A Framework for Faculty Development

Dr. Pradeep Kashinath Waychal, Western Michigan University

Dr Pradeep Waychal is a visiting professor at the CRICPE of Western Michigan University, a founder trustee of Guruji Education Foundation that provides holistic support to the higher education of under-privileged students, and an academic adviser to many Indian educational institutes. Earlier, Dr Waychal has worked at Patni Computer Systems for 20 years in various positions including the head of innovations, NMIMS as the director Shirpur campus, and at College of Engineering Pune (COEP) as the founder head of the innovation Center.

Dr Waychal earned his Ph D in the area of developing Innovation Competencies in Information System Organizations from IIT Bombay and M Tech in Control Engineering from IIT Delhi. He has presented keynote / invited talks in many high prole international conferences and has published papers in peer-reviewed journals. He / his teams have won awards in Engineering Education, Innovation, Six Sigma, and Knowledge Management at international events. His current research interests are engineering education, software engineering, and developing innovative entrepreneurs and intrapreneurs. He was chosen as one of the five outstanding engineering educators by IUCEE (Indo-universal consortium of engineering education) in 2017.

Dr. Om Prakash Jain, Independent Consultant
A framework for nurturing a symbiotic relationship between faculty development and institution building in the Indian context

Introduction

Every reasonably large organization needs a core function of manufacturing or service delivery supported by various feeder functions such as strategic planning, sales and marketing, infrastructure management, and human resources. These functions are required to work in harmony so that the organization can build excellence in its core area of operation. While corporate organizations have developed mature processes and programs for building leaders in both their key delivery functions and feeder functions, academic institutions/universities are lagging in that respect. Minter[1] points out that as universities (and engineering colleges) move into the 21st century, they will find more accountability placed upon them by the public, students, accreditation agencies, and employers. Further, the universities will have to justify the costs of education and assure the quality of education being delivered. That would require a harmonious relationship between the delivery and feeder functions.

In the context of Indian engineering institutions, this is critically required since the employability of their graduates is abysmally low at 18% [2]. Moreover, engineering academic institutions are unable to attract top-quality engineers for faculty positions due to the lack of attractive long-term career growth prospects and due to the stigmatization of teaching jobs [3]. This is not only seriously hampering building excellence in Indian engineering institutions, but is becoming an issue of their survival.

The teaching-learning process in an educational institution is the key process like the manufacturing process in a manufacturing firm and the faculty members of the institute are its key elements. The ABET report 'Engineering Change: A Study of the Impact of EC2000’ that refers to the criteria for accrediting engineering programs states that the teaching faculty is the heart of any educational program [4]. We contend that the contribution of faculty members is the most critical success factor for an educational institute. Moreover, their contribution significantly influences other success factors such as student intake, student progression, placement, industry-institute collaboration, and infrastructure. The teaching faculty is essentially the most critical resource of an educational institute and administrators must strive for their all-round development, which clearly contributes to the institution building activities.

Early efforts of faculty development were aimed at improving specific subject-matter expertise and instructional skills [5]. This, however, does not fulfill the needs of today’s institutions. Camblin and Steger[6] have observed that the faculty development must address issues such as vitality and renewal of faculty members [7], strengthening relationships among colleagues [8], supporting stated institutional missions [9], and dealing with both the faculty
member’s and institution’s “capacity to survive” [10]. Behar-Horenstein et al.[11] assessed faculty needs at a dentistry college and found 74% to 92% participants rating their knowledge in acquiring leadership skills as “low” and 45% participants rating their mentoring skills as “poor” or “fair”. Minter [1] points out that internal coaching and mentoring for prospective and budding administrators is usually nonexistent in universities. We argue that educational institutions must develop leadership and administration skills of deserving faculty members by leveraging career and motivation management practices established by organizational behavior researchers. That can nurture a symbiotic relationship between faculty development and institution building.

