A STUDY ON THE EFFICACY & PERFORMANCE OF INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT CENTRE'S IN KERALA

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Abstract

Innovation and Entrepreneurship Development Centre (IEDC) was established in all educational Institutions in the state of Kerala with an objective to foster Innovation among the students. These centers will be run by the students under the carapace of faculty members in the respective colleges/institutions. The IEDCs in all the institutions will help the students to come up with innovative ideas which can be later taken forward by the respective students towards entrepreneurship. These IEDCs also help the students to come up with start-up in their domain inside as well as outside of the institution. In this study an attempt was made to understand the efficiency and effectiveness along with the performance of IEDCs in the state of Kerala. The study was based on the five parameters set up by the National Startup Framework like Evangelization go Entrepreneurship, Promotion of Innovation, Supporting Incubation and Business Development, Aligning with Institutional Mechanism and finally on Strengthening the Start-up Ecosystem. Based on the above parameters the efficiency and performance of IEDCs of the Institutions will be evaluated and had given them the insights to improve the overall functioning and performance of the IEDCs.

Key Words: Innovation, Women Entrepreneurship, Mentoring, Ideation, Incubation

II. Introduction - Research Problem

The Innovation and Entrepreneurship Development Centre (IEDC) are established in Academic Institutions (Science colleges, Engineering Colleges, Polytechnics, Universities, Management Institutes) with a view to promote innovation and Entrepreneurial spirit amongst students. The mission of the IEDCs is to "develop institutional mechanism to create entrepreneurial culture in academic institutions to foster growth of innovation and entrepreneurship amongst the faculty and students "The task of reviewing the past performance of various IEDCs in Kerala and reporting the performance ranking of various IEDCs. The evaluation was based on the National Startup framework (State/UT Startup ranking framework), taking into consideration the applicable areas for an entity like IEDC in colleges. The report with various Criteria scores, the overall performance scores, and the ranking of IEDCs have been submitted to Kerala Startup Mission (KSUM) as a separate document. This was an opportunity to look at best practices, trends and areas of improvements in general, and enable Kerala Strat-up Mission to look at specific initiatives for nurturing the IEDC objectives in educational institutions.

II. Objectives of the Study

(i) General Objective

➢ To study on the Efficacy & Performance of IEDCs in Colleges in promoting startup ecosystem in the state of Kerala.

(ii) Specific Objectives

➢ To study on the evangelization of Entrepreneurship happening in IEDCs/ Institutions across Kerala

➢ To understand Promotional activities amongst students, on Innovation

➢ To study IEDCs support process on Incubation and Business Development in Institutions.

➢ To understand IEDCs alignment mechanism with its institutional activities

➢ To study the various initiatives put forward by IEDCs in strengthening the startup eco-system in Kerala.

➢ To give concrete recommendations for the effective functioning and performance of IEDCs across Kerala.

III. Major Observations & Findings

(i) Observations against the key Accreditation Criteria

(a) Evangelization of Innovation and Startup

➢ It is observed from the collected data that 36.8% of the IEDCs conducted Entrepreneurship talks/camps between 1-3 and where as 34.1% of the respondents organized camps between 4-6 times and very few (17.6%) of the IEDCs organized maximum of 10 or more number of programs.

➢ 46.2% of IEDCs had 31-50 participants attend each of their entrepreneurship awareness programs. This shows that students are interested in attending such programs.

(b) Skilling / Training programme

➢ 34.1% of the respondents conducted 1 to 2 Skill Development programs in a year and 30.2% of the respondents conducted 3 to 5 Skill development programs every year. Innovators need technical / domain and leadership competence to drive implementation of their ideas either through projects or through Entrepreneurship ventures and low levels of skill programme will be restricting students from moving forward with their ideas.

➢ Large set (55.5%) of the IEDCs is not conducting FDPs, which can be restrictive in the evangelization of Entrepreneurship. Around 39.0% of the IEDCs have conducted 1 or 2 FDP as a part of IEDCs.

