions during the workshop were compiled in a report and shared with all participating institutions³. The report also contained a detailed list of initiatives in the areas of *Governance, Curriculum Design and Development, Mentoring and Placement, Teaching and Learning Practices* and *Alumni Involvement* that had been generated throughout this process.

The participating HEIs were once again asked to study the list of key initiatives and identify the ones they would like to pursue at their respective institutions. They were then invited to half-day sessions in Lahore, Karachi and Islamabad to discuss their planned initiatives, key challenges and possible solutions. The session in Lahore was held at LUMS on 29 November 2012 with participation from University of Agriculture Faisalabad (UAF), Lahore College for Women University (LCWU), University of Management Technology (UMT), Forman Christian College University (FCCU), Pakistan Institute of Fashion and Design (PIFD), Government College University (GCU) and University of Engineering and Technology (UET-Lahore). The session in Karachi was hosted by the Institute of Business Administration (IBA-Karachi) on 6 December 2012 with participation from Institute of Business Administration at Sukkur (IBA-Sukkur), Institute of Business Management (IoBM), PAF Karachi Institute of Economics and Technology (PAF-KIET) and NED University of Engineering and Technology (COMSATS-IIT) on 7 December 2012 with participation from National University of Science and Technology, Islamabad (NUST), FAST National University (FAST-NU), University of Engineering and Technology at Taxila (UET-Taxila) and Fatima Jinnah Women's University (FJWU).

In the following section, the initiatives currently being pursued by the various institutions are discussed in detail.

3. State of UIC Linkages

Detailed discussions and interaction with all the participants revealed that each HEI had done something unique to engage the industry and community. In the following sections we discuss key initiatives, challenges and possible solutions to those challenges in the areas of *Governance, Curriculum Development and Design, Teaching and Learning Practices, Mentoring and Placement Activities* and *Alumni Involvement*.

³ These reports and additional material from the workshop, including presentations of the panelists are available here: http://www.facebook.com/media/set/?set=a.283104545133048.57614.248137028629800&type=3

3.1 Governance

Most of the institutions had industry representation in some form in the Senate, Syndicate, or Board of Governors. There were some examples in which ideas generated by these members had led to the development of new courses and degree programs. However, there was little or no involvement of alumni and community members in the governing bodies. Table 5 highlights some of the key initiatives in this area.

Table 5: UIC linkages at the level of governance
 Existing Initiatives Industry members are part of Senate, Syndicate, Board of Governors (BoG), Board of Studies, Curriculum Committees. Departments, degree programs, courses designed with input from industry members Corporate advisory council and industry liaison offices are independent but formed with the consent of the governing bodies.
 Planned/Suggested initiatives Hold more frequent meetings of the executive/governing bodies Invite prominent/philanthropic members of community to be part of BoG

In public sector organizations, the biggest challenge is the statutes that govern the institution. A number of participants felt that these laws were old and offered little flexibility to engage industry and community members in the governance of the institution. For example, in several cases, members of the Senate or Board of Governors were appointed by the government. In response to these challenges, senior academicians at one institution had passed some statutes to allow them greater autonomy in terms of introducing changes within the institution.

Another challenge in this area was to ensure the effective involvement of industry and community members as BoG. There were a few cases of enthusiastic participation from industry members serving on the BoG. However, by and large, it was observed that the BoG met infrequently or the industry participants were simply unable to attend the meetings on a regular basis due to their busy schedules or logistical concerns. This also brought under discussion the reasons and motivations of the members who served on these committees.

3.2 Curriculum Design and Development

Many institutions were able to identify courses, programs and even departments created through active industry involvement. Industry feedback was sought as well to modify course content and in some instances, a course was offered only when a practitioner was available to teach the course. Table 6 highlights some of the key initiatives in this area.

Existing initi	atives
•	Introduction of departments, programs, courses, workshops, seminars and short courses after assessing industry needs
Planned/Sug	gested initiatives
assessing industry needs Planned/Suggested initiatives • Spend time studying the industry to understand its c o Identify those industry players who are able a develop programs and courses	
•	Get feedback from employers and incorporate it in the curriculum – set up a formal mechanism

0 0	Include mandatory course or design program on entrepreneurship Offer programs/courses for executive education
0	Make project-based course work compulsory in most courses
0	Base books on local content
0	Encourage faculty to write textbooks
0	Offer 2-year associate degrees

One of the biggest challenges faced by a number of institutions was the guidelines enforced by regulatory authorities such as HEC and PEC regarding the acceptable format of courses. This inhibited institutions from enriching the course content as they had to conform to older course construction formats. For example, the use of labs was limited to only certain types of applied, science and technology courses. Also, the percentage of courses offered by industry professionals had to be below a given level.

Another challenge often cited by the institutions was the lack of local content for the development of courses on issues relevant to our context. Furthermore, even if some faculty members took the initiative to develop such content, its acceptability was limited to their own institution.

3.3 Teaching and Learning Practices

Most of the institutions had some informal mechanisms in place to involve practitioners in some teaching and learning initiatives. There was significant variance in the nature of involvement: an executive program taught for the most part by practitioners, courses taught independently or jointly by practitioners and academicians, guest lectures on specific topics throughout the course, grading of relevant course content such as assignments, and projects. Table 7 highlights some of the key initiatives in this area.

One of the biggest challenges in this area was the difference in the style of instruction and grading of course content. A faculty taught or led course focused more on the theory whereas a practitioner taught or led course focused more on the application. The differences were highlighted even more when a course was co-taught or the course content had to be graded by the practitioners.

