Developing Entrepreneurial Ecosystem in Professional Educational Institutions through Reinforcement of Accreditation Framework

Mujahid J. Siddiqui, Aaliyah Siddiqui

Abstract: This study identifies the underlying dimensions which promote entrepreneurial environment in the professional institutions. We analyze the present status of the entrepreneurship as included in the accreditation processes by two accrediting bodies in India i.e. National Board of Accreditation (NBA) and National Assessment and Accreditation Council (NAAC). We devise a model to expand the presence of entrepreneurship aspect into the assessment criterion pertaining to entrepreneurship within these frameworks of accreditation. The study used two scales for obtaining data from the professional institutions. While one scale for measuring the entrepreneurial intentions was adopted a new scale for measuring the ‘support to entrepreneurship by institutions,’ was developed. Exploratory factor analysis performed on the data identified the seven dimensions, which create a positive impact on the entrepreneurial ecosystem in the professional institutions. Bivariate Correlation analysis is performed and results reveal a significant relationship between entrepreneurial intentions of the students and the supporting entrepreneurial activities by educational institutions. The present study conducted in December 2018, evaluated the Entrepreneurial intentions of the students enrolled in the professional programs and their linkage with the support to entrepreneurial activities by the educational institutions. The study has identified five main factors namely, training, guidance and counseling, Infrastructure support, networking opportunities and incubation and mentoring and two weakly supported factors – participation in entrepreneurship events and patent licensing and technology support. These factors can collectively help promote entrepreneurship in the professional institutions. The seven dimensions were proposed to be included in the accreditation process as the present accreditation framework in India was found to be adversely skewed towards entrepreneurship. The paper attempts to begin a debate on how accreditation can drive the national education agenda rather than merely play the role of quality assessor which ignores the vital aspects of entrepreneurship.

Key Words: Entrepreneurship, Accreditation, Indian Professional Education Institutions, Entrepreneurial ecosystem

I. INTRODUCTION

The recent initiatives of the Indian government for creating jobs for millions and establishing a culture of entrepreneurship in the country is indeed a very positive step to give strength to the country’s economy. The primary drivers of these initiatives will be the present generation of students, while the Professional education institutions will play the role of enablers to achieve these objectives. The institutions offer high-quality training, in accordance with the needs of labour market as well the needs of socio economic of the country. The professional institutions can train professionals who can fulfill the needs of public or private organizations, through the ability to use technical knowledge to any situation, and with their acumen [1].

The current situation needs a quick assessment of the capability of the professional institutions to create entrepreneurial mindset amongst the student’s community. Although entrepreneurial education has been there in these institutions for over four decades, their contribution in promoting entrepreneurship has been far off the mark, when compared with the institutions in the Western countries, where entrepreneurship has made significant contribution to the economy [2]. The growth of corporate entrepreneurship as a valuable antecedent to the revitalization and enhanced performance of corporations, especially those in the developed markets, add to its merit [3]. Entrepreneurship influences the country in several ways. Apart from creating jobs it also contributes in improvising products and services, reducing cost of production, making better use of technological advancements for improving quality of life, enhancing standard of living of its population, increasing income from exports while decreasing dependency on imports. Hence, the importance of entrepreneurship can never be underrated.

The facts highlighted above leads us to divert our attention on how entrepreneurship must be dealt with by the professional institutions in India and should there be an increased focus on promoting entrepreneurship particularly amongst the professional institutions in the country. Studies [34] on the impact of accreditation suggest that it creates positive impact on the management activities of higher education institutions such as teaching, learners, support staff, apart from facilities and programs. It shall hence be pertinent to understand- Can accreditation system and accreditation bodies play a significant role in development of Entrepreneurship? For this, we need to analyze the present status of the entrepreneurship as included in the accreditation processes by two accrediting bodies in India i.e National Board of Accreditation (NBA) and National Assessment and Accreditation Council (NAAC). Then we need to devise a model using the underlying constructs to expand the presence of entrepreneurship aspect into the assessment criterion.

