

Effective Mentoring Leading Towards Higher Educational Productivity: A Case at Kalinga Institute of Industrial Technology (KIIT) University

¹Sneha Sinha, ²Paulomi Chakraborty, ³Peuli Das, ⁴Sushanta Tripathy

^{1,2,3,4}School of Mechanical Engineering, KIIT University, Bhubaneswar, India

Abstract

The chief aim of this paper is to determine the critical factors which are responsible for the successful mentor-mentee relationship in the development of technical education. Previous research works helped in analyzing the benefits of mentoring program, which ultimately leads to the overall growth of the organization. A survey was conducted at Kalinga Institute of Industrial Technology where there were three sets of questionnaire for the three levels, that is, the strategic level (management), tactical level (mentors) and the operational level (mentees). The response was then analyzed and it was observed that a mentoring program can be successful only when there is a proper interaction between the mentor and the mentee. Educational system is believed to be '3H' process (head, heart and hand). This essentially means that education is a culmination of sharing of ideas and knowledge, emotional attachment and inculcation of practical knowledge. It was further concluded that it is very essential for the mentors to perform a SWOT analysis of the mentees and to provide Program Educational Objectives (PEOs) to them. Further it was noted that the management level plays a pivotal role such a Total Quality Management is ensured.

Keywords

Strategic, Tactical and Operational Levels of Higher Educational Institutes, Mentor-Mentee Relationships, KIIT University

I. Introduction

"The whole purpose of education is to turn mirrors into windows".

The word 'education' is synonymous with unraveling the so far unexplored arenas and giving in return largely such that it creates a positive impact on society. Education is a tool which helps to remove the veil of ignorance from one's life.

In today's era of mechanics, the dynamics of technical education knows no bounds. Technology has become an integral part of our day to day lives and we cannot manage without it. This is where technical education steps in, providing man with apt practical knowledge and skill required for a job. Also the contribution of technical education in the field of industrial development cannot be ignored. In India, where we often talk about industrial development overcoming the nation's economic crisis, it is ironical that the rate of unemployment rises by 0.1% each year. So in this age of science and technology, where new advancements and developments are taking place each day, it is highly essential that the methodology of imparting technical education to the concerned students should be improvised.

This revolution in the field of technical education can only be brought about by the various technical education institutions. Imparting technical education essentially does not only mean drafting new syllabi and introduction of new courses. Along with bringing about the overall development of students, technical education also aims at working towards eradication of poverty, offering commercially feasible and socially acceptable solutions

to real life engineering problems and at the same time contributing towards the economic growth and industrial development of the nation.

Education in technical arena becomes successful only when there is proper amalgamation of teaching aids, laboratory equipments, practical application of knowledge and maintaining a healthy mentor-mentee relationship. Through most of human history education involved a mentor. Through mentoring, a mentee or a protégé is offered guidance and assistance to meet challenges, (Dennis, 1993). Students in college, in addition to traditional education, require proper mentoring. Unfortunately not many institutions have implemented proper mentoring programs thereby giving not much importance to the overall social and emotional development of their students.

The main objective of mentoring is to enhance the all round development of the mentees by ensuring an appropriate classroom environment, broadening curriculum participation and strengthening the bond between the mentors and the mentees. Mentors play a crucial role that is to provide emotional as well as academic support, guidance, motivation, pose themselves as ideal role models for the mentees and also help them in their career growth. Both mentors and mentees lead to the formation of this symbiotic relationship. Mentors get the opportunity to develop their leadership qualities, widen their outlook, brush up on their communication skills and most importantly gain personal satisfaction. On the other hand mentees acquire precious advice, gain knowledge and skills and get proper guidance until it is time for them to face the professional world.

The top level management plays a very vital role in the sector of technical education by strengthening the financial base of the institution by properly channelizing funds for research and development operations in the field of technology. Apart from encouraging students taking part in those areas, they represent the institution on national as well as international platforms thereby bringing laurels and recognition to the institution. The strategic level basically devises methods and strategies so as to understand the students and their areas of interests. It is the strategic level which ensures that these methods are effectively implemented. The tactical level, that is the mentors, simply execute these strategies and promote a productive mentoring relationship with their mentees.

The strategic level follows the various principles of Total Quality Management (TQM) in order to improve the relationship its relationship with the mentors and the mentees. Some of the very important principles of TQM include:

- Customer Focus- The strategic level must know and serve all the needs of the students, who are the customers of the institution.
- Process Focus- According to TQM, if the primary emphasis is the process or method, then the results will automatically be proper.
- Prevention Focus- Rather than correction of the problems, TQM focuses on the prevention or minimization of the

- problems, to provide an efficient result.
- Workforce Mobilization Focus- TQM implementation by this level leads to the mobilization of the total workforce for the solution of common enterprise problems.
- Fact Based Decision Making Focus- TQM employs constant upgradation processes, multiskilled professionals for effectively scrutinizing the problem areas, recording the facts and figures, and suggesting long term solutions which would bring about quality development.
- Continuous Feedback System- TQM can be successfully implemented only when there is an open and honest communication from the mentees to the management and vice versa, via the mentors.