This paper presents a framework called CCAARR (Choosing, Conditioning, Assessing, Allocating, Realizing, and Recognizing) for nurturing such a symbiotic relationship between faculty development and institution building (Figure 1). Its use can help in identifying potential leaders among college faculty members to successfully carry out institution building activities. Faculty development activity and institution building activities, in that sense, support each other or have a “symbiotic relationship” between them. The framework is derived from our experience of carrying out various initiatives at different Indian institutions and relies on our twin findings that the faculty that have goal clarity perform better [12] and most faculty members require extrinsic motivation [13]. This paper describes the CCAARR framework’s six phases - Choosing, Conditioning, Assessing, Allocating, Realizing, and Recognizing, and ends with concluding remarks.

The CCAARR framework

The framework’s broad goal is to build the institution and develop potential leaders. The framework achieves this by potential leaders progressing towards fulfilling the vision-mission by identifying and implementing projects in the areas of their interest and expertise. As an example, a vision statement at a college is ‘to ensure holistic development of students for employability, entrepreneurship, and higher education’. The statement can translate into projects on improving the number of students getting placed, going for higher studies, and establishing successful enterprises. Each project can assess the current situation, in a quantitative way, and take target to change that situation. As an example, the placement team may assess the current placement percentage at 70% and may take a target to change it to 80%. The teams working on higher education and entrepreneurship also may take similar targets. All these targets may map back into the progress made towards fulfilling the vision statement.

The following sections describe an iterative CCAARR framework (Figure 1) for developing faculty members of an institute for leadership roles and institution-building activities. The framework embodies various techniques to de-stress the faculty, and through various presentations creates awareness about the nobleness of the career and the progression possibilities available therein. Further, faculty are encouraged to choose goals from a bouquet of
goals that are derived from the organizational mission and vision. Self-allocation of goals is driven by multidimensional self-assessments, which are peer-validated. The goals are published appropriately to influence faculty behavior. The goals are analyzed and their realizations are regularly monitored using simple tracking methods. The institutional leaders offer mentoring for the realization of the goals and provide the required resources. Evaluation of the realization of goals includes periodic rewards and recognition based on inputs from all stakeholders such as students, faculty, industry contacts, and administrators. The framework is iterative to bring in sustained benefits to the faculty and to the institute.

Potential or new leaders are fully engrossed in regular teaching and research activities. They may be aware of missions-visions of their colleges, but not living or internalizing them. Further, many of them lack the ability to identify problems that are coming in the way of fulfilling their visions-missions and innovatively derive executable projects from them. Deploying the project solutions across institutions is a big challenge, in general, and so is for most of the potential leaders. The framework provides opportunities to walk the above path to realize visions and missions and develops potential leaders. The leaders may have expertise and interest in different areas such as industry interface, admissions, research, pedagogy. The framework provides opportunities to potential leaders to work in their expertise and interest areas, which increases the chances of success in their chosen projects.

Figure 1: Schematic of the CCAARR (Choosing, Conditioning, Assessing, Allocating, Realizing, Recognizing) Framework
Choosing

This phase refers to choosing potential faculty leaders, who can contribute to institution building activities. AICTE (All India Council of Technical Education), the apex body that governs the technical education in India, reports that in 2016-17, the country had 3,291 institutes with an intake of 15,56,360 students, but actual enrollment of 7,78,813 students, and a faculty of 4,06,980 in their undergraduate engineering colleges [14]. That is an enviable student teacher ratio of around 8:1. However, Chakrabarty [3] points out that engineering academic institutions are unable to attract top quality engineers for faculty positions due to the lack of attractive long-term career growth prospects and competitive remuneration. Social stigmatization of teaching jobs does not help either. She explains that after the multinational companies and the smaller engineering firms have had their pick, several of the leftover graduates take up teaching jobs. Thus, most of the graduates do not take up teaching as a career of choice, but just as a last-choice means of earning livelihood, and, as a result, qualify for the lower levels in Maslow’s hierarchy. As a result, many Indian engineering faculty members seem to fall short of the required passion, competencies, and skills needed to build their institutions and transform incoming students into brilliant engineers.

The framework, therefore, suggests carefully choosing the right faculty members for such development programs. They should be selected based on the right cognitive abilities, a high degree of passion, and a deep commitment towards their profession and institutions. The facilitator team of the program and the institute’s management team need to discuss and justify the rationale of each selection.

