Guidelines for Industry - Academia Mobility

a) Guidelines for Appointment of Professor of Practice (PoP)

b) Increasing mobility of Women PoP **(BHARATI)** (Boosting Higher Education through Assimilation of Resilient and Talented Indian Women)

c) Facilitating Knowledge Exchange

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Preface

Dear Colleagues,

It gives me immense pleasure to present the policy document outlining the guidelines for the appointment of Professors of Practice. As Chairman of the All India Council for Technical Education (AICTE), I am deeply committed to fostering an inclusive and dynamic academic environment that celebrates diversity and promotes collaboration between industry and academia. In-line with this commitment, I am pleased to introduce this comprehensive framework, which reflects our commitment to excellence in higher education and our dedication to fostering strong, sustainable academia and industry linkages.

The role of Professor of Practice represents a significant opportunity to bridge the gap between theoretical knowledge and practical applications. By bringing in seasoned professionals from various industries, we enrich the academic environment, infusing it with real-world insights and experiences that prepare our students for the challenges of today's dynamic workforce.

Further, the appointment of Women Professors of Practice represents a significant step towards gender equality in the higher education and the professional sphere. By actively encouraging the participation of women from diverse backgrounds and industries, we not only enrich the academic discourse but also provide inspirational role models for our students, encouraging them to pursue their aspirations with confidence and determination.

These guidelines have been meticulously crafted to promote gender diversity and inclusivity while also facilitating seamless collaboration between academia and industry. They outline the criteria for the appointment of Professors of Practice as well as giving importance to Women Professor of Practice, ensuring that meritocracy remains at the forefront of the selection process. Additionally, they provide frameworks for industry-academia partnerships, encouraging mutually beneficial engagements that enrich both parties.

I would like to express my gratitude to all those who contributed to the development of these guidelines, including members of the academic community, industry experts, and policymakers. Your collective efforts have been instrumental in shaping this document, which I am confident will serve as a beacon of guidance for institutions across the nation.

In conclusion, I urge all stakeholders to embrace these guidelines wholeheartedly and to work collaboratively towards the successful implementation of the Professor of Practice and ‘BHARATI’ initiatives. Together, we can elevate the quality of technical education in India and empower our students to excel in an ever-evolving global landscape.

Thank you for your dedication and commitment to the advancement of higher education.

Warm regards,

Prof. T.G Sitharam
Chairman, AICTE

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Introduction- Industry and Academia Mobility:

Introduction

The landscape of higher education in India is evolving rapidly in response to technological advancements, shifts in the job market, and changes in student expectations. In this dynamic environment, universities and colleges are seeking innovative ways to bridge the gap between academic theory and practical application. One significant development in this regard is the increasing integration of Professors of Practice into academic institutions.

What is a Professor of Practice?

A Professor of Practice is a faculty member who brings extensive professional experience and expertise to the academic setting. Unlike traditional tenure-track faculty, whose primary focus is often research and theoretical instruction, Professors of Practice are typically distinguished professionals who have made substantial contributions to their fields outside of academia. They are appointed based on their practical achievements and their ability to provide students with real-world insights and skills.

Necessity and Benefits

1. **Bridging Theory and Practice**:
    - Professors of Practice play a critical role in aligning academic curricula with industry needs. Their first-hand knowledge and practical experience enable them to provide students with a deeper understanding of how theoretical concepts are applied in real-world scenarios. This integration helps to produce graduates who are better prepared for the demands of their chosen professions.
2. **Enhancing Employability**:
    - The job market increasingly values practical skills and experience. By learning directly from seasoned professionals, students gain exposure to current industry practices, trends, and challenges. This practical orientation enhances their employability and gives them a competitive edge in the job market.
3. **Industry Connections and Networking**:
    - Professors of Practice often maintain strong connections with industry, which can be invaluable for students. These connections can lead to internship opportunities, mentorship, and job placements. Furthermore, industry-linked faculty can facilitate partnerships between academia and industry, fostering collaborative research and development projects.
4. **Curriculum Relevance and Innovation**:
    - The inclusion of Professors of Practice can drive curriculum innovation. They can introduce new courses and modules that

reflect the latest industry developments and technologies. This ensures that educational programs remain relevant and up-to-date, providing students with the skills and knowledge required in contemporary workplaces.

5. **Diverse Perspectives**:
    - Bringing professionals from various fields into academia enriches the educational environment by introducing diverse perspectives and approaches. This diversity fosters a more holistic learning experience, encouraging students to think critically and creatively.

6. **Real-World Problem Solving**:
    - Professors of Practice often employ a teaching methodology that emphasizes problem-based learning. By engaging students in real-world problem-solving activities, they help develop critical thinking, teamwork, and practical skills that are essential for professional success.