Thus, the tactical level (mentors) acts as a bridge between the strategic level (management) and the operational level (mentees).

The following flowchart depicts the relationship between the three levels and also highlights the factors which affect the smooth functioning of the mentoring process.

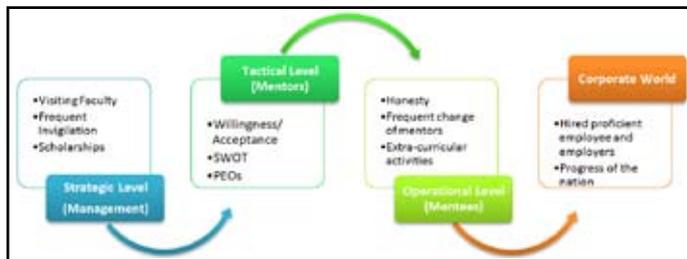


Fig. 1: Flowchart Representing the Three Levels Involved in the Mentoring Program and Their Importance in the Corporate World

The students of today are the employees and employers of tomorrow. So it is essential that students be well equipped with sound technical knowledge along with effective management skills. Overall development of the students is directly proportional to the growth of the corporate world. Therefore, it is the responsibility of the strategic level and the tactical level to ensure that every year

the university produces a set of proficient individuals so that the corporate world can hire them resulting in their growth leading to the advancement and progress of the nation.

II. Literature Review

Innumerable literature reviews have been conducted to determine the various factors affecting mentor-mentee relationship in the development of technical education. Mentoring program is a symbiotic relationship benefiting the mentors as well as the mentees and at the same time it cannot exist without the resonant support of the strategic level. Student performance largely depends on the level of honesty maintained by them in front of their mentors, the support they receive from their mentors while taking decisions, SWOT analysis conducted by the mentors on their mentees, Program Educational Objectives (PEOs) determined by the mentors and the involvement of mentors in extra-curricular activities.

Table 1 below gives literature review of the process of mentoring which leads towards the development of technical education. Column 1 of Table 1 states the several researches carried out on mentor-mentee relationship and its importance in the development of technical education. Column 2 of Table 2 lists the focus (primary idea) and Column 3 of Table 1 states the key findings and conclusions drawn from the studies conducted respectively. The previous research works mentioned in Table 1 relate to the importance of mentor-mentee relationship in the development of technical education. The focus and conclusions range from the importance of support received by the mentors from the strategic level (management) (Kincaid and Feldner, 2002). Another significant factor which determines the successful execution of mentoring program is the necessity of establishment of workshops and training sessions for mentors so as to enhance their mentoring skills (Straus, Chatur, Taylor, 2009). Briggs (2008) identified the need of compatibility of technically equipped mentors with their mentees in terms of content knowledge. Douglas (1997) mentioned the costs, revenues and resources play a major role when it comes to coordinating mentoring sessions and often pose as obstacles.

Table 1: Factors Affecting the Successful Execution of Mentor-Mentee Relationship in the Development Of Technical Education

AUTHOR	FOCUS	KEY FINDINGS
1. Kincaid and Feldner (2002)	Reviewing the role of principals and mentors regarding Leadership for Technology Integration	Importance of mentors and administrator for assuring support for teachers.
2. Kincaid, T (2005)	Study of whether those educators working with high scoring mentors on a technology integration assessment were more successful than the ones working with low scoring mentors	<ul style="list-style-type: none"> • Educators reported lesser technology integration competency than mentors. • Mentors reporting higher technology integration competency levels had mentees reporting the same.
3. Straus, SE and Chatur, F and Taylor, M (2009)	To explore and characterize the mentor-mentee relationship	Identification of techniques to enhance mentorship process by establishment of workshops and development and evaluation of mentorship training initiative.

4. Briggs, Jane E (2008)	Research study of perceptions of career and technical education teachers and teacher mentoring and retention	<ul style="list-style-type: none"> • Identification of the need for screening of mentors and the willingness to give ample time to new teachers. • Compatibility of technical education teachers with their mentees in terms of content knowledge. • Prevention of duplication of university coursework and mentoring content.
5. Tierney, J P and Branch A Y (1992)	To focus the relationship between the mentor and at-risk youth	<ul style="list-style-type: none"> • Mentors preferred relationships to be youth-driven. • Mentors and mentees displayed enhanced self-esteem and satisfactory social skills but did not show any significant improvement in academics.
6. Milner, T and Bossers, A (2004)	Investigation of mentor group relationship in an occupational therapy university curriculum	Mentors were looked upon by their mentees in terms of experience, support and guidance.
7. Judy T. Zeran, Rachel Hess, Russel S. Phillips, Nancy Rigotti (2009)	To ensure effective mentoring and simplify the mentor’s job by applying corporate concept in medical field	<ul style="list-style-type: none"> • Successful growth of the mentoring program from the mentee’s point of view. • Proposal of techniques/strategies for mentee success.
8. Leyton-Armakan, Jen and Lawrence, Edith and Deutsch, Nancy and Williams, J.L and Henneberger, Angela (2012)	To develop effective youth mentoring programs	The results obtained were highly significant in case of cross-race than the same race pairs.
9. Van Ast, John and Field, Dennis W. (2005)	To evaluate the teachers’ tutoring skills and learning effectiveness	<ul style="list-style-type: none"> • Successful partnership of the mentors and mentees. • The mentor-mentee program was supported by the strategic level.
10. Hansford, Brian C. and Ehrich, Lisa C. and Tennent, Lee (2004)	To derive information and results about the types and outcomes of mentoring	Strategic level plays a pivotal role in establishing proper mentoring program which helps mentors to enhance their mentoring skills.
11. Kram (1985); Levinson, Darrow and Klein, Levinson and Mckee (1978)	To depict the manner in which a healthy mentor-mentee relationship can act as an aid towards psychosocial and career development	Identification of career advancement and psycho-social support as two vital outcomes of a successfully executed mentoring program.
12. Douglas (1997)	Study of factors which often emerge as obstacles while conducting mentoring sessions. To highlight the benefits reaped by the mentors	<ul style="list-style-type: none"> • Costs, revenues were identified as major obstacles while conducting mentoring sessions. • Benefits obtained by the mentors were increase in confidence, personal fulfillment and guidance during projects.