Conditioning

This phase refers to pre-training potential faculty leaders by de-stressing them and making them aware of the many possibilities and the nobility of the teaching profession. Many faculty members see teaching-learning and research as the only roles for themselves. This is due to the lack of awareness that besides teaching-learning and research roles, the academic domain also requires leadership roles for various feeder functions. Faculty members get stressed when demands are placed on their time for a variety of meetings, non-teaching and non-research activities, which they consider as unproductive, unessential and wasteful. For example, in one-on-one meetings at an institute, all departmental chairs mentioned that the faculty members spend 30% of their time on administrative activities and the chairs spend 50%. Faculty members also get stressed since most of them lack general management and people skills.

Therefore, the framework works on de-stressing the faculty members. Cramer et al. [15] reviewed 366 randomized control trials of yoga and most of them reported benefits of yoga interventions. Yoga, Sudarshan Kriya, and meditation have been found to be highly useful for de-stressing [16] [17]. We, therefore, propose a structured intervention called the “happiness
program” developed by the ‘Art of Living’ to de-stress faculty. It is important to ensure that faculty members regularly use these techniques to remain energetic and de-stressed.

Assessing
This phase refers to assessing strengths and weaknesses of potential faculty leaders using different instruments.

Felder-Solomon’s index of learning style (ILS) instrument assesses learning styles, which can be helpful for learning as well as teaching processes [18]. Hawk and Shah [19] and Shaikh and Waychal [20] claim that the use of learning style instruments should allow students and faculty to seek out activities that are conducive to more effective and deeper learning. MBTI (Myer Briggs Type Indicator) can help in assessing personality types to enable choosing right activities and effective teaming [21]. MBTI is the most widely used personality assessment tool and has been validated by many researchers [22] [23]. Even so, some psychologists have criticized the instrument for the lack of convincing validity [24] [25].

The framework proposes using these instruments along with a reflective instrument based on self-assessment and peer validation. As a part of the reflective instrument, faculty members write around 15 activities they are good at, and around 15 activities they really enjoy. Then, they select colleagues who know them the best and seek their suggestions. The framework recommends selecting at least a few colleagues, whose views are incompatible with their views. The faculty members then update the lists based on colleagues’ feedbacks, arrive at things at the intersection of the two lists (what they enjoy and what they are good at), and prioritize them in order of their desirability.

Allocating
This phase refers to allocating institutional goals to different potential faculty leaders based on their assessments.

Matusovich et al. [26] point out that several motivation theories recognize that individuals’ actions are shaped by their beliefs, values, and goals. One of the most widely used theories in the education domain is the expectancy value theory, which posits expectancy of success and value beliefs as central in individuals’ choices to engage in activities [27].

The framework then requires the institute leadership and facilitator teams to identify goals based on institutional strategy, vision, mission, and objectives. The faculty, based on their self-assessments, provides their priorities for those goals. They are also encouraged to suggest goals, along with their rationale for inclusion, that are not in the institutional list. The institutional leadership team reviews the suggestions, and updates the institutional goals and other appropriate documents.
Based on the priorities provided by the individual faculty members, the institutional leaders allocate goals to the teams of four to five faculty members – preferably belonging to different departments. The leaders meet with the faculty, who are not given their top priority goals, and explain the rationale for the allocations. Since the faculty teams choose goals that add value to them, the ‘value’ part of the value expectancy theory is addressed [27]. Faculty teams analyze goals using a template that is developed based on the force-field analysis theory [28][29]. The analysis gives rise to several projects required to realize the goal. The facilitating team helps faculty teams to finalize around three projects and develop an execution plan in terms of expected outcomes and resource requirements for the subsequent three months and the following three quarters. The faculty teams present plans to the institutional leaders for their review inputs and baseline the project plans. The institutional leaders publicize allocation of goals to all teams in a formal function and attempt to include the faculty members’ family members in the function. The corresponding plans are publicized to all faculty members that are part of this program. These goals address the development of feeder functions and the faculty must succeed in them along with their success in delivery functions.

**Realizing**

This phase refers to helping the potential faculty leaders realize the allocated goals. Many researchers and practitioners such as Hirschman and Sirkin [30, 31] have found that seventy percent of (innovative) goals fail to deliver value.