Academia-Industry Mobility: Facilitating Knowledge Exchange

The mobility of professionals between academia and industry is increasingly recognized as a critical component in fostering a dynamic and responsive educational environment. This bi-directional flow offers numerous benefits:

1. **Knowledge Transfer**: Professionals moving from industry to academia bring with them practical insights and up-to-date knowledge of industry practices, while those transitioning from academia to industry can apply their research and theoretical expertise to real-world problems.

2. **Collaborative Synergies**: Such mobility encourages collaborative research and development projects, leveraging the strengths of both sectors to address complex challenges and drive innovation.

3. **Career Development**: For individuals, transitioning between academia and industry can enhance career prospects by broadening skill sets, fostering adaptability, and providing diverse experiences.

4. **Economic and Social Impact**: The interplay between academia and industry can lead to the development of new technologies, startups, and business models, contributing to economic growth and societal advancement.

Conclusion

The incorporation of Professors of Practice and the facilitation of mobility between academia and industry are essential strategies for modernizing education and fostering a productive synergy between theoretical and practical domains. By embracing these approaches, educational institutions can better prepare students for the complexities of the contemporary workforce, while also driving innovation and economic development. This symbiotic relationship not

only benefits individual careers but also enhances the overall societal capacity for progress and adaptation in an ever-changing world.

Committee Members:

1. Prof G D Yadav, National Science Chair (GOI) & Emeritus Professor of Eminence, Former VC, ICT, Mumbai - Chairman
2. Prof Prem Kumar Kalra, Former Director / Vice Chancellor, DEI, Agra - Member
3. Prof. Karm Veer Arya, IIITM, Gwalior - Member
4. Ms. Reena Ahuja, Partner & Director, SmartHead Strategy Solutions Pvt Ltd
5. Prof. Runa Sarkar, Economics Groups, IIM Calcutta

AICTE Officers/Officials:

1. Dr. Mamta R. Agarwal, Advisor-I, P&AP Bureau
2. Dr. Dinesh Singh, Director, P&AP Bureau
3. Sh. M.G. Vamsi Krishna, Deputy Director, P&AP Bureau
4. Sh. Rakesh Kumar Pandit, YP, P&AP Bureau

Guidelines for Engaging Professor of Practice and Mobility of faculty members and technical experts between industry / research Institutions and AICTE approved institutions:

1. **Engaging Professor of Practice**

In the dynamic landscape of higher education, the pursuit of excellence remains a steadfast goal for academic institutions worldwide. To achieve this, Institutions / universities are continuously exploring innovative strategies to bridge the gap between theory and practice, preparing students to thrive in real-world scenarios. One such strategy gaining prominence is the integration of Professors of Practice into the academic fabric as the change makers.

Professors of Practice (PoP) bring a wealth of practical experience going beyond theory, industry insights, and professional networks into the classroom, enriching the learning experience and fostering a culture of applied knowledge and innovation. Unlike traditional faculty members who predominantly focus on teaching textbook material and also research in PG programmes, Professors of Practice actively engage in professional endeavours while concurrently teaching within the institution. Their dual roles offer students invaluable opportunities to glean first-hand knowledge, cultivate essential skills, improve their hands on experience and forge meaningful connections with industry leaders.

Recognizing the transformative potential of Professors of Practice, academic institutions are increasingly seeking guidance on how to effectively integrate, support, and leverage their expertise. The adjunct appointments are one way of achieving the object but it also has its short comings. This set of guidelines serves as a comprehensive framework to assist Institutions / Universities in harnessing the full potential of Professors of Practice, optimizing their contributions to the academic community, and maximizing the impact on student learning outcomes.

Through careful consideration of recruitment strategies, contractual arrangements, professional development initiatives, and collaborative opportunities, institutions can establish a conducive environment where Professors of Practice thrive and students benefit from their real-world wisdom. By embracing these guidelines, academic institutions can strengthen their commitment to academic excellence, innovation, and holistic student development in the ever-evolving landscape of higher education.

PoP should also encourage institutes to recruit well-endowed individuals without being technically right and match number for number for faculty cadre to misdirect the authorities.