➢ 47.3 % of IEDCs that conducted Student Development Programme (SDP) had around 30 to 60 numbers of students' participation in the SDPs. This shows fairly high degree of interests amongst students for such skills development initiatives

➢ From the data analyzed it is inferred that 31.9% and 30.2% of the faculty members have done 1 to 2 and 3 to 4 training programs associated with IEDCs respectively every year. Meanwhile around 23.1% of the faculty members have associated with 7 or more training with respect to IEDCs every year. The data is a reflection of Faculty member's participation for IEDC activities

➢ From the analysis of the data it is inferred that 45.6% of the IEDC Coordinators and students have attended 1 to 5 days of training and around 26.4% attended 6 to 10 days of training and 14.8 % attended 11 to 15 days. This reflects very positively on the involvement of IEDC office bearers in its activities

(c) Women Entrepreneurship

➢ From the analyzed data it is seen that majority of the IEDCs (63.2%) do not have any special mechanisms (benefits/ incentives) to encourage women entrepreneurs.

➢ From the data collected it is inferred that, majority (63.2%) of the IEDCs have no women entrepreneurs evolved from their IEDCs. Around 26.4 % of the IEDCs has 1 to 2 women entrepreneurs, who has started their enterprise in the institutions. 1.1% IEDCs have more than 7 or 8 women entrepreneurs with their startups.

(d) Funding

➢ From the data analyzed it is seen that 81.3% of the students didn't get any idea grants. Only 18.7% of the students from IEDCs got idea grants. Idea grants are an important benchmark measure on the quality of Ideas generated by students. The metrics shows the room for improvement in this area

➢ The data analyzed shows that 81.9% of the students in IEDCs didn't get any startup grants. This will be demotivating practice among the students. Only 9.9% of the IEDCs where one startup gets the grant

➢ From the data analyzed it is inferred that 82.4% of the IEDCs didn't get any funding like Seed funding, Angel funding, Venture Funding etc. 17.6% of IEDCs got one or more forms of the above funding for startups

➢ It is inferred from the analyzed data that, 52.2% of the institutions has made an investment up to Rs. 25,000/- in developing IEDC outside KSUM funds. Meanwhile 22.5% of the institutions in Kerala have spent Rs. 76,000 or more in developing IEDC, outside KSUM fund in the last 12 months.

➢ It is interpreted from the analyzed data that majority (71.4%) of the IEDCs has not raised any funds, which is can negatively affect the development of IEDCs and Startups. Meanwhile 19.2 % of the IEDCs has raised fund up to of Rs. 25,000/- or less from external sources each year which is very less as compared to national

standards. Only a negligible percent (4.9%) of the IEDCs raised money of Rs. 75,000/- or more for the development of startups from external sources in a year.

(e) IEDC Process

➢ From the analyzed data it is seen that 56.6% of the IEDCS have established a system for registering startups, availing benefits and also getting information regarding startups.

➢ It is analyzed from the data that 58.8% of the IEDCs have a mechanism for monitoring the progress of implementation of startup plan on regular basis.

➢ From the data analyzed, 56.6% of IEDCs have not allotted any time for IEDC activities and around 26.9% of the IEDCs have allotted 2 hrs. per week exclusively for IEDC activities, which is very less.

(f) Mentoring

➢ It is seen from the data analyzed that 40.1% of the IEDCs have 1 to 2 external mentors to mentor the students. 15.4% of the IEDCs have 3 to 5 or more external mentors to mentor the students. 37.4% of the IEDCs don't have an external person to mentor the students

➢ 28.6% and 20.9% of the IEDCs have 1 to 2 and 3 to 5 internal mentors respectively. Meanwhile 4.4% of the IEDCs have 8 or more internal mentors, which is in par with the national standards. It is inferred from the collected data that 37.4% of the IEDCs don't have any internal mentors.

➢ Around 39.6% of the IEDCs conducted 1 to 2 mentoring programs and 17.6% conducts 3 to 5 mentoring programs and 2.2% of IEDCs conduct 6 to 7 programs. The data analyzed reveals that around 37.4% of the IEDCs is not conducting any mentoring program because they don't have mentors to conduct.

(g) Partnership

➢ From the data analyzed it is inferred that 64.8% of the IEDCs don't have any partnership with corporates and other institutions. Around 26.4 % of the IEDCs have 1 to 2 partnerships, around 8% of IEDCs have 3 or more partnerships with corporates and other institutions.

➢ From the data analyzed, 64.8% of the IEDCs have not done any partnership programs with corporates or other institutions because most of the IEDCs don't have any partnership. Around 24.2% of the IEDCs that have partnerships conducted 1 to 2 programs. 9.9% of IEDCs conducted 3 to 5 partnership programs and 0.5% of the IEDCs conducted 6 to 7 and 8 or more programs respectively.