II. ENTREPRENEURSHIP, PROFESSIONAL EDUCATION AND ACCREDITATION

The experts from industry and academia have consistent views on, the need of every student pursuing higher education, to acquire...
entrepreneurial capabilities, besides subject specific knowledge. The skills essential to succeed as an entrepreneur thus, must be integrated into the curriculum with an increased emphasis. The students of business schools are more likely to study the subject of Entrepreneurship in a formal way, but a vast majority of the students from other streams, such as Engineering, Pharmacy etc., do not have this opportunity. This gap has led to a slower growth of 'startups' in these educational institutions. Ironically, such technical institutions, compared to the business schools, have more intellectual capital (Patentable technology, tools, machines, equipment etc.). While the business school students may have more knowledge of commercializing these intellectual resources but they lack in several skills such as technical competencies, project management, financial modeling etc., and even they lack in confidence to turn to entrepreneurship.

Although the current Accreditation processes do have component of entrepreneurship present as mentioned in NBA Manual under three different sections 4.4, 7.3 and 9.6.[32]. Considering the inclusion of entrepreneurship in NAAC, another accreditation body, its manual contains entrepreneurship under clause 1.1.3 in the Autonomous institution’s as well as the University accreditation manuals. It is worthy to note here that the affiliated colleges are not awarded any marks for promoting entrepreneurship, which is very astonishing but these have a very miniscule presence as indicated in Table I. The weightage given to aspect of entrepreneurship does not exceed more than 2% [33] in all types of accreditations. This is particularly disappointing to note that the present accreditation system in the country does not encourage the promotion of entrepreneurship in India.

Some studies on the entrepreneurship point out that, although the preference to study entrepreneurship is high in India, the educational support for its development is largely missing [4]. Entrepreneurship education is not yet a hugely desired course amongst students of professional institutions in India. For this reason, the institutions offer entrepreneurship as an extra-curricular or co-curricular course in colleges and universities in India [5].

An analysis of the current situation indicates an unjustifiable ignorance of the entrepreneurship education in the Indian institutions. This scenario has to change and entrepreneurship education has to be accorded its right place in the educational curriculum [6], if the professional educational institutions are to play any role in building the entrepreneurial ecosystem in the country.

III. DEVELOPING A MODEL FOR INCLUSION OF ENTREPRENEURSHIP IN ACCREDITATION

Usually any accreditation process comprises of three stages, a self-evaluation of the program by higher education Institution (HEI), a visit by external experts and finally the decision of the accreditation authority [35]. News appeared in national dailies titled “19,000 graduates, postgraduates, MBAs, BTechs apply for 114 sweepers’ jobs in UP town” [7]. News like this needs the attention of accreditation bodies who are wielding far more power now, considering the recent directives of the Union HRD ministry and the alarm raised amongst the educational institutions [8]. This calls for an extensive and meticulous examination of the structure, processes and the entire ecosystem for promoting entrepreneurship in professional institutions. It is high time, cases of the professional and non-professional programs in India. This, in a way, is a missed opportunity, by means of promoting entrepreneurship in the institutions using the accreditation route and providing little or no incentive to the institutions who promote entrepreneurship. This study highlighted the shortcomings in the accreditation criteria to bring into limelight the focus on entrepreneurship through various measures which can help in developing an enabling environment for development of entrepreneurial ecosystem in the institutions. Accreditation can provide the much needed focus of the institutions on entrepreneurship.