Existing	initiatives
-	Practitioners are invited to
	o Conduct workshops to train faculty and students
	o Participate in seminars as guest speakers
	 Teach courses on campus as adjunct, visiting, professor of practice, executives in residence or honorary professorship
	o Grade student projects or other relevant course components
	o Sponsor and evaluate final year projects
	• Foreign practitioners are also invited for transfer of knowledge/expertise not available locally
	• There is a high percentage of graded field/applied projects in courses that are
	evaluated by industry professionals
Planned/	Suggested initiatives
	Give more emphasis to project-based learning
	Encourage case writing – focusing primarily on the local context
	Utilize distance education
	o Offer courses online
	o Deliver lectures through video-conferencing

o Institutionalize student involvement in these reviews	
 Include level and impact of "industry and community engagement" in decisions for promotions 	
o Keep faculty up-to-date through professional development initiatives	

Another issue which appeared more often in the case of public institutions was the pay scale of visiting or permanent faculty coming in from industry. In the presence of a relatively low pay scale it was challenging to consistently attract practitioners into teaching.

3.4 Mentoring and Placement Activities

Many institutions had just started a career services and placement office. Mentoring was done informally through students' interaction with faculty, staff, senior students and alumni. Generally, no specialist career guidance professionals were hired. In the absence of formal processes in place, student societies facilitated interaction with practitioners. Most of these interactions were a result of individual efforts. The institutions that did have a well-established placement office were able to conduct job fairs and recruitment drives. Table 8 highlights the key initiatives in this area.

In many cases students received guidance close to the time of graduation. This further highlighted the need to provide career guidance as an integral part of the services offered to students throughout their engagement with the institution.

One of the biggest challenges in this area was changing the mindset of all the major stakeholders: the students, faculty and practitioners. Students must understand the need for developing a broader skill set that would help them become more "aware" and conscientious citizens as well as more socio-economically productive in the long term. Faculty must understand the need for imparting practice-oriented knowledge rather than just theoretical knowledge through various pedagogical techniques in order to enable students to be more effectively employable in the job market. Practitioners must understand that more effective linkages with faculty and students would require formalized processes for internships, performance review, feedback and placement activities.

Existing Init	iatives
•	Placement office/career counseling centers with qualified/professional staff
•	Job fairs, recruitment drives, visiting HR offices of various companies
•	Mandatory internships designed in conjunction with industry and community
•	Display of student projects using some regular "showcase" event for practitioners and community
•	Mobilization of student societies to stay in touch with practitioners and alumni
•	Designing of graduate profile book of students and sending it to potential employers
•	Hiring retired company executives as advisors to senior students
Planned and	Suggested Initiatives
•	Creating forums for student interaction with alumni and industry
•	Starting the mentoring and career guidance process as early as possible and not waiting till the graduation year
•	Designing internships with practitioners so that both students and practitioners can get the best out of the experience

- Focusing on nurturing critical values, attitudes and attributes through creating an environment at the institution that imbibes them excellence, tolerance, professionalism, merit, originality and integrity
- Having institutionalized processes in place that make industry and community engagement in mentoring an integral part of the programs rather than leaving it to the discretion of individuals

3.5 Alumni Involvement

The role of alumni in HEIs deserves special attention as they are in a unique position to engage with their respective HEIs as former students as well as practitioners. Figure 1 illustrates alumni involvement in various areas. The y-axis shows the survey scale (1-10) and the x-axis shows some of the participating institutions (numbered 1 through 14).

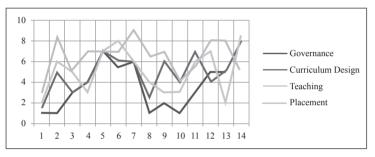


Figure 1: Alumni involvement in HEIs

The figure shows that alumni are generally involved at the time of mentoring and placement and less frequently involved in the areas of teaching, curriculum design and governance. The objective here is not to advocate greater alumni involvement in all areas but to simply demonstrate that HEIs seek out alumni simply as a placement resource whereas they could offer a lot more. Given their association with the institution, they should be able to offer the practitioner views that could be incorporated in curriculum design, teaching and even governance. However, they can only be truly leveraged if formal mechanisms are in place to facilitate their involvement. Table 9 highlights some of the existing initiatives to improve the role of alumni in building UIC linkages.

Table 9: Alumni involvement in HEIs		
Existing Initiatives		
Tracking alumni placement and remaining connected		
Encouraging students to invite alumni to participate in student societies		
Providing a formal place for students and alumni to interact		
o Alumni re-unions and get-togethers		
 Networking night, student-industry interaction through on-campus recruitment gathering, exchange of recruiter's guide and students' profile CD, sessions with alumni and sector-wise panel discussions/guest speaker sessions 		
 Students spending from a day to a week with alumni at their workplace getting oriented with the company's ground workings, the people and the culture 		
Planned and Suggested Initiatives		
Creating instruments which give pride and a sense of association to alumni		
Inviting alumni to		
o Participate in curriculum development		
o Teach courses or come as guest speakers		

3.6 Community Involvement

A number of institutions had community-based initiatives in place that focused on providing some form of community service. However, none of the institutions had formal mechanisms in place to involve community members in specific areas such as curriculum design or mentoring and placement. However, all of the participants did cite a greater need for community-based initiatives. Table 10 highlights key ideas that were shared with reference to community involvement.

