

Challenges in Education and Need for Transformation with Possible Solutions

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Abstract: The goal of my paper is to focus on teaching and learning practices and lead students to move with clear objectives with practicality for their bright career. They are graduating without much practical experience as per the need of the current society. The very purpose of this IUCEE dais is to find needs in education and share possible practices to find solutions for better teaching, learning, and implementation. Collaborative learning practices in our college gave a visible change in the results from the first mid to second mid exams; the need for such practices in many practical achievements is discussed. This paper has also presented various practices of collaborative learning at our college and out puts for the extracurricular and co-curricular activities. At the same time how the success in other activities is inter linked with the academic success of the students by increasing their confidence level. The direct and indirect reflection of the success, can it be continued leading to good career and campus placements. Various practices are discussed with objectives and out puts and also tried to visualize by showing pictures of those practices at our college.

Key words: CLP, Group Works, Pair Works, The Voice

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1. Introduction:

Present challenges of the students and roll of the teachers; can we teach still in between 4 walls from morning to evening and students listen to teachers in a passive manner? If so learning can happen?

Still, the same classroom scenario is visible even in many higher education colleges in eastern countries like India. I saw the same situation in financially boosted Middle East countries. Are we teachers really facilitating students to enhance their skills? If so how? Is it enough for them? If it is enough, why many of our students are still struggling to get good marks just by depending on text books and to choose their own career? Our students are working for less than Rs10000 at corporate companies and even M Tech students are ready to work for teaching at the same amount in India.

I tried to discuss here in this paper about how far we teachers have transformed to meet millennial learners needs. Still, the minimum needs of our learners are at final outlook to get a good job and not even be in a better position in their interested area. But the reality is even less than 50 % are able to achieve this much. Only a few can think about startup companies at the initial stage. As a faculty how far can we change to resolve our students' problems and by sharing the problems, may lead to find solutions from our experiences? We all need to think of the problem and try to find out at our level the best and utilize these kinds of daises to share and get equipped with possible solutions[2].

The principles for lasting human development, formulated at the 2002 World Summit on Sustainable Development in Johannesburg, imply lessons that largely coincide with the four pillars of education set out in the Delors Report: learning to know, learning to do, learning to live together and learning to be. In the context of ESD, UNESCO (2008) suggested the inclusion of a fifth pillar: learning to transform oneself and society.

2. The study on the challenges facing at present:

According to the World Declaration on Higher Education for the 21st Century (1998), higher education is facing a number of important challenges at the international, national and institutional levels.

Conventionally, education has been understood as preparation for life, as personal realization, and as an essential element in progress and social change, in accordance with changing needs [2] and [7] declares that if certain precautions are not taken, education may equip people to become “more effective vandals of the earth”. He describes education of the sort we have seen thus far as a possible problem and argues for a new type of education.

Students are at higher education level like exited electrons. Every student has their own ability in one way or another way. But they generally can't realize their skills and how those skills can be utilized for their success. They want to get success and achieve all their dreams but they need support externally and internally. They are not getting required practical experience. Educational practices from years onwards just sticking us only exam oriented way, if you see in the variation of the results from intermediate to under graduation level there is very much decline because at this under graduation level students are vexed with passive learning practices. They have well-equipped labs at the graduate level even practical labs in many colleges are giving monatomic practices. The same conventional experiments for years onwards again exam oriented. The experiments are not to get experience freedom in experimenting.

The labs should always open with assistance, guidance, and freedom. They should be allowed to do collaboratively experiments in groups. Thought sharing can be explored, energy can be enhanced, they feel competitive to get new ideas, innovations begin, try to find needs of the society, entrepreneur thoughts

can be emerged, find new ways for marketing; all these are inter linked with each other. They can't be happened in a short period but never be happened in silent labs doing routine experiments for years. First, we create curiosity to attend and do all these practices, then students start getting ideas and start sharing.