➢ From the data analyzed it is inferred that majority (74.7%) of the IEDCs in institutions doesn't undertake any partnership with countries or international agencies such as educational, funding institutions, incubators, accelerators etc. Only 18.7% of the IEDCs have one such partnerships.

(h) Ideation / Incubation

➢ 64.3% of the IEDCs produced 1 to 2 Innovative ideas from the students. Around 14.8% of the IEDCs produced more than 8 innovative ideas from students, last year. An environment of Ideation is very critical for the success of IEDCs and area looked weak across IEDCs.

➢ Majority (77.5%) of the IEDCs have no patents applied through them. Only 12.6% of the IEDCs had applied for one patent through IEDCs. Applying Patent should be an important goal for institutions at large and IEDCs should be a strong facilitator for the same.

➢ 71.4% of the IEDCs have not incubated a single company during April 2017 to March 2018. 17.6% of IEDCs has incubated 1 to 2 companies and 4.4 % of IEDCs incubated 3 to 4 companies and around 6.6% IEDCs has incubated 5 or more companies.

➢ The analyzed data shows that majority (79.1%) of the IEDC Incubators lack the facilities like special software, special hardware, devices, books, learners kit etc. 20.9% of the Incubators have such facilities.

➢ From the data analyzed it is inferred that 84.6% of the IEDCs doesn't have any lab facilities for testing. Only 15.4% of the IEDCs have the above facilities.

➢ From the data analyzed it is inferred that majority (96.2%) of the IEDC has a dedicated team with at least a faculty to manage. This is a very positive sign that reflects in the good management of IEDCs.

➢ From the data analyzed majority (45.6%) of the respondents claimed that faculty members spend 3 to 5 hours every week for IEDC activities apart from their academic work, which is good for the development of IEDCs.

➢ It is inferred from the data collected that 36.8% IEDC has 25 of less number of student involvement and 28.6% has around 26 to 30 number of student involvement, 14.8% has 31 to 40 number of student involvement and 19.8% has more than 41 student involvements in IEDCs.

(i) Innovation Community & Outreach

➢ From the data analyzed it is inferred that almost same percentage 50.5 % of IEDC established an innovation community for promoting a culture of innovation in the college. At the same time 49.5% of the IEDCs has not established an innovation community for promoting a culture of innovation.

➢ The data analyzed shows that a majority (63.2%) of the IEDCS/ Institution is not organizing any Startup outreach events for showcasing their ideas and only 36.8% of the IEDCs are conducting such outreach program to showcase their visibility across Kerala.

➢ It is inferred from the data analyzed that, almost same percentage 50.5 % of IEDC extended its support to schools, other institutions, Local NGOs, Community etc. at the same time 49.5 % of the IEDC has not extended its support to schools, other institutions, Local NGOs, Community etc.

➢ It is inferred that 45.1% of the IEDCs have successfully implemented 1 to 2 community projects at the same time around 40.7% has not implemented any of the community projects and around 8.2% of IEDC implemented 3 to 4 projects and around 6 % of IEDCs implemented 5 more community projects.

➢ 69.8% of the IEDCs have not organized any boot camps across schools and colleges to promote innovation and entrepreneurship. 30.2% of the IEDCs have organized such events across schools and colleges.

(j) Innovation / Ideation events

➢ From the data analyzed it is inferred that majority (64.3%) IEDCS/ Institutions organized Hackathons/Ideation programmes to identify innovative technological solutions and for supporting entrepreneurs in building these solutions as product/services offering. Around 35.7% IEDCs has not organized any such events.

➢ It is inferred form the data analyzed that around 37.9 % of the IEDCS has not conducted any National or International events. Around 20.9% of the IEDCs conducted 1 National or international event and 15.9% of the IEDCs conducted 2 events and around 25% of IEDCs conducted 3 more national or international events. This is an important metric to measure the quality and competitiveness of the student ideators; IEDCs have room some for improvement

➢ It is inferred that around 42.3% of the IEDCs had 25 or less number of students participating in the national and International events. Meanwhile around 37.9 % of the IEDCs didn't have any students attending any of the National or International events.

➢ It is inferred from the collected data that 62.6% of the students have not won any awards on behalf of IEDCs and startups. 37.4% have won awards for their innovative ideas and events.