Table 10: Community involvement in HEIs

Existing Initiatives

- Compulsory community service hours and/or courses for students
 - o Active Citizenship Program (6-credit-hour planned and assessed work geared towards community service)
 - o Helping families establish a micro-business as part of student projects
 - Looking at environmental issues within the vicinity of your university or local and undertaking projects to address them
 - Starting educational/informational radio channels
 - Establishing endowment funds for needy students
 o National outreach initiatives
 - Developing a center/presence where there is a need in a specific area. This would not be a full campus
 - Having a zero-semester to help overcome academic deficiency of people coming from doubly poor backgrounds – economic and academic poverty

Planned and Suggested Initiatives

- · Having undergraduates teach a semester at primary schools and getting credit for it
- Collaborating with local high schools to generate interest in different field

3.7 Other Initiatives

A number of institutions were pursuing initiatives that could not be placed in any of the categories discussed above. These initiatives have been highlighted in Table 11.

Table 11: Other initiatives to improve UIC linkages AACSB or other accreditations that provide a structured approach to involve all the stakeholders Introduction of community colleges · Invitation to other universities for enhanced joint university-industry and university linkages Research center to promote research-oriented U-I linkage efforts Participation in international trade shows/events MoUs with industries to undertake specific initiatives Industry support for university equipment (licenses, etc.) Collaboration with foreign faculty, institutions and companies Collaborative projects with industry and government (funded research centers) Synopsis from industry (asking for write-ups identifying research problems) Setting up technology incubation center Encouraging faculty to be professionally active Sponsoring research and scholarships . Setting up experiential learning opportunities - 'trading' center on campus

• Consortium-based approach to tackle multidisciplinary problems that one institution alone cannot tackle independently for example, energy solutions for villages (bio-gas projects)

4. Discussion

There are some overarching observations that can be made about the extent of UIC linkages in Pakistan. First, although there are several initiatives undertaken by HEIs to engage industry across various levels, there are no well-established, institutionalized mechanisms in place to further promote and strengthen the linkages. As a result, departments and colleges within the same institution rely on their own informal approaches to engage industry and community. Moreover, it becomes difficult to assess the effectiveness of these initiatives.

Second, there is a clear lack of community involvement. Although some institutions have community-focused programs, there is a greater need for the institutions to have a community outlook which should involve students as well as faculty.

Third, both practitioners and academicians agree that there is a general lack of trust between them which limits the extent and quality of linkages. They have different expectations in terms of (a) the outcomes of joint initiatives, (b) the timelines within which they operate, and (c) ownership of intellectual property. Past experiences that lacked mutual trust make it even more difficult to pursue newer initiatives.

Fourth, and most importantly perhaps, HEIs need to adopt a more holistic approach towards the extent of linkages they would like to establish with community and industry. In other words, how responsive should an educational institution be towards industry and community requirements? This is something which should be reflected in the institutional philosophy of the respective HEIs. It is interesting to note that when HEIs were asked to identify their institutional philosophy during the data collection process, (a) half of them specifically mentioned the desire to respond to industry requirements, and (b) a third of them discussed a need to contribute to the community through development of readily employable graduates with the right mix of skills. These numbers coupled with the poor assessment of UIC linkages by practitioners (Table 3) suggest that HEIs need to re-assess their approach towards UIC linkages. Perhaps, there is an expectation of responsiveness to industry and community requirements which is not shared by the HEIs. Furthermore, each HEI may have a very different perception of what constitutes an effective linkage. There are some institutions, like NCA for example, which feel that they are the industry, hence, formalized mechanisms for industry involvement are unnecessary. Similarly, some of the older institutions feel that industry/community advice should be sought but practitioners may not be involved in decision-making within HEIs because that is the job of the academicians. What is important though is for the relevant stakeholders to have a clear understanding of each other's roles and expectations to promote meaningful linkages. There are different ways of visualizing the various institutional philosophies which will in turn determine the kind of outlook HEIs will have towards UIC linkages. Figure 2 illustrates an HEI that views industry and community to be at the heart of what it does.

Another related point that needs to be made is that there are advantages and disadvantages of having highly institutionalized mechanisms in place to promote linkages with industry and community. The advantage of not having any institutionalized process in place is that HEIs or faculty within HEIs have the opportunity to adopt different innovative approaches. Lack of a formal structure gives them freedom and introduces a level of diversity in the types of programs, courses, governance and mentoring practices within and across HEIs. For example, if a need is identified for a particular type of course by a group of students, a faculty member

has the freedom to quickly design an elective and offer it in the next semester without having to go through any formal process of getting the course vetted by practitioners or receiving their input. On the other hand, institutionalized processes can ensure that successful practices are perpetuated, shared and improved over time. Conversely, having institutionalized processes in place can ensure that ineffective practices are not repeated. Therefore, there is a tradeoff in having institutionalized processes in place, and each HEI may adopt a different stance depending on its institutional philosophy.

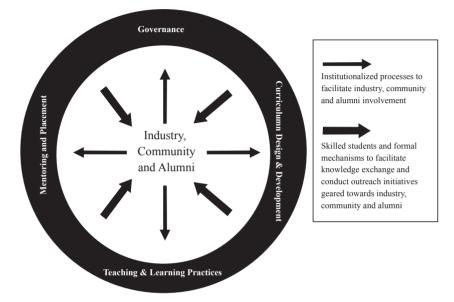


Figure 2: Illustration of effective UIC linkages

5. Conclusion

It is encouraging to note that each institution had something unique to offer in terms of developing effective UIC linkages in Pakistan. However, clearly we have a long way to go. The degree of responsiveness of each HEI to industry and community requirements may vary, but collectively, HEIs should be contributing more to improve the socio-economic output in Pakistan.