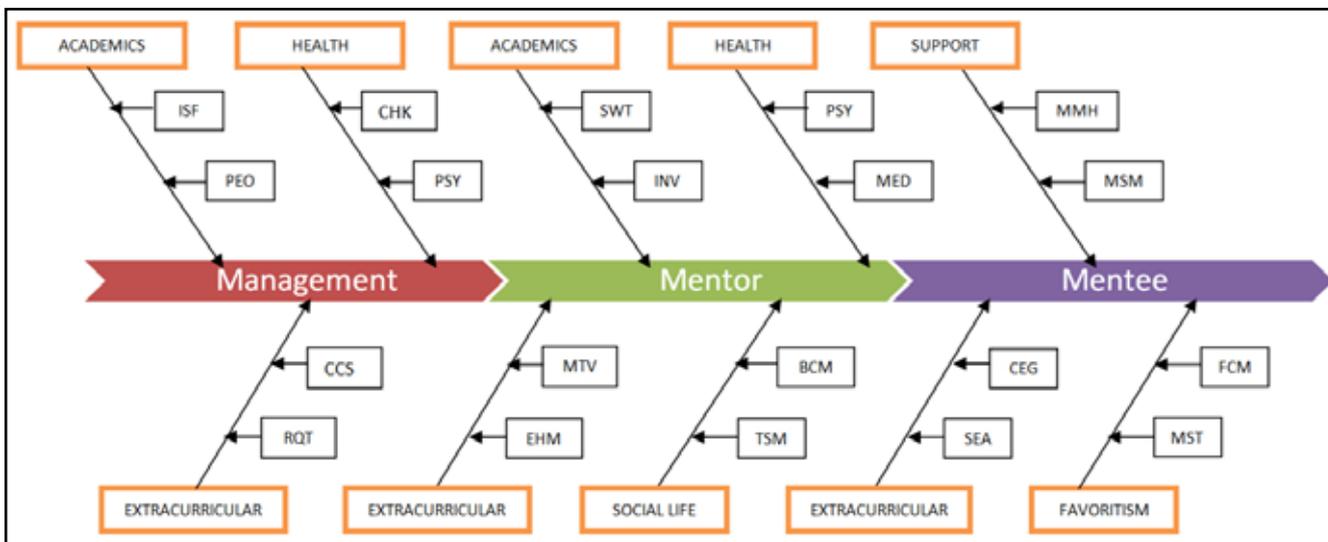


Fig. 2: Fish-Bone Diagram Illustrating Mentor-Mentee Relationship

Fig. 2 resembles a fish-bone structure which depicts the interrelation among the three levels, that is, the strategic level (management), the tactical level (mentors) and the operational level (mentees) and the factors affecting them. The end product obtained is academically sound and emotionally developed individuals ready to meet the demands of the corporate world.

Table 2: Index for the Abbreviations Used in fig. 2

A. Management Level

ISF	Inviting branch specific faculty occasionally to lecture students
PEO	Program Educational Objectives
CHK	Organization of compulsory health checkup and blood donation camps
PSY	Establishment of a proper psychiatric counseling center for students
CCS	Conducting counseling sessions for students who excel at extra-curricular
RQT	Recruitment of quality trainers for different sports, singing, dancing and the likes

B. Mentor Level

SWT	SWOT Analysis for the students
INV	Conducting surprise invigilation at regular intervals in classrooms and laboratories
PSY	Establishing proper psychiatric counseling centers
MED	Taking interest and having knowledge about the medical history of mentees
MTV	Motivating mentees who are not interested in extra-curricular activities
EHM	Encouraging his mentee for extracurricular activities
BCM	Conducting a background check of mentors
TSM	Conducting a training program for mentors