<table>
<thead>
<tr>
<th>National Board of Accreditation (NBA)</th>
<th>National Assessment and Accreditation. Council (NAAC)</th>
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<tbody>
<tr>
<td><strong>Institution type</strong></td>
<td><strong>Maximum Weightage (%)</strong></td>
</tr>
<tr>
<td>Diploma Engineering</td>
<td>1.7</td>
</tr>
<tr>
<td>Engineering</td>
<td>1.5</td>
</tr>
<tr>
<td>PG Engineering</td>
<td>1.0</td>
</tr>
<tr>
<td>University</td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>1.0</td>
</tr>
<tr>
<td>PG MCA</td>
<td>1.0</td>
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</tbody>
</table>

Source: NBA and NAAC accreditation Self-Assessment / Study Report Manuals

Table I: Weightage accorded to Entrepreneurship in Accreditation process in NBA and NAAC

IV. OBJECTIVE OF THE STUDY

The study attempts to explore the status of support to entrepreneurial activities by educational institutions in Indian context and to find out the means of promoting the entrepreneurial intentions of the students in professional institutions in India. Following objectives are outlined for the purpose of this study:

1. To form a scale for measuring the support to entrepreneurial activities by educational institutions in order to capture the constructs of entrepreneurial support needed by students in context of Indian professional institutions.
2. To ascertain the underlying dimensions of the identified constructs.
3. To use the identified dimensions for creating the framework for inclusion in the accreditation process of the accreditation bodies.
4. To recommend the specific actions to be initiated by the accreditation bodies for promoting entrepreneurship in professional institutions in India.
V. LITERATURE SURVEY AND FORMULATION OF HYPOTHESIS

A. Entrepreneurial Intentions

There exist a vast literature in psychological and social studies on ‘intentions’. The ‘intentions’ have acted as a robust predictor of planned individual behaviour, more so, in case these behaviour occur at random intervals, are uncommon in their occurrence and not easily observable [9]; entrepreneurship has all these characteristics of planned and intentional behaviour [10], [11].

The current literature has enormous evidences to support the fact that intentions play a very significant role in an individual’s choice of establishing his own business [12]. Theory of Planned Behaviour (TPB) is regarded as the most suitable model for predicting an individual’s intention and is a well-researched theory [13]. The efficiency of TPB to forecast entrepreneurial intentions has been proved by several studies on entrepreneurship [14], [15], [16].

The model identifies three main constructs to predict an individual’s intention:
1. The Attitude towards the behaviour (the extent of individuals’ positive or negative judgements of being an entrepreneur) [14], [17].
2. The Subjective norms (the ostensible force from family, friends or other significant social class of individuals to start a new business or not) [13] and
3. The Behavioural control (the perceived ease or hardship of becoming an entrepreneur).

The three constructs as mentioned above are predictive variables, whereas “Entrepreneurial Intention” is considered as the dependent variable.

The key constructs of the theory of planned behaviour and entrepreneurial intentions are well researched and are part of many prominent studies in the area of entrepreneurship [12], [14], [17], [18]. In the highly proclaimed journal, Entrepreneurship Theory and Practice, Linan and Chen in the year 2009, had created a scale for testing entrepreneurial intentions by applying the theory of planned behaviour. This questionnaire was considered of high relevance to this study and hence was adapted for this research.

Several studies have supported Ajzen’s [13] claim that the three identified constructs are helpful in predicting the ‘intentions’ but also conclude that the result may vary in different situations and in context of different countries. Thus, these conclusions indicate that all three intention antecedents must be combined when examining entrepreneurial intentions. Thus, we frame the first Hypothesis as under:

H1: Attitude towards behavior (entrepreneurship), subjective norms and perceived behavioral control with respect to entrepreneurship, are positively related with the students’ entrepreneurial intention.

B. Support to Entrepreneurial Activities by Educational Institutions’ (SEA-EI)

There has been a growing interest, in the last few decades, in the area of entrepreneurship as a socio-economic subject and has seen many researches being done in this area [19]. Entrepreneurship has gained interest due to its economic significance and its various benefits such as innovation and creativity for the markets, generation of new job opportunities, and other economic benefits [20]. Many studies in the past have indicated that entrepreneurship can be taught and that education can promote entrepreneurship [21-27]. The inclusion of entrepreneurship in the educational programmes has seen a phenomenal rise in many universities and institutions [28-30]. Entrepreneurship has gained a wide-ranging popularity among postgraduate and undergraduate students [29]. These evidences indicate the importance of entrepreneurship education in Higher Educational institutions. Hence, the support by institutions to entrepreneurship is of great value to the students.