There is a greater need to setup regular forums for exchanging ideas between HEIs such as conferences and workshops. Industry and community involvement should be encouraged at such events. Over time, this will reduce the expectation gap between HEIs and industry/community.

Public institutions require significantly greater support than they are receiving right now. This support has to come from both the government as well as industry and community members. In terms of policies and decision-making, institutions such as HEC need to work with HEIs to ensure a level of quality while allowing HEIs to pursue different initiatives to increase their relevance. In the context of financial support, the government alone cannot be relied upon to provide funds, given the political and socio-economic environment in Pakistan.

The industry and community must be recognized as major stakeholders. They should be given a meaningful role in governance and be seen as a key resource for the HEIs. The extent of industry and community involvement in BoGs needs to be revisited as well. Currently, there is an issue of the motivation of those who serve on these bodies and their reasons for serving. Some members appear to be merely interested in the patronage and prestige of association with the HEI. In order to remedy this situation, there is a need to develop (a) a more objective criteria for appointment of members to these bodies and (b) a performance assessment mechanism, based perhaps on participation or attendance, to evaluate continued membership of these bodies. This will facilitate more effective involvement of the members in the governance of the institution.

The alumni potential needs to be leveraged in a more systematic way. They should not be viewed merely as a resource for funding or a placement tool. It is important to give them a sense of participation, contribution and belonging to the institution. Not only will they be more effective, current students (future alumni) will imbibe a similar sense of association and responsibility towards the institution. This will automatically happen if the alumni are seen to be actively involved in various activities within the HEI.

Greater emphasis is required towards the development of local content. There is a big gap here. Most of the HEIs that are aware of this problem have started looking towards development of cases based on local industry but that is clearly not enough. Consequently, it is not surprising that students frequently choose to go abroad and those who stay back find it hard at times to apply their knowledge within the local context.

More discussion is required on the pedagogical approaches towards instruction across various disciplines. Practitioners have increasingly expressed concerns that fresh graduates who may have excellent theoretical foundations, lack practical knowledge and experience and require significant training to work in the field or on the factory floor. This criticism should not be confused with the notion of "on-the-job training".

In the area of mentoring and placement, a more holistic approach and participation is required from HEIs. Currently, students receive guidance close to the time of graduation. Ideally, counseling efforts should begin as soon as the students start evaluating options for higher education. Furthermore, holding information sessions in major cities is not enough. Given the lower than average level of education across Pakistan, it is important

to increase outreach initiatives. HEIs could develop summer workshops or events to attract middle and high school students. They could also require their own students to teach part-time (or during the summer) at middle and high schools.

In conclusion, it must be noted that for HEIs to become more relevant within our society, sustained attention is required towards forging meaningful ties with industry and community. We have learned over the course of the year-long project that a culture of collective thinking and application is missing within the educational, industrial and societal discourse. To some extent, there is realization amongst individuals about the importance of quality higher education in building the future of Pakistan. However, institutionally it has not received the level of priority and emphasis it deserves. The real purpose of HEIs – creating the future of our society – does not figure very prominently in the priorities. Hence, the emphasis is on functional and mechanical rather than the attitudinal aspects. The purpose, mission and operating priorities of HEIs must revolve around the development of individuals who have a desire to learn, are compassionate, and capable of contributing towards the socio-economic improvement within society.

If we are to talk about building the future of Pakistan, both HEIs and industry must realize that the burden of responsibility weighs heavily on them. One can argue that the country's socio-economic progress or lack thereof, is a reflection of both its HEIs and industry. In view of Pakistan's socio-economic mêlées, HEIs owe it to society to develop students that are more attuned to our requirements. Concurrently, industry must make the effort in collaboration with HEIs to develop students that can support growth and development efforts across various sectors in Pakistan. The time for discussing the importance of relevance in higher education is gone – now we must act!

Appendix 1: Instrument for collecting data from HEIs

What is the overall philosophy of this institution to make itself more relevant for the community and industry?

- 1. Role of industry and community in governance
 - i) Representation in governing bodies
 - a) Percentage from industry and community
 - b) Which organizations/sectors are represented?
 - c) Key motivations of those who participate
 - d) Key issues and challenges
 - ii) Level of participation
 - a) Frequency of attendance
 - b) Type and nature of inputs
 - c) Impact on strategic decisions
 - d) Key issues and challenges
 - iii) Voluntary participation through seminars and other forums with specific ideas, suggestions and feedback
 - iv) Examples of positive contribution and impact
 - v) What are the main challenges in this regard?
 - vi) Key issues and challenges
- 2. Industry and community role in program and curriculum design
 - i) Membership in committees
 - a) Any specific formal role
 - b) Regular/Ad-hoc involvement
 - c) Key issues and challenges
 - Level and type of participation
 - a) New ideas and input
 - b) Feedback on proposed program
 - c) Joint faculty-industry/community design
 - d) Any other form

ii)

- iii) Are there any full courses designed and offered by the Industry? Get specific examples
- iv) Role in internship program design-key contributions
- v) Specific success stories or examples-ideas/process/outcome
- vi) What are the main challenges in this regard?
- vii) Has any new initiative been taken up?
- 3. Industry and community role in teaching and learning
 - i) Are individuals from community and industry involved in teaching at the university? If so, what type of courses/classes are offered and what is the percentage of such courses?
 - ii) Are experienced people from community and industry invited as guest in courses? How frequently? Is there a process or guidelines for such speakers?
 - iii) What are the institution's main motivations for such teaching?
 - a) Bringing industry perspective and new dimensions for students
 - b) Lack of in-house faculty in the area
 - c) Availability of a person with an unusual background and academic training and experience