C. Mentee Level

MMH	Maintaining honesty with mentors
MSM	Mentors supporting mentees' decisions
CEG	Considering extra-curricular in calculation of GPA
SEA	Providing scholarships for excellence in academic and extra-curricular
FCM	Frequent changing of mentors
MST	Considering mentors as a subject teacher

III. Methodology

In order to analyze the critical factors affecting the mentor-mentee relationship in the three levels, that is, strategic level (management), tactical level (mentors) and the operational level (mentees), a survey was conducted in Kalinga Institute of Industrial Technology, Bhubaneswar, India. Several dimensions of the relationship between the mentors and their mentees were explored and studied. The transformation of KIIT University from a technical institute to a multi-disciplinary university is certainly incredible. This prestigious institute, founded by Dr. Achyuta Samanta, has twenty-eight schools which collectively offer more

than a hundred programs. The university proudly boasts of its esteemed faculty and state-of-the art facilities in form of well equipped laboratories and research centers.

Students from different parts of the country, with varying culture and mindsets, are enrolled in this university. Therefore the survey was conducted in this university which ensured a wide range of opinions and ideas.

Three sets of questionnaires were prepared for the three levels, that is, strategic level (management), tactical level (mentors) and operational level (mentees). Each questionnaire comprised three sections namely academics, extra-curricular, health and family background. The respondents were requested to rate the questions according to the five point Likert scale. Also the respondents were requested to mention their own suggestions which according to them would lead to the development of technical education. Fifty members of the strategic level (Vice Chancellor, Registrar, Joint Registrar, Pro-Vice Chancellor, Director Head Quality Control, Deans of various departments), hundred members of the tactical level

(mentors, tutors and professors of various departments) and seven hundred members of the operational level (mentees) were approached and requested to participate in the survey. The response was remarkable and the suggestions obtained indeed throw light on some of the major aspects which govern the development of technical education.

IV. Analysis

Bar chart for the rating questions for the strategic level (management)

A. Academics

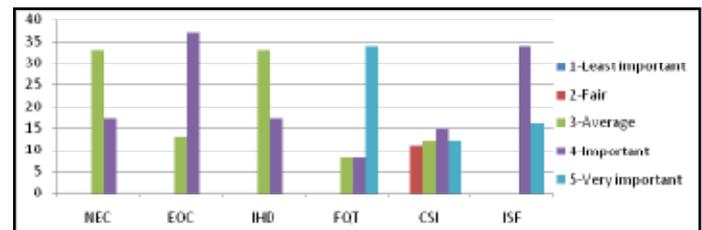


Fig. 3: Bar Chart Representing Survey Results of the Academic Section Obtained From the Strategic Level (Management)

Fig. 3 depicts the survey results of the academic section obtained from the strategic level. From the bar chart obtained it can be concluded that 68% of the members of the strategic level feel that conducting regular interactive sessions with the mentees (students) as the most important factor which would lead to higher educational productivity. 78% of them think that implementation of extra classes outside the regular curriculum would benefit the students and simultaneously promote the desire to learn. 66% of the members of the strategic level rated regular interaction of the management authorities with the heads of various departments as one of the important factors. 66% of the members felt that inviting branch specific visiting faculty to conduct lectures was a factor of average importance. Conducting surprise invigilation in classrooms and laboratories during examination was not considered as a factor of much importance and therefore was not given much weightage.

B. Extracurricular

Figure 4: Bar chart representing survey results of the extra-curricular section obtained from the strategic level (management)

Fig. 4 concerns the extra-curricular section and represents the feedback obtained from the members of the strategic level. 64% of the members think that recruitment of quality trainers for sports, dance, singing and other extra-curricular activities is an important factor. Quality training in these arenas would bring about the overall development of the students (mentees) and would also inculcate within them qualities of teamwork and leadership. 42% of the members of the strategic level feel that weightage should be given to extra-curricular activities while calculation of the Grade Point Average (GPA) and that scholarships should be granted not only for excellence in academics but also for excellence in extra-curricular activities. Not much importance was given to conduction of counseling sessions for students (mentees) who excel at extra-curricular activities at the cost of their academics. Henceforth, it is clear that extra-curricular activities are necessary and do receive support from the strategic level but at the same time academics and sound theoretical and practical knowledge about the subjects pertaining to the curriculum cannot be ignored.

1. Health

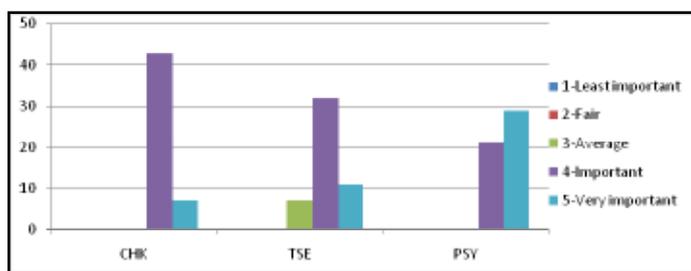


Fig. 5: Bar Chart Representing Survey Results of the Health Section Obtained from the Strategic Level (Management)

Fig. 5 illustrates the bar chart which depicts the results concerning the health sector obtained from the strategic level. 86% of the members of the strategic level feel that regular health checkups should be conducted for students and that students should be made aware of the advantages of blood donation and such camps should be organized by the university. Therefore, this factor was considered as the most important factor among all. 58% of the members think that proper psychiatric counseling centers should be established for students dealing with pressure related to peers, grades and placement. 64% of the members of the strategic level think that inviting medical experts to train students as to how they should act during emergency situations is a factor of much importance. The strategic level considers good health of the mentees as a very important aspect which would lead to higher educational productivity.