The item generation for the constructs of ‘Support to entrepreneurial activities by Educational institutions’ (SEA-EI) hinged on theoretical and commonly known concepts. A convenience sample of 22 entrepreneurs and senior academician in the field of entrepreneurship were requested to define SEA-EI through an open-ended format. The frequently appearing terms were converted into the items for the construct and a seven point Likert scale response categories of Strongly Disagree-1 to Strongly Agree-7 was used. This process led creation of 23 items scale for the construct of SEA-EI.

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>No. Of items in the scale</th>
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<tr>
<td>0.775</td>
<td>23</td>
</tr>
</tbody>
</table>

With respect to the discussion above, it is vital to evaluate the relationship between entrepreneurial intentions and the Support to entrepreneurial activities by educational institutions. Hence, the second hypothesis is proposed as under:

H2: There is a significant relationship between Entrepreneurial Intentions and factors that provide support to entrepreneurial activities by educational institutions.

VI. RESEARCH METHODOLOGY

The study aimed to understand the intention of the students undergoing undergraduate and Post Graduate professional programmes. Hence, 400 targeted mails were sent to students who had sent their interest for participation in an entrepreneurship course to be conducted by a prominent institution. 294 responses were received. The sample size was considered sufficient for the statistical analysis. The sample population was drawn from variety of disciplines from the professional institutions. The sample mainly comprised of students pursuing engineering, management and pharmacy programmes, while maintaining the randomness of the sample. Both descriptive and inferential statistics were used to analyse the collected data.

VII. ANALYSIS AND RESULTS

Two scales were used for the purpose of the study namely Entrepreneurial Intentions Scale and the SEA-EI scale. Since only SEA-EI was specifically constructed for the study, exploratory factor analysis was performed for the items. Exploratory factor analysis performed on the data identified the underlying dimensions. Principal component analysis with Eigen value greater than one was used to extract factor. This resulted in extraction of seven factors as labelled in Table V, to reflect various characteristics of the support to entrepreneurial activities by educational institutions. The factors together accounted for 80.9% of the variance in the data.
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The factor loadings ranged from high of 0.873 to a low of 0.551. The reliability analysis of the scale was performed using Cronbach’s alpha and Coefficient alpha of the entire scale was found to 0.775, which was in the acceptable range [31]. Table II presents the Reliability statistics for the SEA-EI Scale. The adapted scale for measuring entrepreneurial intentions has a combined coefficient for four constructs with a value of 0.81[12].

In the next stage, for the purpose of testing the hypothesis 1, a regression analysis was performed and a model in which the entrepreneurial intention was taken as the dependent variables. Whereas the constructs of attitude towards entrepreneurship, perceived behavioural control and subjective norms were the predictor variables. Table III presents the model summary of the linear regression, the model indicates that the antecedents of theory of planned behaviour have a significant predictive power on the entrepreneurial intentions (p<0.05). The overall adjusted R² is 0.61, which is quite high and is well positioned in the range of predicting the entrepreneurial intention. Similarly it is also revealed that attitude towards entrepreneurship has the highest influence on the entrepreneurial intentions. The test supports hypothesis 1, hence the positive relations between the three antecedents, namely attitude towards entrepreneurship, perceived behavioural control and subjective norms have a significant positive relation with the entrepreneurial intentions.