I do agree on the practical challenges but we can overcome all these by sharing all organizations. Faculty move from one organization to another and study the new practices and get enough confidence to convince management and implement. Only a few private organizations are doing practically on some issues. If all the organizations share the practical problems, many can be resolved just by sharing and new ideas can emerge.

These exchange programs should not be formal, they should be continuous, faculty those who are getting an opportunity to visit such successful other organizations, should share with everyone and find ways for implementation and show the results of such visits practically.

As a consortium member of IUCEE, our college is a cluster of colleges. In that cluster summit, our college faculty visited KL University, Hubli. There we observed many bestpractices. Our team of faculty impressed very much and we discussed with their faculty and met their students in different departments. We stayed there for a few days. We observed even in the night those students are working in labs in teams. We found the faculty is there for students after working hours. We noticed many different practical things. Their way of approach is entirely different in many things.

I remember Mechanical department students almost 10 to 15 in number were working on an auto mobile vehicle model at 7 in the evening. Very seriously and with enthusiasm to know the outcomes and also they are ready to explain about their project and presented their project in a professional way. We saw on the other way ECE students working on some project, we wondered by seeing the energy levels the students have to present even about the minor detail of the project. Already all those students who were there are selected in campus placements in reputed organizations with good packages but they want to continue their research further in the same area. Because they are enjoying their work and their work is giving pleasure to them.

So just visiting can inspire, we can share those things at our college, we can discuss with our colleagues and management but it is possible to implement the same if faculty stand on it with commitment. Managements also many times come forward to do at any extent for the benefit of students. Only partially we are able to implement such practices. I personally feel semester wise we need to exchange faculty from one organization to other. This is happening in foreign countries and in some government organizations but not in private organizations. In Hyderabad, hundreds of colleges are there. Every college might be good in one way or other way but these best practices should be shared and together move forward to find a path to our young generation. By sharing ideas can be enhanced and polished for the best outcome.

The text book is only the base, but not everything. The foundation for the career of students should be built successfully for every student at the college level and that progress can be forever. Students should go out with a clear understanding of their career but not with full of confusions. Students should not only look forward to the campus placements, they should get the confidence to create jobs by the time they leave college. These things are not impossible; practically some organizations are doing the same, like Indian school of business.

Students have to get the opportunity to visit such campuses and industries; to share the views, practices, work culture and updates. They can realize the work culture and learning practices which are making them successful and placing in international organizations with fellowships and placements with great packages. They need to understand the industry needs and be in touch with social media for the latest information. Students should give attention to think of present scenario and allow they should be allowed to discuss in classrooms, not only on subject issues, students should be updated on every current issue world widely. Knowledge gives the confidence to get exposure to society and its needs which leads the students to think about current problems and possible solutions.

Visiting campuses like Indian School of Business is completely different experience. There you can see the attitude of collaborative practices by taking live entrepreneur projects and working on it to find possible solutions. Speaking with anyone there for a few minutes make us realize that, everyone is ready to

become an entrepreneur, even though they are getting attractive packages in campus placements.

3. Encouraging students by giving freedom to share:

Those who visit share their views can start thinking to explore at that level what kind of atmosphere have to be created and get the confidence to think in an innovative way. I personally felt more than that when I got an opportunity to do there a PGMP program. I visited the campus and met with students and faculty. I spent much time in their group activities. Visiting the campus took me to a different world. With that experience, I visited Indian Institute of Management also. Every time I got a valuable experience, which I can't get just by reading in magazines and articles on the same. As a faculty, I also got very interesting experience by speaking with faculty directly and also listening to their students about their faculty. The work environment is completely different from what I am facing everyday in our campus. So I wish our students also should get good exposure of such experiences by visiting many prestigious organizations, its students and work culture there.