- d) Part of the financial model helps save costs
- e) Others
- iv) What are the main motivations of the guest speaker?
 - a) Interest in sharing knowledge with the young generation/altruistic
 - b) Opportunity to earn additional income
 - c) To stay current with theory
 - d) To help in molding students to meet industry's specific needs
 - e) To help spot top talent for later hiring
 - f) Thinking of moving to academic career
 - g) Others
- v) Is there any role in design and development of field projects and lab experiments?
- vi) What are the key examples of success in this area at your university?
- vii) What are the main challenges in this regard?
- viii) Have any new initiatives been taken up?
- 4. Mentoring, coaching, career guidance and job placement
 - i) Are individuals from community and industry interacting with the students regarding various career options? If so, what is the form and process for this interaction? How many such interactions take place? Who organizes these interactions?
 - ii) Are people from industry/community involved in assessing students' suitability for the job market? If so, how is this assessment carried out? Is there any mechanism for helping students address the shortcomings that emerge from these assessments? Who is involved in this process?
 - iii) Are any job fairs organized where industry sets up booths?
 - iv) What is the process of organization to recruit students at your university? Is there a placement office? What does this office do? Is a student profile book (hard copy or electronic) published?
 - v) On an average, how many interactions does a student have with a person from industry during the job search and placement process?
 - vi) What is the role of alumni in career guideline, placement and mentoring/coaching?
 - vii) Extent of alumni involvement, number of alumni, nature of engagement, typical time commitment
 - viii) Specific examples to highlight success in this area at your university?
 - ix) What are the main challenges in this regard?
 - x) Have any new initiatives been taken up?
- 5. What major initiatives have been started or planned to enhance the job prospects of your students? Can you provide one or two specific examples of success in this regard?
- 6. On a scale of 1 to 10 (1 being the lowest and 10 the highest) how would you evaluate your university?
 - i) Leveraging community and industry to make your university's long term plans and strategy more in line with the needs of society and industry

1 2 3 4 5 6 7 8 9 10

- ii) Use of industry and community resources for designing of specific programs, courses and curriculum components
 - 1 2 3 4 5 6 7 8 9 10

iii) Use of industry and community in mentoring, coaching, career guidance and job placement of students

1 2 3 4 5 6 7 8 9 10

iv) Effectiveness of the process and mechanism in the university in using alumni ina) University governance

- Course and curriculum designing b) Teaching c) d) Career guidance and job placement
 - 1 2 3 4 5 6 7 8 9 10

Appendix 2: Instrument for collecting data from industry

- 1. What do you think should be the overall philosophy in terms of making higher education institutions more relevant for the industry and community? What has been your own and your organization's approach to this issue?
- 2. Role of industry and community in governance
 - Representation in governing bodies
 - a) Percentage
 - b) Which organization/sector?
 - c) Key motivations
 - d) Others
 - ii) Level of participation
 - a) Frequency of attendance
 - b) Type and nature of inputs
 - c) Impact on strategic decisions
 - d) Others
 - iii) Voluntary participation through seminars and other forums with specific ideas, suggestion and feedback
 - iv) Examples of positive contribution and impact
 - v) What are the main challenges in this regard?
 - vi) Others

i)

- 3. Role in program and curriculum design
 - i) Membership in committees please refer to specific examples
 - a) Any specific formal role
 - b) Regular/Ad-hoc
 - c) Others
 - ii) Level and type of participation so far please refer to specific examples
 - a) New ideas and input
 - b) Feedback on proposed program
 - c) Joint faculty-industry/community design
 - d) Others
 - iii) Are there any full courses designed and offered by your Industry at any institution?
 - iv) Role in internship program designs
 - v) Specific success stories or examples-ideas/process/outcome
 - vi) What are the main challenges in this regard?
 - vii) Others
- 4. Industry and community role in teaching and learning
 - i) Are individuals from your organization and/or industry involved in teaching at a university/ institution? Can you give any specific examples? Is such an activity encouraged? How?
 - ii) Are experienced people from your organization and industry invited as guest speakers to various universities? How frequently? Does your organization have a process or guidelines for such requests?
 - iii) What are the main motivations of such speakers?

- a) Altruistic/interest in sharing knowledge with the young generation
- b) Opportunity to earn additional income
- c) To stay current with theory
- d) To help in molding students to meet industry's specific needs
- e) To help spot top talent for later hiring
- f) Intentions/plans of pursuing an academic career
- g) Others
- iv) What in your opinion are the educational institutions' main motivations and reasons for inviting industry professionals for lectures/teaching?
 - a) To bring industry perspective and new dimensions to students
 - b) Lack of in-house faculty in a specific area
 - c) Availability of a person in industry with unusual background and academic training and experience
 - d) To save costs as compared to hiring full-time faculty
 - e) Others?
- v) Is there any industry role in design and development of field projects and lab experiments?
- vi) Do you know of any key examples of success in this area related to your organization and/or industry?
- vii) Are you aware of specific new initiatives to enhance the role of industry professionals in teaching and learning at universities? What are the main challenges in this regard?
- 5. Mentoring, coaching, career guidelines and job placement
 - i) Are individuals from community and industry interacting with the students regarding various career options? If so, what is the form and process of this interaction? How many such interactions have you or your organization been part of? Who organizes these interactions? Is there any role that industry organizations (like chambers) play in this regard (like holding career guidance forums)?
 - ii) Are people from industry/community involved in assessing students' suitability for the job market? If so, how is this assessment carried out? Is there any mechanism for helping students address the shortcomings that emerge from these assessments? Who is involved in this process?
 - iii) Are any job fairs organized by the industry where industry and universities set up their booths?
 - iv) What is the process in your organization for recruiting students from universities? Do you have a university interface office? If so, what does this office do? Do you use profile books prepared by various universities? Do you attend job fairs organized by different universities? How effective are these job fairs in providing you the opportunity to hire the talent that you need?
 - v) On an average how many interactions do people from your organization have with faculty or staff at different universities for hiring?
 - vi) Does the university/institution that you graduated from engage you as an alumnus? If so, do you participate in the career guidance and placement mentoring/coaching activities organized by your Alma Mater?
 - vii) Can you provide any specific examples to highlight how you and your organization have played a role in mentoring, coaching or providing job placement guidance to students at universities?
 - viii) What are the main challenges in this regard?
- 6. What major initiatives have been started or planned to ensure that the graduates coming from universities are suitable for your organization and the industry's current needs and future requirements? Can you