Table III: Regression analysis between TPB antecedents and entrepreneurial intention

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes towards Entrepreneurship</td>
<td>0.502*</td>
</tr>
<tr>
<td>Perceived behavioral control</td>
<td>0.421*</td>
</tr>
<tr>
<td>Subjective norm</td>
<td>0.163*</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.61</td>
</tr>
</tbody>
</table>

Dependent Var.: Entrepreneurial intentions  *p<0.05, **p<0.001

For the purpose of testing the second hypothesis H2, a Bivariate Correlation analysis was used to understand the relationship between entrepreneurial intentions and the factors extracted from the Support to Entrepreneurial Activities by Educational Institutions. A strong and significant relationship would highlight the influence that the SEA-EI will have on the behavioural intentions of the students of professional institutions.

Table IV displays the bivariate correlations between the SEA-EI factors and the entrepreneurial intentions. The training in entrepreneurship has the highest and positive correlation coefficient (0.528) with the entrepreneurial intentions, which is quite obvious and points towards the need to develop training programmes for the students of the professional institutions. The second highest coefficient (0.411) is the infrastructural support for the professional institutions, indicating that the students need infrastructural support such as Workplaces, facilities and Entrepreneurship Cells in their institutions. Incubation and mentoring programme have also found very strong and significant (0.398) support in the study. Providing Entrepreneurial Guidance and Counseling (0.342) is also a critical aspect to build the entrepreneurial intentions of the students of Professional institutions. Patents, Licensing and Technology have been found not to have significant correlation with the entrepreneurial intention; perhaps these plays a rudimentary role in creating the entrepreneurial intentions hence may have been ignored in comparison to the other factors. Most of the SEA-EI factors have significant impact on the entrepreneurial intentions and contributes to the development of entrepreneurship. Hence, Hypothesis H2 is accepted.

1. The inclusion of practical project work can be a good resource that can help me create my startup
2. A course on entrepreneurial skills can supplement in starting my own enterprise.

Entrepreneurial Guidance and Counseling (11.6%)

0.773

0.688

0.813

0.753

0.674

If given adequate advisory support by the institute I can develop my own business
1. The institute's faculty members can provide me the support to start my own business
2. I feel that the institute can provide me guidance to create my own business

Infrastructural Support (9.7%)

1. If the institute establishes an Entrepreneurship club it will motivate me to start my own business
My institute can provide new facilities that will be helpful in starting up my business

0.873

0.821

Table V: Bivariate Correlations

<table>
<thead>
<tr>
<th>SEA-EI Factors</th>
<th>Entrepreneurial Intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training in Entrepreneurship</td>
<td>0.528**</td>
</tr>
<tr>
<td>Entrepreneurial Guidance and Counseling</td>
<td>0.342**</td>
</tr>
<tr>
<td>Infrastructural Support</td>
<td>0.411**</td>
</tr>
<tr>
<td>Networking with other Entrepreneurs</td>
<td>0.313**</td>
</tr>
<tr>
<td>Incubation and Mentoring</td>
<td>0.398**</td>
</tr>
<tr>
<td>Organizing Entrepreneurship Workshops</td>
<td>0.115*</td>
</tr>
<tr>
<td>Patents, Licensing and Technology</td>
<td>0.016</td>
</tr>
</tbody>
</table>

**p<0.001, *p<0.05
Creating a separate workplace in the institute to work on business proposals can boost my chances to become an entrepreneur.

**Networking opportunities with other Entrepreneurs (7.6%)**

1. If I am provided with opportunities to meet businessmen through my institute, it can help develop my business ideas.
2. I can improve my network with other entrepreneurs with the support of my institute.
3. Events and competitions hosted by the institute can help me in improving my relations with other entrepreneurs.
4. The institute's Alumni network can be leveraged to boost my chances of starting my own business.

**Incubation and Mentoring (7.2%)**

1. A business idea, if incubated by the institute, can increase the prospects of starting my own business.
2. If a structured mentoring programme is conducted by the institute, I can easily commercialize my business idea.
3. If the institute provides a continued support even after my graduation, I think it can help me establish my own business.