As a faculty, if we are able to mold students' mindset in that way, nothing stops their success. The responsibility of the faculty to society is day to day increasing by seeing the challenges in the society. So as a faculty first we need to go ahead to meet the current challenges[5]. The most priority should be given to the students to enjoy their work. Unless they love their work they can't involve in it. That is the most challenging thing which only a talented teacher only can have that capacity by involving in practical things by creating enthusiasm among groups. Once students realize that what they are doing is leading them towards success by visualizing the reality that can resolve our entire problem. So students need reality by looking into the real world practices[9]. They can enjoy their work only when they are working in their desired groups; that can be learning, practicing or experimenting.

The European Union (EC-JRC, 2010), for example, has stressed that higher education must change and adapt to economic and social needs, that institutional change is essential to educational innovation, and that information and communication technologies must form part of the teaching and learning process. The second international challenge

is to encourage international cooperation between institutions in order to share knowledge across borders and facilitate collaboration, which, furthermore, represents an essential element for the construction of a planetary (Morin, 2009) and post-cosmopolitan citizenship (Dobson and Bell, 2006): the assumption of interdependence, “deterritorialisation”, participation, co-responsibility, and solidarity among all inhabitants of the planet.



Fig. 1 Group works adds fun in learning

4. Seriousness in Internship programs:

Internship programs should not be formal and students really should get practical expose and that real-time experience should give confidence by understanding the work culture of the organization. Students should start to implement their entrepreneur ideas from college level with peers. Students need to work collaboratively. Every campus can become a platform for students' startup companies.

Their learning can be practical then and useful to the society[7]. The students can gain, that much of confidence, if they start working together with the help of faculty, management, and industry experts. They need to work alone if they start the same after going out from the campus. That can't give enough courage to them outside if they work alone.

5. The Collaborative Learning Practices, (CLP) in our College:

Learning is from schooling to college level only individual task by sitting separately just memorizing the content to present on answer sheet to get good marks.

At the same time sitting in groups and do open discussions on the same content enhance the ability to understand and students can be realized about the common problems and try to find relevant solutions from different sources. The advised change is implemented in KG Reddy college of Engineering in Hyderabad after the result analysis. The management conducted a meeting after the first year first mid exams result from analysis. The meeting main agenda was to discuss various possible solutions to improve the results for the next exams. I initiated a proposal with our team of faculty by acceptance of the management The Collaborative Learning practices for better results in our college.

The need for active learning to acquire good academic results and creating interest among students towards learning is always challenging. Result is a big task for any organization. It can be possible to achieve the task if the teacher able to monitor all the students continuously. But it cannot be possible to monitor all the students in all the aspects of any teacher or administrator. If the students are divided into teams, every team can be monitored by their team leader. Then it is easy to monitor only team leaders for any teacher. These teams handle different responsibilities effectively and the teacher can work for the smooth functioning of the group activities. The teachers can get updates continuously and can assess the requirement to extend support. It is easy to choose active team leaders based on their active participation in extracurricular activities, ability to lead the given roles, leadership qualities, and subject knowledge.

Class coordinators from each class also can help to recognize active learners from each group. Generally, each section of engineering classes consist 60 students and can be divided into 6 teams. The leaders can be assigned to monitor group members' different areas like regularity in attending classes, results, subject interests, abilities, and attitude. Based on various tasks and needs, teachers also can coordinate with team leaders to collect data from departments. Faculty with departments can plan a strategy by coordinating with teams to get the expected outcomes.

- The teacher can easily monitor these 6 teams with the help of team leaders.
- Easily can get the required data on attendance and can give guidance to the irregular students