Cognizing difficulties in realizing goals, the framework expects faculty teams to schedule weekly meetings to discuss their progress and issues, and to send to the institutional leaders and facilitators fortnightly reports indicating planned outcomes and actual achievements in that fortnight. The leaders and facilitators conduct monthly review meetings to discuss progress till that time and modified plan for a rolling 12-month period. The review includes inter-team collaboration and faculty team’s evaluations of the success levers such as communication to stakeholders, provision of early wins, etc. as recommended by Waychal et al. [32]. The institutional leadership team organizes the required resources for realizing the goals. The monthly planning and tracking of projects and success levers increase the chances of success, covering the expectancy part of the value expectancy theory [27].

As the teams work towards their goals, the facilitators in consultation with the institutional leaders identify training needs of individual faculty members and organize the required development programs in areas such as team management, time management, and change management.
Recognizing

This phase refers to recognizing the performing potential faculty leaders in the context of the goal program.

There are two types of motivations: intrinsic and extrinsic. A faculty member is said to be intrinsically motivated if there is no apparent reward other than carrying out the activity itself. While such faculty members do not require external awards for their motivation, they are far fewer in number. We argue that most of the faculty members move up the ladder of motivation only when they receive external rewards. We verified this premise by conducting a survey of 22 faculty members at a workshop on engineering education. We asked them to rate the statement, ‘A proper reward and recognition system must be developed at colleges’ on the Likert scale of 1 to 5 and received the rating of 4.54, which underlines a desperate need for award systems. Finelli, et al. conducted a study to find the factors that influence faculty motivation, wherein they spoke to 26 faculty members at a college across ranks, genders and departments. They found that 19 of the faculty members referred to ‘Incentives and rewards: Types of external benefits including monetary awards, grants, and release time’ as one of the factors [33].

The framework, therefore, expects the facilitators to evaluate goal realizations of individual potential faculty leaders by seeking inputs from all stakeholders, and recommends different types of recognitions to the leadership team. The framework also values contribution to other goal teams. A properly designed award system could help improve motivation of faculty members. As the first set of goals is realized, the teams can embark upon the next iteration.

Implementations

Table 1 describes three program instances that we executed or are executing based on the framework. Appendix A provides schedule of a sample workshop.

College set 1

The first program was at an engineering and management college and started in Oct 2016 with a daylong workshop, which received very good feedback. The institute leader chose 40 potential faculty leaders out of 196 faculty members. We conditioned the leaders by explaining the criticality of engineering and management education in national and global development and introduced meditation. We assessed the participants using the PLOT tool (www.plot.co.uk) and reflection exercise. We allocated institute goals to faculty members and, surprisingly, did not find any conflicts in the allocation process. However, during the realization phase many participants wanted to change the goals, which we allowed. Interestingly, they had thought that the goal allocation process was limited to the workshop exercises only. This was despite the invite mail clearly mentioning that they would be responsible to meet the allocated institute
goals. Perhaps, the participants were not used to activities spilling out of such workshops. The realization was happening at a slower pace as faculty members were not finding time to work on their goals. The monthly meetings were becoming less effective due to slow progress. After a year we decided to suspend the program.

The end-of-workshop and the follow-up (after about 3 months) feedbacks were excellent without any dislikes. The end-of-workshop feedback rating was 4.1/5 and the salient likes in it were for the goal setting process, identification of projects, presentation material, meditation, and delivery style of the workshop faculty. The salient likes in the follow-up feedback were for the goal setting process, goal realization plans, and teamwork.

**College set 2**

This was a set of 10 colleges in science, technology, arts, commerce, law, etc., where we conducted a workshop in Sep 2017 to set the goals and left the regular review process to the college leadership.

The principals (deans) of the colleges chose the top 10% of their faculty members as potential faculty leaders to form a group of 34 participants for a day-long offsite workshop. We conditioned the leaders by explaining the criticality of higher education in national and global development, used briefing and video recordings of eminent educators on possibilities in the education domain, and introduced meditation. We assessed the participants using the reflection exercise. We gave an overarching goal to all the teams that their college should be the best in the region and asked them to identify challenges that they would like to scale to reach the goal. We provided them with the templates that they could use for analyzing challenges and for tracking their projects.