**Participation in Entrepreneurship Workshops (5.8%)**

1. Participation in special workshops on entrepreneurship can help me in acquiring skills to become an entrepreneur.
2. Entrepreneurship summits and seminars can help improving my chances of starting my own enterprise.
3. My involvement in activities hosted by entrepreneurship development organizations will assist me in starting a business.
4. Special sessions can help in giving shape to my new business ideas.

**Patents, Licensing and Technology (4.4%)**

1. Knowledge on Patents and technology is essential to make progress in business.
2. Understanding of Legal aspects of business is essential to succeed in establishing my own business.

**Fig. 1 Proposed SEA-EI Model of factors for inclusion in Accreditation process**

**VIII. CONCLUSION**

The present study evaluated the Entrepreneurial Intentions of the students enrolled in the professional programmes and their linkage with the Support to entrepreneurial activities by the educational institutions. The study has identified seven factors which can help promote entrepreneurship in the professional institutions in India. The training in entrepreneurship is regarded as the most important factor in building the entrepreneurial intentions, Entrepreneurial guidance and counseling needs of the students coupled with the infrastructural support are two factors which can develop the support system for entrepreneurship in professional institutions. Networking opportunities as well as incubation and mentoring are rated on an equal footing; hence these also form part of the crucial support system for students in institutions. Providing increased attention to these aspects of entrepreneurship by the institutions can help in building a culture which promotes entrepreneurship. These factors outlined above can be the basis of evaluating the institutions efforts in building an entrepreneurial ecosystem within the institution. These factors must be included within the framework of accreditation by the agencies which accord the accreditation to the higher educational institutions. These seven factors emerging out of this research present a comprehensive framework for support to the entrepreneurship activities in the professional institutions. The Accreditation as a process needs to evolve with the changing times. The newer perspectives and practices emerging from the present study must not just be valued but integrated within the realms of accreditation process. The accrediting bodies must take forward the national agenda and must supplement the economic development of the nation. The accrediting bodies have the capacity to give shape and direction to the educational system of our country. It is time that the accrediting bodies turn more dynamic and proactive in driving the change that the education system currently needs. Entrepreneurship being such a universal theme applicable to all professional institutions must be brought...
into focus with renewed vigour, so that accreditation is viewed not merely as a driver of quality but as a force, that can alter and positively influence the outcomes of the higher educational institutions.

REFERENCE

32. NBA accreditation manuals (updated October 2019) for all programs available at https://www.nbaied.org/Downloads/Documents

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Dr. Aaliyah Siddiqui is currently working as Assistant professor, with Symbiosis Centre for Management Studies, Nagpur a constituent of Symbiosis International (Deemed) University. She has a cumulative experience teaching and research spanning over 10 years in academics. Awarded with a PhD. in Management from RTM Nagpur University. She has also earned a Master’s Degree in Business Laws and also holds a degree in journalism. She has contributed over 20 publications in various journals and presented her research in reputed conferences at IIM and NIT. She has to her credit a book titled ‘Essential Laws for Entrepreneurs’ Hummingbird Knowledge Series, 2016 (ISBN: 978-93-5265-400-0). She has a professional work experience of accreditation process in the higher education as the leader of accreditation at Symbiosis Centre for Management Studies. She has been the member of several boards including curriculum development, academic advisory, and Accreditation. She is currently the Coordinator of Internal Quality Assurance Cell and a member of faculty in the area of Entrepreneurship, Marketing and Legal studies.
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Apart from a degree in Mechanical Engineering, he also holds a Master degree in Management, a Master’s Degree in Law and is a Postgraduate in Psychology and Journalism. He holds a Ph.D in Organizational Behavior. He is also qualified UGC-NET in Management.

He is also serves on the Board of Directors and also actively engages workshops and training ion Higher Educational Institutions in the area of Quality Assurance, Accreditation, Systems and Process design for academic institutions. He is the member of American Society for Mechanical Engineers as also all India Law Teachers Congress.