- The weak students in each subject can be identified easily and can be monitored by the subject teachers
- Teachers able to plan better strategy to support the weak student and assign required tasks
- The weak students can be monitored by the team, for the completion of the given tasks
- The students whoever are good in particular subject can guide the weak students also, as it is a revision for them so they try to improve weak students also, along with their own perfection
- Peers are easily accessible to clear even simple basic doubts of the particular subject
- Healthy competition leads to good results
- Interactive learning is always interesting so span of the study time increases along with active learning
- As they are learning by sharing, mutual understanding leads to team's progress
- Academically good students can be always confident to face any challenges, these practices lead to come forward any team to fulfill any task
- Anyway teacher monitors in classrooms, if students realize the benefits of team learning, they can coordinate out of the classrooms also
- Each subject teacher can be updated with ready data time to time for every unit, gaps can be filled instantly by remedial methods with the coordination of such teams and team leader
- When student realizes that they are being monitored continuously, he never dare to be lazy
- Result can be visible and beyond the conventional studying practices results
- Encouraging learning efficiency by creating interest among peers towards it
- There is a scope to come up with new practices as it is easy to share among group members readily

The big challenge of good results in academics boost up the organization and also it boosts students'

energy to face any challenge. This kind of collaboration and active learning can lead to success with any challenging works, projects, and tasks.



Fig. 2 Group work in closed environment

Here in this picture, we can see the involvement of the students competitively to achieve the given task and also can understand the presentation skills among groups in open environment in the next picture. So learning and presenting both are happening at a time. Individual presentations and group presentations in open environment can give an opportunity for learning with fun and presentations improve their communication skills. Giving group tasks and open assessment by presentations improves their learning skills. Revision happens unknowingly. Generally students ignore the need of revision in studies.



Fig. 3 Presentations on the discussed topics in open environment

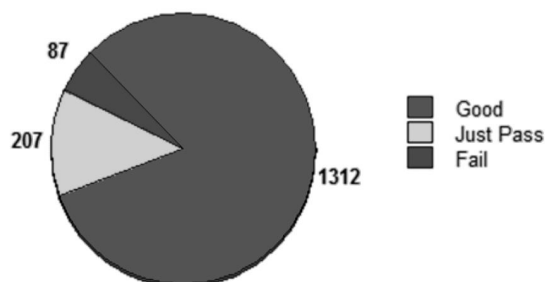
The result analysis progress in graphical comparison for the Mid I and Mid II marks of the first year of first semester mid exams; the Mid-I before introducing CLP and Mid II after introducing CLP. The result is compared subject wise, branch wise. Also, the total pass percentage of all branches compared to graphics, here I presented only total pass

percentage comparison for the first year I mid and II mid. Last semester we started only for the first years that too only for 4 to 5 weeks just before exams, not for the remaining years. We started for second and third years in this semester by seeing better results in first-year mid-exam.

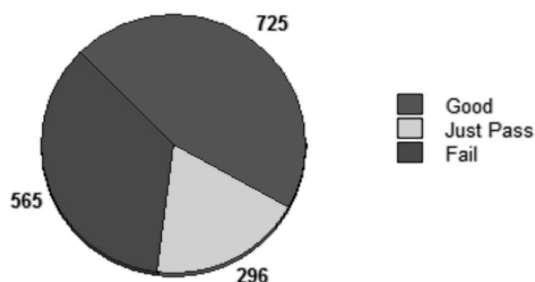
- Just pass yellow color for those who got around pass marks 14, 15, and 16 sometimes even by chance also they may pass
- Red, who failed even by one mark
- Green for more than 16 for 25 total marks

This comparison of the pie charts is giving a clear idea of the success of the implementation of the CLP program. It is just happened by focusing and facilitating students' on learning practices. This facilitation has proven that how students can utilize if the opportunities are given to them by little effort and time. The positive change not only in the result, also it increased students' confidence level. It is essential for further development. That too they involved in the learning process voluntarily. Now by seeing the improvements in results all are inclined towards these kinds of learning practices.

FIRST YEAR ALL BRANCHES MID 2



FIRST YEAR ALL BRANCHES MID 1



I do agree with the pros and cons of implementing such practices. Time is a major problem, where syllabus in engineering education is vast. Convincing management is difficult even if we are able to convince, practically showing good results is a Herculean task for the initiators. Students and teachers are habituated to conventional practices, other than teaching focusing on learning also overburdens to them. More than that, many teachers are not able to handle these practices because of lack of training to teach at higher education level with new practices. Our team saw in many cases teachers made these CLP classes as conventional study hours. But our team is overcome from many of these practical problems with good team spirit and with continuous monitoring.