Table 3: Index for the Abbreviations Used in the Bar Charts (Strategic Level)

NEC	Necessity of extra classes even if for a single student in the entire class.
EOC	Implementation of extra classes outside the curriculum.
IHD	Regular interaction with heads of various departments to obtain feedback.
FQT	Organizing interactive sessions with students to obtain feedback about quality teaching.
CSI	Conducting surprise invigilation at regular intervals in classrooms and laboratories

ISF	Inviting branch specific visiting faculty occasionally to lecture students.
CCS	Conduct counseling sessions for students who excel at extra-curricular at the cost of their academics.
EGPA	Extra-curricular activities should be given some weightage while calculation of GPA.
RQT	Recruitment of quality trainers for different sports, singing, dancing and the likes.
SAE	Scholarships should be granted not only for excellence in academics but also for extra-curricular activities.
CHK	Organization of compulsory health checkup and blood donation camps.
TSE	Inviting experts to impart techniques and to train students how to act during emergency situations.
PSY	Establishment of a proper psychiatric counseling center for students dealing with pressure related to peers, grades and placement.

Bar chart for the rating questions for the tactical level (mentors) Academic:

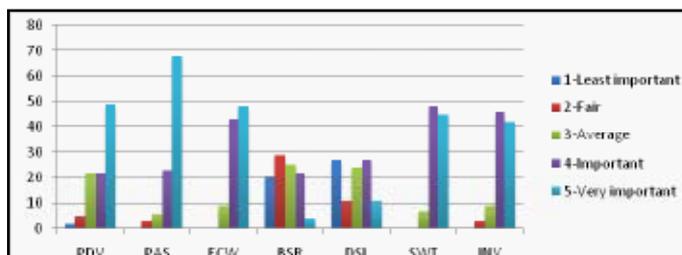


Fig. 6: Bar Chart Representing Survey Results of the Academic Section Obtained From the Tactical Level (Mentors)

Fig. 6 represents the bar chart which illustrates the feedback obtained from the members of the tactical level (mentors). 68% of the mentors rated the involvement of theory teachers in the practical classes as a very important factor. 49% of the members of the tactical level think that it is very important to show videos and conduct panel discussions so as to make the classes more interesting and interactive. A similar response was obtained for conduction of extra classes for a handful of academically weak students with 48% of the mentors rating this as a very important factor. 45% of the mentors think that SWOT analysis is an extremely important factor. 42% of the mentors rated surprise invigilation in classrooms and laboratories as an important factor. Factors such as maintaining bright students as reference during teaching in classrooms and allowing disinterested students to leave class during lectures received average responses with 29% and 24% of the mentors rating them as factors of average importance.

2. Extra Curricular Activities

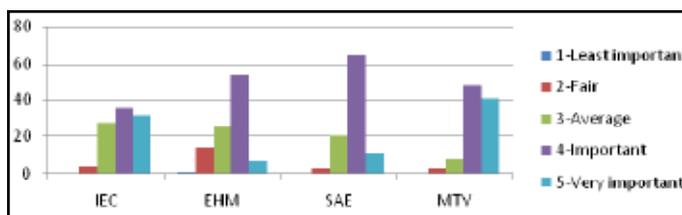


Fig. 7: Bar Chart Representing Survey Results of the Extra-Curricular Section Obtained from the Tactical Level (Mentors)

Fig. 7 above portrays a bar chart which exemplifies the response of the mentors in the field of extracurricular activities. It has been observed that most of them, that is, about 65% of the mentors think that granting scholarships for excellence in academics as well as in extracurricular plays a significant role in the mentoring program. It has also been noted that it is very much essential to encourage the mentees to excel in extracurricular field. The response of 54% of the mentors has proved so. The factor that the mentors should be involved in extracurricular activities gained average response with only 36% of them rating as important.

C. Social Issues and Family Background

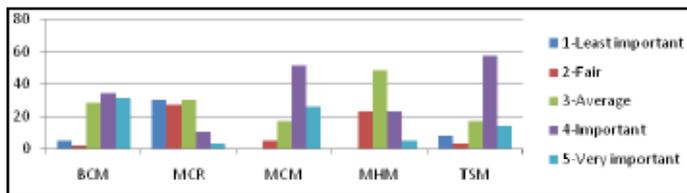


Fig. 8: Bar Chart Representing Survey Results of the Social Issues and Family Background Section Obtained From the Tactical Level (Mentors)

Fig. 8 illustrates the fact that how social and family background can play an effective role in the mentoring process. About 58% of the mentors have conveyed the fact it is very much essential for the establishment of proper training sessions for the mentors in mentoring their mentees effectively thus making it the most important factor. 52% of the mentors voted the factor of continuing mentoring a particular group of students as important so that comfortable relations can be strengthened. On the other hand the factor of conducting a background check on the mentees is considered important by 34% of the mentors. The factor which concerns changing of mentors to prevent favouritism has received average response of only 30% of the mentors remaining neutral.