provide any specific examples of success in this regard?

- 7. On a scale of 1 to 10 (1 being the lowest and 10 the highest) what is your assessment of:
 - The extent to which universities are leveraging industry and community to make their long-term plans and strategy more in line with the needs of the industry and society
 1 2 3 4 5 6 7 8 9 10
 - ii) The manner in which industry and community are helping and guiding the universities to serve the needs of industry and community effectively
 - 1 2 3 4 5 6 7 8 9 10
 - iii) Universities' use of industry and community resources for designing of specific programs, courses and curriculum components
 - 1 2 3 4 5 6 7 8 9 10
 - iv) Use of industry and community resources in mentoring, coaching, career guidance and job placement of students

1 2 3 4 5 6 7 8 9 10

8. Any other aspect that you would like to share that is related to this area?

Appendix 3: Workshop on Making Higher Education More Relevant for Industry and Community

21-22 September 2012 Venue: Sayeed Saigol Auditorium, Academic Block, LUMS **Program Schedule**

Day 1: Friday, 21 September 2012

Registration of participants and informal networking 9:00 - 9:45

Session 1 9:45 – 11:00

Topic: Making higher education relevant for industry and community: need, challenges, opportunities and initiatives

Session Chair: Syed Babar Ali, Pro Chancellor LUMS Guest of Honor: Mr Nadeem Lodhi, MD, Citi Bank Pakistan Speakers: Dr Ishrat Hussain, Director, IBA, Karachi

Dr Sohail Naqvi, Executive Director, HEC, Islamabad Dr Sved Zahoor Hassan, Lead-faculty for the workshop

Tea Break 11:00 – 11:30

Session 2 11:30 – 13:00

Topic: Role of industry and community in governance of higher education institutions

Session Chair: Dr Adil Najam, Vice Chancellor LUMS Panelists: Dr S M Zaidi, Dean SEECS, NUST Mr Talib Syed Karim, Rector, Institute of Business Management Dr Hassan Sohaib Murad, Rector, UMT, Lahore Prof Hina Tayyaba, VC, Pakistan Institute of Fashion & Design

Lunch/Juma Break 13:00 – 14:15

Session 3 14:15 – 15:45

Topic: Industry, community and academia collaborations in curriculum design and course development

Session Chair: Dr Sohail Naqvi, Executive Director, HEC Panelists: Dr Sabiha Mansoor, VC, Lahore College for Women University Dr Syed Irfan Hyder, Vice President and Dean, PAF-KIETs Dr Arshad Saleem Malik, Advisor to Rector, COMSATS Dr Arshad Hussain, Director FAST-NU, Lahore Mr Monis Rehman, CEO Rozee.pk, Lahore Tea Break 15:45–16:15

Session 4 16:15 – 17:45

Topic: Extending the engagement with the industry and community

Session Chair: Dr Sohail A Qureshi, Dean, Syed Babar Ali School of Science and Engineering, LUMS

Panelists:

Dr Iqrar Ahmad Khan, VC, University of Agriculture, Faisalabad Mr Nisar Ahmad Siddique, Director, IBA - Sukkur Lt Gen (Retd) Muhammad Akram Khan, VC, UET - Lahore Dr Muhammad Abbas Choudhary, VC, UET - Taxila Prof Sajjad Kausar, Principal, NCA, Lahore

Day 2: Saturday, 22 September 2012

Session 5 8:45 – 10:30

Topic: Leveraging alumni, industry and community for career planning and guidance

Session Chair: Prof Dr Anwar Khurshid, LUMS
Panelists:
Dr Adil Najam, VC, LUMS, Lahore
Dr Niaz Ahmad Akhtar, VC, NTU, Faisalabad
Dr Khaleeq Ur Rahman, VC, GCU, Lahore
Dr Samina Amin Qadir, Fatima Jinnah Women University, Rawalpindi
Mr Abrar Ahmad, Convener Standing Committee on "Education", LCCI

Tea Break 10:30 – 11:00

Session 6 11:00 – 13:00

Topic: Industry and community expectations from higher education institutions

Session Chair: Mr Shahid Kardar, Former Governor State Bank of Pakistan Panelists:

Mr Bakhtiar Khawaja, President Learning Solutions Mr Faisal Farooq, Group Head Human Resources and Learning, Bank Alfalah Mr Waqas Manzoor, Head of Organizational Excellence, Metro-Habib Cash & Carry Mr Sajjad Kirmani, CEO Infogistic Mr Arif Ijaz, Advisor Maple Leaf Group Mr Mian Kauser Hameed, Futurist and Executive Trainer Mr Rahmatullah Javed, Chairman FPCCI – SME Committee