6. A Step Forward Towards Communication Skills:

Our college introduced Soft Skills classes for all the branches of engineering. Weekly every section got a slot of two periods at a stretch for all the four years along with regular syllabus. Our soft skills trainers handling these classes with the objectives

- All the students should be able to communicate in English confidently
- Students should overcome the fear of public presentations
- Students have to explore by extempore sessions to improve spontaneity
- Team spirit exploration by group presentations and also gives ease as they are in team
- Creating much ease among teams to explore even on technical activities
- Creating a database for various programs and involving students
- Team spirit by creating healthy competition among them
- Students get motivated by observing the peer people presentations
- Initiating them to speak English by creating such environment and motivation
- Encouraging by providing open platform



Fig. 4 Group activity and sharing in open environment

7. Describing a Group Work Activity:

To achieve the above-mentioned objectives our soft skills' trainers are active with various practices. One among those practices is group work. We divide students into various groups based on different strategies. We ask them to choose a topic and make them discuss on the same for some time. Generally, we give topics as per their choice but not conventional topics like pollution, population etc. They have to coordinate themselves for the group presentation. After giving required time for their discussion on the given topic among the group members, we call the group on to the dais for group presentation as shown in Fig 1. They share one after other and also they can involve adding their views again and again. In team presentations no need of giving the continuous presentation. The team tries to encourage each other and ensure everyone's presentation. The other students take video of the entire presentation in their mobiles. Students can watch their own presentations; they can assess themselves and realize how they are presenting. Faculty always suggests all these presentations can be collected in a CD and these videos can be useful to check the progress of their performance by comparing the first presentation to the last presentation. These videos can be a proof to check the quality and quantity of participation and also we can ask to submit along with their records for awarding assignment marks. Students do sincerely if these activities are related to marks. After their presentation, we ask for feedback from the remaining groups. After listening to them we have to make them observe the dos and don'ts, and ask to share the same which is very effective. This activity also can be conducted even in classrooms as shown in pictures.

8. Freshmen Speak Easy :

One more activity called pair work which involves

freshmen speak easy. This activity is to make first-year engineering students to be initiated speak English with their pair on the given topic. It involves all the students at a time to communicate in English. Not even a single student can be passive because only two students have to be in a pair and each one needs to speak English to continue the conversation. All the students can involve at a time and everyone gets an opportunity to speak. Even the passive students also have to participate actively. Again faculty role is monitoring all the students to use only English for communication at the same time faculty need not involve, to put on ease the students to participate freely. After finishing their conversation they have to share partner's opinion on the given topic to the class. It makes everyone to share and present in the classroom. It can be conducted in a classroom by asking students to sit in pairs on each bench as shown in Fig 3, to avoid disturbance for other classes by noise, this activity also can be conducted in open space.



Fig. 5 Pair work in their classroom by freshmen

9. Visualization of Collaborative Work in College First Magazine:

In 2011 our college first magazine was released. College students lead this entire project with team spirit. As a faculty, we just monitored all the activities to run smoothly. We collected names of interested students in various areas by displaying different rolls like editor, technician, photographer, designer etc. Different teams were formed for each area and started working with coordination. Information team worked for gathering information by dividing the task as, everyone from that group should collect information from one department like one for ECE department information, another for CSE. They also collected

from each department faculty achievements, students' achievements, and departmental activities like workshops, conferences. They gathered from each department toppers list, cultural events, and talented students in various areas.