Table' A'

<table>
<tr><td rowspan="2">Designation</td><td>UG/PG/PGDM courses</td><td>Professor of Practice (PoP)
Associate / Asst. PoP</td></tr>
<tr><td>Diploma courses</td><td>Associate / Asst. PoP</td></tr>
<tr><td>Eligibility for Degree Courses</td><td colspan="2"><table>
<tr><th>Professor of Practice (PoP)</th><th>Associate PoP</th><th>Assistant PoP</th></tr>
<tr><td>Ph.D with relevant 10 year of experience in large conglomerate**

Or

Masters with relevant working experience of 15 year in large conglomerate*

Or

B.Tech with relevant working experience of seventeen (17) year of experience in large conglomerate*

Or

Ph.D / Masters / B.Tech with minimum five (5) patents and 5 years of experience in the start-up

Ph.D is desirable for guiding researchers at Ph.D level but not mandatory for teaching</td><td>Ph.D with relevant 5 year of experience in large conglomerate*

Or

Masters with relevant working experience of 10 year in large conglomerate*

Or

B.Tech with relevant working experience of Twelve (12) year of experience in large conglomerate*

Or

Ph.D / Masters / B.Tech with minimum five (5) patents and three (3) year of experience in the start-up

Ph.D is desirable for guiding researchers at Ph.D level but not mandatory for teaching</td><td>Masters with relevant working experience of 5 year in large conglomerate*

Or

B.Tech with relevant working experience of Seven (07) year of experience in large conglomerate*

Or

Ph.D / Masters / B.Tech with minimum three (3) patents and three (3) year of experience in the start-up

Ph.D is desirable for guiding researchers at Ph.D level but not mandatory for teaching</td></tr>
</table></td></tr>
</table>

Eligibility for Diploma Courses	<table><tr><td>Associate / Assistant Professor of Practice</td></tr><tr><td>Masters with relevant working experience of 5 year in large conglomerate* Or B.Tech with relevant working experience of Seven (07) year of experience in large conglomerate* Or Masters / B.Tech with minimum three (3) patents and three (3) year of experience in the start-up</td></tr></table>
% of sanctioned Strength	In all Technical Programmes, Institutions may avail the services of 'Professor of Practice (with rich Industry experience)' for teaching the students against the faculty strength. Note: 1. Maximum percentage of faculty members engaged as Professor of Practice within the required Faculty strength (cadre ratio) in Engineering and Technology is 20%, wherein 5% is exclusively reserved for Women Professor of Practice/Associate/Assistant PoP (regular basis). 2. For other programme, prevailing norms will be applicable.
Tenure	The engagement may be assessed after one year by the Institute. At the end of the initial engagement or subsequent extension, the Institute will make an assessment and take the decision about extension. The Institute will devise its own assessment procedure for extension based on the contribution and requirement of the experts engaged as Professors of Practice.
Activities	1. Design, development and offering of new practice-oriented courses; 2. Developing new experiments in cutting edge areas and making use of technology including simulations. 3. Advise /Guide students in their projects linking them with appropriate external stakeholders; 4. Promoting critical thinking with open end solutions and not rote learning. 5. Engage in department building activities including creation of new programmes and Centres of excellence /

	Technological parks / Incubation Centres and enhancement of scope and activities of the department; 6. Develop Continuing Education Programmes, undertake outreach activities and conduct extension programmes; 7. Encourage students in innovation and entrepreneurship projects, Product development and provide necessary mentorship for these activities; and Contribute to enhanced industry academia collaborations. 8. Involving in Workshop Practice 9. Thesis / Project mentoring the students 10. IP creation, filing and protection 11. Participating in Technology Transfer Office and Technology Licensing Office. 12. Industry Institute interaction, placement activities, sabbaticals and internships, MoU's, Inter Institute collaboration.
The organization/ Industries / Bodies from where , professors of practice / Resource person / Lecture of Practice may be engaged are eligible [Note: conglomerate* - Persons from the fields as defined in the adjacent column]	1. Teaching and research Organizations of State/ Central government Institutions/Universities 2. Central and State Public Sector Undertakings (PSUs) 3. National and International Industry associations like FICCI, CII, etc 4. Reputed Industries & NGO's 5. International Organizations like UNO, World Bank etc 6. Civil servants (IAS/ IPS/ Officials from Central and Provincial Services), and Professionals and 7. Officials from professional Councils 8. NRIs working with reputed overseas academic, research and industrial Organizations or having a demonstrated interest in Indian issues. 9. Armed Forces personnel. 10. Person of eminence in the chosen domain not covered above.

2 Empowering Women in Academia: Promoting Diversity through Professors of Practice

Government / AICTE strives to have work force which reflects gender balance and encourages women candidates to be employed. Encouraging women employees to work as Professors of Practice is a positive step towards promoting diversity and inclusivity in academia. This aligns well with the lateral entry Women Scientists in DST scheme. Professors of Practice often bring valuable real-world experience and practical knowledge to their teaching roles, which can enrich the learning experience for students. By actively supporting and promoting women in these positions, universities and academic institutions can help address gender disparities in higher education and empower women to excel in their chosen fields. Additionally, having more women Professors of Practice can serve as role models for aspiring female academics, inspiring them to pursue careers in academia and contributing to a more balanced representation of genders in higher education.