IV. Correlations & Cross tab results

➢ From the data collected, it is inferred that Engineering Colleges across Kerala tops the IEDC performance of 51.21%, Agriculture College (49.6%) and Arts and science Colleges (40.86%) score respectively. It is seen that Polytechnics has a lower performance (35.84%) compared to other category of Institutions.

➢ It is inferred that IEDCs having startups have submitted more patent applications

➢ It is also seen that IEDCs/ Institutions with startups have mobilized more external funds and have entered into MoUs with International Organizations and Institutions.

➢ Institutions with good infrastructure have much better performing startups than other Institutions.

➢ Institutions/IEDCs with a clear goals and plan has much higher performance compared to institutions which lack goals

➢ IEDCs with more dedicated faculty involvement have shown a higher performance compared to other IEDCs across Kerala

➢ IEDCs with KSUM or other Institutional intervention have shown a high & steady performance

➢ IEDCs that have done a greater number of Entrepreneurship Skill Programs, Skill Development programs and faculty Development Programs have performed high compared to others

V. Chi-square Results

➢ The more the number of student's involvement in IEDCs higher performance of IEDCs was seen.

➢ The more the idea grant obtained by the students more the number of startups were created.

➢ The more the financial funding received by the IEDCs the more number of startups were created.

VI. Qualitative observations

Positive areas	Opportunity for improvement
➢ More number of entrepreneurships awareness camps	➢ Number of patents applied
➢ High involvement of students in Entrepreneurship Development Program	➢ Faculty (other than Nodal officers) Involvement in IEDCs
➢ Novel ideas that are evolving every year in IEDCs	➢ External mentors to support IEDC
➢ Outreach programs / Boot camps by IEDCs	➢ Money raised by IEDCs outside KSUM
➢ Presence of Internal mentors	➢ Women entrepreneurs & entrepreneurships
➢ High class Infrastructure facilities in some of the IEDCs	➢ Winning more Idea grants
➢ Dedicated faculty member allocation for IEDC activities	➢ More National / International Award winners
➢ The students interest levels in IEDC activities.	➢ Number of community projects undertaken to promote a local startup ecosystem.
➢ Events like Hackathons/ Ideation programs by IEDCs	➢ Number of national and international programs/events
	➢ Faculty Development and Skill Development Programs

VII. Suggestions

➢ More number of Entrepreneurship Skills Development Programs and Faculty Development Programs should be conducted in order to enhance the skills, attitude and spirit of entrepreneurship.

➢ More structured approach to IEDC activities – Create a calendar of activities along with the goal sheet, so that they can perform well with respect to the target and objectives.

➢ To encourage women entrepreneurs, specialized programs focusing on women should be organized and the institution/ IEDCs should also be aware of National/State level incentives available for women entrepreneurship, so that they can encourage more girl Students to join IEDCs.

➢ IEDCs should encourage pure idea generators and bring them to collaborate with students who have entrepreneurial skills to it forward as an Entrepreneurship venture

➢ The IEDCs should take adequate measures to create a pool of external mentors, which is low at present. This can be done by creating partnership and MoUs with corporates and other institution to promote startup eco-system

➢ More IEDCs should open incubators to motivate and inspire the young entrepreneurs of the institution

➢ While IEDCs should encourage as many ideas as possible to flourish as successful entrepreneurship, it should also assist in pivoting ideas/ventures that may not work and allow students to fail fast /fail early

➢ The IEDCs should connect more, with the community and stakeholders at large to establish and promote a culture of innovation and entrepreneurship in local level

➢ IEDCs should start opening up beyond KSUM funding for its operations and for supporting its Students

➢ IEDCs should promote national / international level collaboration and ensure student participation in National and international events – this will build better understanding of the national/global picture and increate their competitiveness

➢ IEDCs should prepare itself in encouraging more patent filing ideas and facilitate the process of patent filing.

VIII. Conclusion

While the report will form a baseline for all the IEDCs and provide them with an opportunity to reflect on their achievements and areas of interest, it is important for each IEDCs to create an action plan to strengthen its performance. The follow-up to this exercise is to create the next one-year plan with clear goals and measures to frequently review the progress. With an adequate governance provided by KSUM for all IEDCs in helping them to achieve their own performance goals and target for the years to come, it is strongly felt that the IEDC's will improve its quality standards substantially and thus help in building a high-quality pipeline of Student startups.

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