1. Health

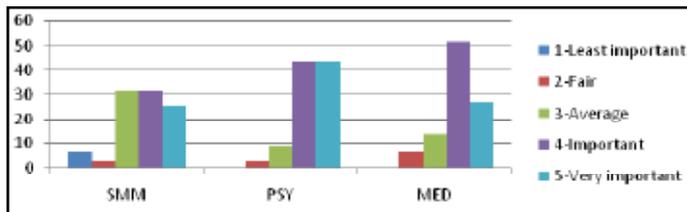


Fig. 9: Bar Chart Representing Survey Results of the Health Section Obtained From the Tactical Level (Mentors)

Fig. 9 shows the bar chart representing health as a major sector in mentoring programs. Majority of the mentors that is 52% of them think that proper counseling sessions should be there for the at risk youths involved in drugs, smoking and other illegal activities. 44% of the mentors also conveyed the fact of improvising psychiatric counseling center for the students inclined towards suicidal acts thus making it as the major factor affecting mentoring program. The factor that mentors should have knowledge about medical history obtained an average response with only 32% rating them as important.

Table 4: Index for the Abbreviations Used in the Bar Charts (Tactical Level)

PDV	Importance of panel discussion and showing videos so as to enhance practical knowledge.
PAS	Level of importance of involvement of theory teacher in practical classes.
ECW	Arrangement of extra classes for a handful of academically weak students.
BSR	Maintaining standard of teaching keeping bright students as reference.
DSL	Granting permission to disinterested students to leave class during lectures.
SWT	Importance of SWOT analysis of the mentees.
INV	Importance of surprise invigilation in classroom and laboratories.
IEC	Importance of the involvement of mentors in extracurricular activities.
EHM	Importance of encouragement given by the mentor to his/her mentees to excel in extracurricular at the expense of his/her GPA.
SAE	Scholarships being granted for excellence in academics as well as in extracurricular.
MTV	Importance of motivation to the mentees in terms of extracurricular so as to inculcate within them the qualities of leadership and teamwork.
BCM	Importance for the mentors conducting a background check on the mentees before interacting with them.
MCR	Changing of mentors at frequent intervals to prevent favouritism.
MCM	Importance of a mentor to continue mentoring a particular group of students so as to develop comfortable relations with them.
MHM	Importance for a mentor to pay heed to his/her mentee even if it for a less significant matter.
TSM	Necessity of training programs for the mentors in mentoring their mentees effectively.
SMM	Importance of taking strict measures instead of counseling the students involved in drugs, smoking and consumption of liquor.
PSY	Establishment of proper psychiatric counseling center for the students with suicidal tendencies.
MED	Mentors taking interest and having knowledge about the medical history of his/her mentee.

Bar chart for the ten rating questions for the operational level (mentees):

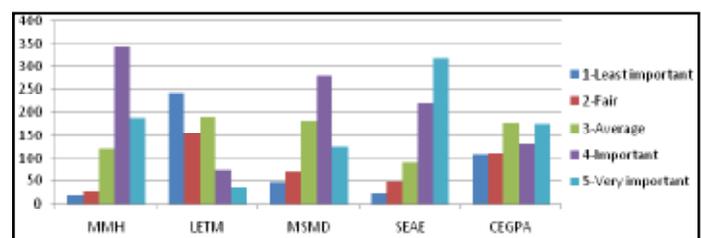


Fig. 10: Bar Chart Representing Survey Results Obtained From the Operational Level (Mentees)

Figure 10 illustrates the feedback obtained from the operational level, that is, the mentees. 45% of the mentees think that scholarships should be granted for excellence in extra-curricular activities and therefore this was rated as the most important factor. 49% of the mentees felt that maintaining honesty in front of one’s mentors was an important criterion which would result in effective mentor-mentee relationships. The next factor which was considered as a vital factor for the development of technical education by 40% of the mentees was the importance of mentors instructing the mentees what to do rather than supporting them in taking their own decisions. Not many favoured the idea of professors with less teaching experience being mentors to students with 35% students rating this as an undesired factor. Similar response was obtained from the mentees regarding the inclusion of extra-curricular activities while calculation of Grade Point Average (GPA) with only 25% mentees rating this as an important factor.