Rationale behind the Policy:

The problems faced by the Women in the carrier advancement are several, but significantly, most often the "break in their careers" arises out of motherhood and family responsibilities. The option for revival of their profession is presently unavailable due to restrictions in age and qualification and no system at present addresses these issues. Under this scheme, women Professor of Practice will be encouraged to pursue academic carrier as well as research in the Institutions.

Objectives

Enhance Diversity: Increase the representation of women in academic leadership and teaching roles.

Industry Integration: Infuse practical industry insights and experience into academic programs.

Role Models: Provide students, particularly female students, with strong role models in their fields of study.

Professional Development: Support the professional development of women transitioning from industry to academia.

Collaborative Opportunities: Foster collaborations between academic institutions and industry.

Eligibility Criteria : As defined in the previous part in the Table 'A'
Roles and responsibilities: As defined in the previous part in the Table 'A'

3. Academia-Industry Mobility: Facilitating Knowledge Exchange

[*Mobility of faculty members and technical experts between industry/research institutions and AICTE approved institutions***]**

INDUSTRY LEAVE:

The faculty members of the AICTE approved institutions can also avail leave for a duration up to six months on one term. In fact, summer vacations of 2-3 months can also be used for Industrial exposure.

The faculty members of the AICTE approved institutions interact with industries and research institutions in various ways for mutual benefit. It is desirable to create mechanisms to enhance this interaction. One such mechanism is to visit industries for a short duration, especially during the vacation (i.e., non-teaching) period. Such short visits have several advantages to faculty, Institute as well as the industry.

EXPECTED OUTCOME:

Mutual exchange of ideas and knowledge. Seeding of new projects and fostering of long-term interactions and R&D collaboration. Exposure of faculty to real-life data and problems. Exposure of faculty to engineering / design / management practices in the industry. Generation of opportunities for internship, placement, and fellowships for students, support for student technical projects, etc.

- Knowledge Exchange: Facilitating the movement of faculty members and technical experts between academia and industry/research institutions allows for the exchange of knowledge, skills, and best practices. Academics can bring the latest research findings, teaching methodologies, and industry trends to educational institutions, while industry experts can share practical insights, real-world challenges, and technological advancements with academia.
- Curriculum Relevance: Industry professionals bring first-hand knowledge of current industry needs, emerging technologies, and market trends. Their involvement in curriculum development ensures that educational programs remain relevant, up-to-date, and aligned with industry standards, thereby enhancing the employability of graduates.
- Enhanced Teaching Quality: Faculty members who have gained industry experience can offer students a unique perspective by integrating real-world examples, case studies, and practical applications into their teaching. This hands-on approach enhances the quality and effectiveness of education, making it more engaging and applicable to students' future careers.

- Pedagogy: Developing knowledge and skill set with educational sector context.

- Research Collaboration: Collaboration between academia and industry/research institutions fosters joint research projects, technology transfer, and innovation. Faculty members who collaborate with industry experts can access resources, funding, and facilities that support their research endeavours, leading to advancements in science, technology, and engineering.
- Professional Development: Mobility programs provide faculty members with opportunities for professional development, skill enhancement, and career advancement. Experiencing different work environments, challenges, and perspectives can broaden their expertise, enrich their teaching methods, and enhance their research capabilities.
- Industry-Academia Partnerships: By fostering closer ties between academia and industry, mobility programs promote mutually beneficial partnerships. Industry partners may offer internships, co-op programs, guest lectures, and industry-sponsored projects, providing students with valuable hands-on experience and industry exposure.
- Policy Implications: AICTE and other regulatory bodies can play a vital role in facilitating and incentivizing mobility programs. This may include developing policies, guidelines, and funding mechanisms to support faculty exchange, sabbatical leaves, industry attachments, and collaborative research initiatives.
- Continuous Feedback Loop: Establishing mechanisms for ongoing communication and feedback between academia and industry ensures that educational programs remain responsive to evolving industry needs and technological advancements. Regular interaction between faculty members, industry experts, and students helps identify emerging trends, skill gaps, and opportunities for improvement.

IMPLEMENTATION:

INDUSTRY LEAVE DETAILS: Faculty will be full-time visiting personnel in the industry during this period. Duration can be up to two years. Location can be either within or outside India. Faculty will be allowed to take up such assignment as 'on-duty' with no leave deduction.

FINANCIAL DETAILS: Travel and other incidental expenses are to be borne by the Industry or the faculty. Remuneration will be as mutually agreed upon between faculty member and industry.

OPERATIONAL DETAILS: Any assignment / Consultancy during the industrial engagement of a faculty member must be through the Institution. One-third of the Remuneration earned for such individual consultancy / assignment will be shared with the Institute. The Institute will raise the invoice under its GST number.

CADRE: The Professor of Practice will be counted in the Student to Faculty ratio. This will also lead to improving the student to faculty ratio. Also the faculty doing both teaching and research should be counted separately for UG and PG programmes.

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