The end-of-workshop feedback was excellent with the Likert scale rating of 4.55/5. The salient likes were for the workshop theme (direction and topic), workshop effectiveness (in fulfilling the objective), style of speakers, challenge analysis resulting into projects, and meditation. The dislikes were for the long session, ‘nothing’, and the audio-visual infrastructure.

**College set 3**

This set had only one engineering college, where the program started in Oct 2017. The institute leader chose 40 potential faculty leaders out of 123 faculty members. We conditioned the leaders by explaining the criticality of engineering education in national and global development, used video recording of an eminent educator on possibilities in the education domain, and introduced meditation. We assessed the participants using reflection exercise and floated institutional goals based on its vision, mission, and values. There were conflicts in the goal allocation and we had to take help of the institute leaders to resolve those conflicts. The leaders allocated the next priority goals to some faculty members and explained to them the
rationale of the decision. The institutional leaders publicized allocation of goals by issuing them a formal letter, which stated their allocated goals, in a function. The realization is happening at a better pace for some goals as compared to others, but it is too early to declare the program a success.

**Learnings from the implementation**

In the following subsections we describe learnings from the implementations.

**Conducting workshops is far easier than executing institutional building projects**

In all three instances, our workshops were received very well. However, the project execution, as we experienced in college set 1, did not progress satisfactorily. The participants assumed that the allocation of goals was limited only to the workshop and was not for long-term institution building. In the early months we saw some progress but very soon the faculty members were engrossed in their day-to-day teaching and research activities, and in tackling institutional dynamics. We are hopeful that the college set 3 will maintain the initial momentum.

**A strong leader and a homogenous leadership team is critical for the success of institution building projects**

The college set 1 had a weak leader and a fragmented leadership team. One of the departmental chair mentioned that sometimes we feel that there was not one but three leaders driving the college in three different directions. While the college leader was driving the program towards success, the other two seniors appeared to exert efforts to slow down the progress. In college set 3, on the other hand, there is a very strong central leader, who was driving the program.

**Younger faculty tend to contribute more**

Younger, as compared to older, faculty tend to contribute more. We did come across a few older faculty members, in all three college sets, that were enthusiastic and worked hard. But in general, the younger faculty appeared more excited for being chosen as a potential leader, had more ideas, and tended to work harder to realize their goals. Of course, they may require support in managing the changes across the institute and a stronger leader may be able to provide that support in a better way.

**Moderate goals and expectations**

The faculty members, despite being better performers, would have lesser time available for such institution building activities and the program facilitators require to moderate their goals.
## Table 1: Implementations of the framework

<table>
<thead>
<tr>
<th>Colleges -&gt;</th>
<th>College set 1</th>
<th>College set 2</th>
<th>College set 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Started in</td>
<td>Oct 2016</td>
<td>Sep 2017</td>
<td>Oct 2017</td>
</tr>
<tr>
<td>College description</td>
<td>An engineering and management college (management college was considered as a department)</td>
<td>Ten colleges including science, arts, commerce, technical colleges</td>
<td>An engineering college</td>
</tr>
<tr>
<td>Choosing</td>
<td>The institute head chose 40 potential leaders from 196 faculty members</td>
<td>All the college principals (deans) were chosen and were asked to choose the best 10% of their faculty resulting in 34 participants</td>
<td>The institute head chose 40 potential leaders from 123 faculty members</td>
</tr>
<tr>
<td>Conditioning</td>
<td>Explained the criticality of engineering and management education, in national and global development. Also introduced meditation.</td>
<td>Explained the criticality of higher education, in national and global development, and used briefing and video recording of eminent educators. Also introduced meditation.</td>
<td>Explained the criticality of engineering and management education, in national and global development, and used video recording of an eminent educator. Also introduced meditation.</td>
</tr>
<tr>
<td>Assessing</td>
<td>A reflection and PLOTR exercise</td>
<td>A reflection exercise</td>
<td>A reflection exercise</td>
</tr>
<tr>
<td>Allocation</td>
<td>Institutional goals were allocated to faculty members. There were no conflicts over the allocation.</td>
<td>The principal and his teams chose the goals based on their priorities.</td>
<td>Institutional goals were allocated to faculty members and conflicts were resolved by allocating second priority goals to some faculty members. The institutional leaders publicized allocation of goals to all teams in a formal function.</td>
</tr>
<tr>
<td>Realizing</td>
<td>Many faculty members wanted to change the goals as they thought that the allocation was only for workshop exercise. The realization happened at slower pace for a year, after which, the institute authorities decided to suspend the</td>
<td>This was left to individual principals.</td>
<td>The realization has been happening at a better pace in case of some projects, but is too early to declare this a success.</td>
</tr>
</tbody>
</table>
programs as the faculty member were not finding time to execute the goal projects.