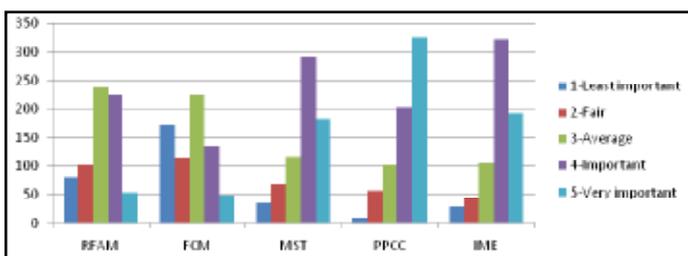


Fig. 11: Bar Chart Representing Survey Results Obtained From the Operational Level (Mentees)

Fig. 11 also illustrates the feedback obtained from the survey conducted among the operational level (mentees). Establishment of proper counseling centers for students with suicidal tendencies owing to pressure related to peers, grades and placement and the involvement of the mentors in extra-curricular activities apart from academics emerged as two very important factors with 47% mentees rating in favour of implementation of these two factors. The next factor which was considered important by 42% of the mentees was the necessity of the mentor being a subject teacher to his/her mentees. Religiously following the advice of the mentors and mentors being changed at frequent intervals received similar responses with 34% and 32% of the mentees rating the above two factors as average respectively.

Table 5: Mean, Standard Deviation and Variance of the Feedback Obtained From the Operational Level (Mentees)

Factors	Standard Deviation	Variance
MMH	0.71502	0.51125
LETM	0.8426	0.70997
MSMD	0.79143	0.62636
SEAE	0.82648	0.71473
CEGPA	0.9828	0.96589
RFAM	0.84049	0.70642
FCM	0.86783	0.75313
MST	0.84891	0.72065
PPCC	0.73675	0.5428
IME	1.01739	1.03508

Table 6: Index for the Abbreviations Used in the Bar Charts (Operational Level) and in Table 5

MMH	Maintaining honesty in front of the mentor.
LETM	Less experienced teachers as mentors.
MSMD	Importance of mentors instructing their mentees.
SEAE	Scholarships for excellence in extra-curricular activities along with academics.
CEGPA	Weightage given to extra-curricular activities while calculation of GPA.
RFAM	Religiously following the advice given by the mentor.
FCM	Importance of frequent change of mentors.
MST	Necessity of mentor being subject teacher to his/her mentees.
PPCC	Establishment of counseling centers.
IME	Involvement of mentors in activities apart from academics.

PIE-Charts Representing Operational Level Survey Feedback



Fig. 12: Pie-Chart Representing Survey Results Obtained From the Operational Level (Mentees)

Fig. 12 illustrates that 52% of the students share their personal details with their respective mentors. The rest of the students do not feel comfortable in revealing their personal life to their mentors. This acts as a disadvantage because unless a mentor knows all the information about the mentor, he/she will not be able to guide the student properly and accordingly.

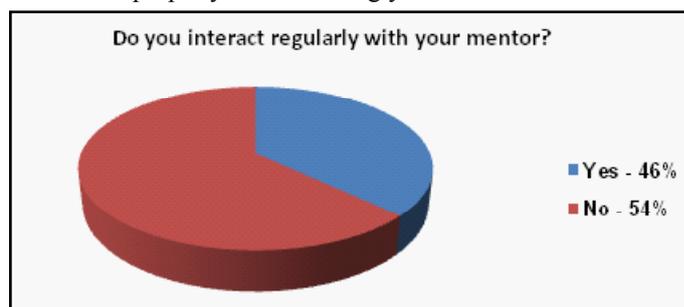


Fig. 13: Pie-Chart Representing Survey Results Obtained From the Operational Level (Mentees)

Fig. 13 depicts that 54% of the mentees do not interact with their mentors on a regular basis. The remaining students discuss their ideas and problems with the mentors and seek suggestions from them regularly. This enhances the communication and thus the relationship between the mentor and the mentee.

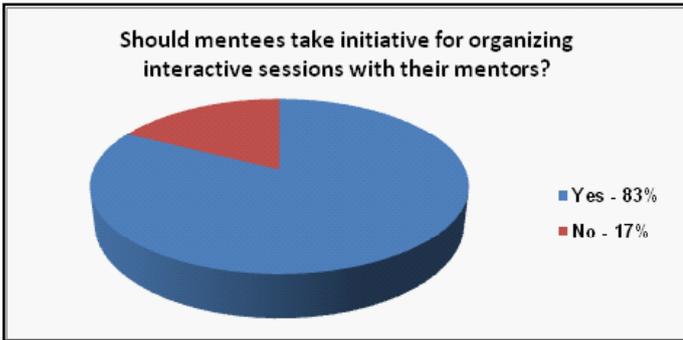


Fig. 14: Pie-Chart Representing Survey Results Obtained From the Operational Level (Mentees)

Fig. 14 represents that 83% of the mentees believe that they themselves should take an initiative for organizing interactive sessions with their mentors, where they can discuss about various academic, personal and social issues. The remaining students believe that that it is the duty of the mentors to organize those sessions accordingly.



Fig. 15: Pie-Chart Representing Survey Results Obtained From the Operational Level (Mentees)

Fig. 15 represents that 64% of the mentees feel that their respective mentor gives adequate importance to their needs and concerns while the other students are not satisfied with the response of the mentors. They feel that their problems and issues are not given sufficient priority by the mentors. As a result, the students hesitate to share their problems with their mentors.