Lunch Break 13:00 – 14:00

Session 7 14:00 – 15:30

Topic: Group discussion on new ideas to enhance relevance of higher education for industry and community

Coordinators: Dr Syed Zahoor Hassan, Dr Muhammad Adeel Zaffar

Tea Break 15:30 - 16:00

Session 8 16:00 – 17:00

Topic: Local and international best practices - creating economic and social value

Speakers: Mr Abrar Ahmad on behalf of Mr Irfan Qaiser Sheikh, President Lahore Chamber of Commerce and Industry Dr Syed Zahoor Hassan - main ideas and findings from the workshop

Appendix 4: List of Participants

1. Dr Muhammad Abbas Choudhary Vice Chancellor University of Engineering and Technology Taxila, Pakistan

2. Mr Waseem Ahmad

Assistant Professor University of Engineering and Technology Taxila, Pakistan

3. Mr Ejaz Ahmad

Senior Research Scholar University of Engineering and Technology Taxila, Pakistan

4. Mr Mohammad Bilal Omar Senior Research Scholar University of Engineering and Technology Taxila, Pakistan

5. Dr Mumtaz Ahmad Kamal

Dean Faculty of Civil and Environmental Engineering University of Engineering and Technology Taxila, Pakistan

6. Dr Adeel Akram

Dean Faculty of Telecommunication and Informatics Engineering University of Engineering and Technology Taxila, Pakistan

7. Dr Riffat Asim Pasha

Assistant Professor Mechanical Engineering Department University of Engineering and Technology Taxila, Pakistan

8. Dr Tahir Nadeem Malik

Chairman Electrical Engineering Department University of Engineering and Technology Taxila, Pakistan

- 9. Dr Peter H Armacost Rector/Principal Forman Christian College Lahore, Pakistan
- **10. Dr Iftikhar Hussain** Head of IT Department Forman Christian College Lahore, Pakistan
- 11. Mr Kashif Fida Placement Office Forman Christian College Lahore, Pakistan

12. Mr Ashkenaz Vincent

Director of Internships Forman Christian College Lahore, Pakistan

13. Dr Khaleequr Rahman Vice Chancellor Government College University Lahore, Pakistan

14. Dr Muhammad Zakria Butt Director Research Government College University Lahore, Pakistan

15. Ms Uzma

Student Counselor Government College University Lahore, Pakistan

16. Dr Khalid Manzoor Butt

Professor Political Science Department Government College University Lahore, Pakistan

17. Dr Riaz Ahmad

Director CASP Government College University Lahore, Pakistan 18. Mr Asif Saeed

Professor Economics Department Government College University Lahore, Pakistan

19. Mr Aqeel Ahmad Wagha

Assistant Professor Government College University Lahore, Pakistan

20. Dr Sabiha Mansoor Vice Chancellor Lahore College for Women University Lahore, Pakistan

21. Professor Riffat Saqlain

Dean of Arts and Sciences Lahore College for Women University Lahore, Pakistan

22. Ms Mehr Jabeen Agha

Head of Career Counseling Lahore College for Women University Lahore, Pakistan

23. Ms Saima Asghar Riaz

Lahore College for Women University Lahore, Pakistan

24. Professor Dr Ismat Naeem

Director ORIC Lahore College for Women University Lahore, Pakistan

25. Mr Tahir Ilyas

Director Quality Enhancement Lahore College for Women University Lahore, Pakistan

26. Dr Uzma Qureshi

Director Institute of Education Lahore College for Women University Lahore, Pakistan

27. Mr Ali Rizvi

Director Finance Admin and University Advancement Lahore College for Women University Lahore, Pakistan

28. Ms Talat Shahid

Lahore College for Women University Lahore, Pakistan

29. Dr Arshad Hussain

Professor and Director FAST- National University of Computer & Emerging Sciences Lahore, Pakistan

30. Mr Farzoq Ahmad Chaudhary

Director Corporate Liaison Coordinator Association of Management Development Institute in Pakistan (AMDIP) University of Management Technology Lahore, Pakistan

31. Dr Abdul Rashid Kausar

Pro-Rector, Member University of Management Technology Lahore, Pakistan

32. Mr Farhan Dawood Qazi

Chairman Department of Industrial Engineering University of Management Technology Lahore, Pakistan

33. Dr Hasan Sohaib Murad

Rector University of Management Technology Lahore, Pakistan

34. Mr Waqar Ahmed

University of Management Technology Lahore, Pakistan

35. Lt Gen (Retd) Muhammad Akram Khan Vice Chancellor University of Engineering and Technology Lahore, Pakistan

36. Dr Ikhlaq Ahmed

Professor Metallurgical Engineering Director Financial Aid and Career Services University of Engineering and Technology Lahore, Pakistan

37. Dr Zubair Ahmed Khan

Dean Electrical Engineering University of Engineering and Technology Lahore, Pakistan

38. Dr Abdur Sittar Shakir

Dean Civil Engineering University of Engineering and Technology Lahore, Pakistan

39. Dr Ali Sajjid

Director Institute of Management Sciences University of Engineering and Technology Lahore, Pakistan

40. Dr Waqar Mehmood

Director, Alkhwarzami Department University of Engineering and Technology Lahore, Pakistan