<table>
<thead>
<tr>
<th>Recognizing Feedback from participants</th>
<th>Did not reach the phase</th>
<th>This was left to individual principals.</th>
<th>Have not yet reached the phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Suspended</td>
<td>Handed over to the college principals</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>

Conclusions

An educational institution is known by the faculty it keeps. Their professional development is a key to building successful academic experiences for students, for the faculty themselves, and for the university in developing its competitive edge and uniqueness in the marketplace of higher education [1]. A good faculty drives other institutional success factors such as, student intake, institute-industry collaboration, and infrastructure and contributes to institution building by successfully working on feeder functions. Therefore, administrators need to spend considerable resources on developing potential leaders among their faculty members. Currently the development efforts predominantly focus on core engineering expertise, which is a critical requirement in the ever-changing world of technology. However, there is a need to
extend those efforts to leverage pedagogical innovations and to identify and develop leaders. The authors are working on this aspect (of developing leaders) at some Indian engineering institutions and, the proposed framework is based on their experience.

While the individual elements of the framework have been used at various institutions, its full implementation has not yet been completed to assess ultimate benefits. Based on our experience of partial implementations, we learnt that conducting workshops is far easier than executing institution building projects. A strong leader and a homogenous leadership team are critical for the success of institution building projects and younger faculty members tend to contribute more towards such programs. Our framework is used at private Indian institutions and may require appropriate adaptations for institutions of other categories (government and semi-government) and institutions in other geographies. In the geographies where faculty members are often the highest achievers, the “choosing” phase may work a little differently (it may be difficult to choose the potential leaders with more contenders) but other phases may be applied without much change. The framework does not include hiring of appropriate faculty and will have to be extended for that. Despite these limitations, we believe that the model can help other faculty educators in their efforts to develop symbiotic relationship between development of faculty members and building of institutions.

Acknowledgements

We thank all the college authorities for allowing us to conduct the programs at their colleges and all the participants for their whole-hearted support for the programs.

References

5. !!! INVALID CITATION !!! [5-9].
17. !!! INVALID CITATION !!!! [21-23].
### Appendix A: A schedule of a workshop

<table>
<thead>
<tr>
<th>Topic</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prologue</td>
<td>0900-0930</td>
</tr>
<tr>
<td>Breakfast</td>
<td>0930-1000</td>
</tr>
<tr>
<td>The changing world and expectations from education</td>
<td>1000-1100</td>
</tr>
<tr>
<td>Fundamentals of Goal Setting</td>
<td>1100-1130</td>
</tr>
<tr>
<td>Tea Break</td>
<td>1130-1145</td>
</tr>
<tr>
<td>Identifying and Analyzing Challenges</td>
<td>1145-1300</td>
</tr>
<tr>
<td>Lunch</td>
<td>1300-1345</td>
</tr>
<tr>
<td>Developing 2017-18 Plans</td>
<td>1345-1430</td>
</tr>
<tr>
<td>Team Presentations-1</td>
<td>1430-1545</td>
</tr>
<tr>
<td>A module on difficulties in getting buy-ins from different stakeholders</td>
<td>1545-1600</td>
</tr>
<tr>
<td>Team Presentations -2</td>
<td>1600-1715</td>
</tr>
<tr>
<td>A module on difficulties in execution</td>
<td>1715-1730</td>
</tr>
<tr>
<td>Epilogue</td>
<td>1730-1745</td>
</tr>
</tbody>
</table>