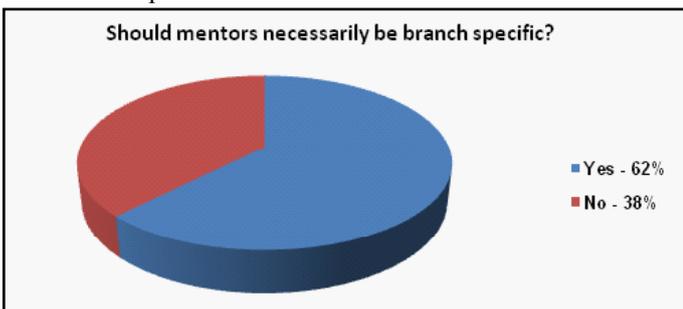


Fig. 16: Pie-Chart Representing Survey Results Obtained From the Operational Level (Mentees)

Fig. 16 illustrates that 62% of the students want their mentors to be from the same branch, as it leads to a better and more efficient communication with the mentors. The academic stream of the mentors does not matter to the other 38% students as long as the mentors cater to their problems and decisions.

V. Scope For Future Work

This paper work highlights the key factors responsible in affecting mentor-mentee relationship in the development of technical education. Mentoring is all about cooperation from both the

sides of mentors and mentees. But in this extensive concept of mentoring program there are certain limitations which are faced by the mentors while mentoring. This opens up a new path where research works can be carried out. There are many constraints to carry out an effective mentor. One of them being is proper time management. It has been observed that some of the senior faculties are the members of the management body (administration) as well. This poses an acute problem as they are bounded by a very busy schedule. This does not permit them to devote much time to mentoring. So it has been suggested that there can be a separate body which will act as mentors only and not tutors. So a thorough research can be carried out in order to procure the pros and cons of the stated above. Establishing an extensive Industry and Academia interaction is another significant area where there is a scope for future work. If TQM system is established in the educational sector ensuring a continuous feedback system and focusing on prevention of problems then the final products which are mentees in this case will be benefitted in many ways to a large extent. Thus future research work can examine all these critical aspects which would lead to effective mentor-mentee relationship and thereby higher educational productivity.

SWOT Analysis

<p>STRENGTHS</p> <ol style="list-style-type: none"> 1. Work ethics among the mentors and the mentees. 2. Mentors are mostly aware of their mentees. 3. Coaching coupled with counseling. 4. Stress management. 5. Students taught about the social value system. 	<p>WEAKNESS</p> <ol style="list-style-type: none"> 1. Not specifically catered to at risk youths. 2. Time management. 3. Cooperation. 4. Insufficient Industrial visits.
<p>OPPORTUNITY</p> <ol style="list-style-type: none"> 1. Extensive learning experience. 2. Leadership development. 3. Availability of ample resources and funds for project and research work. 4. Career advancement. 	<p>THREATS</p> <ol style="list-style-type: none"> 1. Improper mentoring. 2. Imparting more theoretical and less real life solutions.

VI. Conclusion

After conducting the survey and analyzing the responses, it was found that proper mentoring program is very essential in the growth and development of an individual. For effective mentoring, special and formal training of the mentors for “mentoring” the students should be a part of the faculty development program. The PEOs leading a successful career in an industry or pursuing higher education, offering commercially feasible and socially acceptable solutions to real-life engineering problems, developing effective communication skills, professional attitude and the desire to learn, Apart from this, the students should also be taught about the social value system. It was also noted that the TQM system should be established. The mentors should carry out the SWOT Analysis to determine the Strengths, Weaknesses, Opportunities and Threats faced by the mentees. This would allow the mentors to understand the students properly and help them to exploit the potential strengths within them, in order to lead the mentees

towards the path of success. Strengths and weaknesses of a student are determined by their knowledge, decision making abilities, social skills, curricular and research orientation among other factors. The opportunities include enthusiasm of the strategic level toward towards additional infrastructure, research facilities and teacher-student exchange programs. Not focusing on real life problems rather laying stress on theoretical solutions is one of the many examples for threats. Thus, the SWOT Analysis helps the mentors to understand the internal capabilities of their respective mentees.

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Sneha Sinha is currently pursuing B.Tech in Mechanical Engineering from the School of Mechanical Engineering, KIIT University, Bhubaneswar, India.



Paulomi Chakraborty is currently pursuing B.Tech in Mechanical Engineering from the School of Mechanical Engineering, KIIT University, Bhubaneswar, India.



Peuli Das is currently pursuing B.Tech in Mechanical Engineering from the School of Mechanical Engineering, KIIT University, Bhubaneswar, India.



Dr. Sushanta Tripathy is currently working as professor in the School of Mechanical Engineering, KIIT University, Odhisha, India. He obtained his PhD from the Department of Industrial Engineering and Management, Indian Institute of Technology, Kharagpur. He has over 24 years of teaching, research and industry experience in India and abroad. He has also served for two years as an Assistant Professor in Industrial Engineering Department at Mekelle University, Ethiopia. He has a number of published papers in national and international conferences and journals. His research interests include operational management, productivity management and multivariate analysis.