41. Professor Hina Tayyaba

Vice Chancellor Pakistan Institute of Fashion and Design Lahore, Pakistan

42. Ms Shawana Abid

Associate Professor Pakistan Institute of Fashion and Design Lahore, Pakistan

43. Ms Fatima Farooq

Deputy Manager Pakistan Institute of Fashion and Design Lahore, Pakistan

44. Mr Talal Khan

Associate Professor Pakistan Institute of Fashion and Design Lahore, Pakistan

45. Mr Hammad Khawaja

Faculty Member Fashion Marketing and Merchandising Department Pakistan Institute of Fashion and Design Lahore, Pakistan

46. Ms Hina Chaudhry

Coordinator Jewellery Department Pakistan Institute of Fashion and Design Lahore, Pakistan

47. Mr Javed Akhtar Mir

Associate Professor Pakistan Institute of Fashion and Design Lahore, Pakistan

48. Mr Nadeem Akhtar

Coordinator Fashion Marketing and Merchandising Department Pakistan Institute of Fashion and Design Lahore, Pakistan

49. Mr Muhammad Aslam

Associate Professor Pakistan Institute of Fashion and Design Lahore, Pakistan

50. Mr Rizwan Amjad

Faculty Member Pakistan Institute of Fashion and Design Lahore, Pakistan

51. Mr Shahzad Mughal

Faculty Member Pakistan Institute of Fashion and Design Lahore, Pakistan

52. Mr Sajjad Kausar

Principal National College of Arts (NCA) Lahore, Pakistan

53. Dr Shabnum

Principal National College of Arts Lahore, Pakistan

54. Ms Qudsia Rahim

Director/Curator Zahoorul Akhlaq Gallery National College of Arts Lahore, Pakistan

55. Mr Nadeem Hassan Khan

Registrar National College of Arts Lahore, Pakistan

56. Mr Talib Syed Karim

Rector & Executive Director Management Excellence Center Institute of Business Management Korangi Creek Road, Karachi, Pakistan

57. Dr Akhlaq Ahmed

Advisor to President QEC, Environment & Energy Management Institute of Business Management Korangi Creek Road, Karachi, Pakistan

58. Mr Javaid Ahmed

Senior Fellow and Head of Marketing Institute of Business Management Korangi Creek Road, Karachi, Pakistan

59. Ms Samra Javed

Senior Assistant Manager Institute of Business Management Korangi Creek Road, Karachi, Pakistan

60. Ms Shanaz Meghani

Associate Professor and Head of Case Study Cell Institute of Business Management Korangi Creek Road, Karachi, Pakistan

61. Dr Ishrat Husain

Dean and Director Institute of Business Administration Karachi, Pakistan

62. Dr Mohammad Nishat

Professor and Associate Dean Faculty of Business Administration Institute of Business Administration Karachi, Pakistan

63. Dr Qazi Masood Ahmed

Director Research Institute of Business Administration Karachi, Pakistan

64. Mr Izhar M Hussain

Director Center for Executive Education Institute of Business Administration Karachi, Pakistan

65. Dr Amber Gul Rashid

Director Quality Enhancement Cell Faculty Departments of Marketing and Computer Science Member Centre for Entrepreneurship Development (CED) Institute of Business Administration Karachi, Pakistan

66. Mr Muhammad Khalid Hussain

President PAF-Institute of Economics & Technology Karachi, Pakistan

67. Dr Syed Irfan Hyder

Vice President & Dean PAF-Karachi Institute of Economics & Technology Karachi, Pakistan

68. Mr Omar Javaid

In-charge Center of Entrepreneurial Development PAF-Karachi Institute of Economics & Technology Karachi, Pakistan

69. Dr Shoaib Zaidi

Dean Faculty of Electrical and Computer Engineering (ECE) NED University of Engineering & Technology Karachi, Pakistan

70. Dr Sarosh Hashmat Lodi

Dean Civil Engineering and Architecture NED University of Engineering & Technology Karachi, Pakistan

71. Dr Muzzaffar Mahmood

Pro-Vice Chancellor – 1 NED University of Engineering & Technology Karachi, Pakistan

72. Dr Sahibzada Farooq Ahmad Rafeeqi Pro-Vice Chancellor-II NED University of Engineering & Technology Karachi, Pakistan

73. Mr A Kalam. C. Eng

Vice Chancellor NED University of Engineering & Technology Karachi, Pakistan

74. Engr Abdul Majeed Sheikh

Director Directorate of Industrial Liaison NED University of Engineering & Technology Karachi, Pakistan

75. Mr Syed Ali Akbar Rizvi

Director Center for Entrepreneurial Development & Leadership Sukkur Institute of Business Administration Sukkur, Pakistan

76. Dr Waqar Akram

Associate Professor Sukkur Institute of Business Administration Sukkur, Pakistan

77. Mr Nisar Ahmed Siddiqui

Director Sukkur Institute of Business Administration Sukkur, Pakistan

78. Mr Pervaiz Ahmed Memon

Assistant Professor Sukkur Institute of Business Administration Sukkur, Pakistan 79. Mr Sanaullah Shar

Marketing Manager Sukkur Institute of Business Administration Sukkur, Pakistan

80. Dr Iqrar Ahmad Khan

Vice Chancellor University of Agriculture (UAF) Faisalabad, Pakistan

81. Dr Muhammad Ashfaq Professor& Chairman Department of Agri. Economics University of Agriculture Faisalabad, Pakistan

82. Dr Ashfaq Ahmed Chattha

Director External Linkages University of Agriculture Faisalabad, Pakistan

83. Dr Ashfaq Ahmad Maann

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