Editors from each department started working for presenting all the data in a systematic way. Language editors, proof-reader and all worked for language part. Designers started to learn page making, page setting, page designing photo-shop, abode reader, different formats and converting word to pdf etc. Technicians did technical roles efficiently. Division of work and team-work can be visible in all the required areas. Finally, the first magazine of college came by our students' coordination and that task was done in the given period of the time and it is very successful. The success secret is the team-work of the students by playing lead roles as Chief editor, Editor, Designer, Technician, Photographer, proof readers etc. Faculty played these roles at my previous colleges where I worked but here everything was done by students by the encouragement of our management.

10. The success story of KGR radio “The Voice”:

One more among such intrusting practices is 'The Voice', KGR Radio hub which is buzzing in the campus at leisure times. Our college inaugurated this programme recently and it is a big success. Students are using this opportunity with much enthusiasm. Students are the RJs, technicians, and advisors. Students' teams are managing at their leisure times. Students are coming everyday with a theme to speak by filling gaps before they play music. They are able to share their achievements instantly. For example, our students' cricket team is the winners among all the colleges of Hyderabad. It was buzzed immediately and entire college came to convey their wishes. Announcements, events, birthday wishes, festival celebrations, sharing opinions on industrial visits, campus visits and there is no limit for sharing. Our RJs are just in a queue to get the opportunity. It is a wonder to us without any effort our students are coming forward to share with the public, they learned how to use the mike, how to share spontaneously on anything, how to fill gaps. They are trying to imitate professionals, they are managing time efficiently. More than these things their team-work and team spirit is visible with healthy competition. They created a 'Whatsapp' group for the radio team and circulating the information, responsibilities, assigning various duties, corrections, advice, updates,

and adjustments everyday and inviting feedback for further progress. The faculty is to just monitor and facilitate them but the entire process is carried out by our students which boost their confidence, learning efficiency along with team spirit.

11. Outcomes of These Activities:

- Students communicate in English with ease as they are speaking with peers on their interested topic and also they have to speak spontaneously
- They feel competitive when they listen to the peers and they also try to acquire spoken skills
- The team tries to coordinate to present themselves better than others so, competition arises automatically
- They feel ease on days when they are with their team in group work activities
- They will get chance again and again in the same presentation and try to present better each time
- They get instant feedback from peer groups and also from teachers
- Students acquire technical skills also easily
- Different platforms like radio, magazine, group works, pair works encourage students by providing opportunity to involve readily
- Spontaneously reacting leads to decision making
- Students improve their writing, listening skills along with speaking skills
- Students' spontaneity and learning skills enhances in different expected and unexpected situations
- Team building ability improves
- Team leading and leadership qualities improves
- Active learning happens without much effort of the teacher.
- Learning happens with fun and enthusiasm
- Creative thinking and writing skills can be enhanced by writing articles to the magazine

- They try to read to see the format and page making skills can be improved
- Page designing and computer graphics they able to use for magazine designing

The whole process involves just by facilitating them by giving an opportunity for interesting activities to meet the current needs [12]. Students love to involve in such kind of participation. Learning can happen with fun. We encourage the students to do the entire activity even in open spaces like college garden, play grounds etc. So they readily come forward to feel the difference of learning. Team building and team learning is a part of their active learning continuously not only in academics and also in all activities. All the teams are involving directly with different activities, among such groups by giving direct responsibilities of leading roles, encouraging students to create innovative practices [8]. We also add writing and reading practices by providing opportunities in the name of the college magazine, ultimately students should focus on all the four skills listening, speaking, writing and reading. Students can meet the major need of English and communications skills also, which ultimately leads to campus placements in engineering colleges. Our entire team is practicing the same whichever is mentioned in this paper. Our CEED team is trying hard to encourage the faculty to adopt such practices in all the branches and in all the departments. Regular faculty development programs are conducting with the faculty at KGR CET by the coordination of all the departments and encouragement of the management.

12. Conclusion:

Faculty and students have to get good acquaintance with the present needs of the society and by adopting required solutions; we can be practical to serve the society. Success, opportunities come on the way. Students should not only be as a path seeker but be a path maker for that all kinds of efforts should be done by faculty, management, and everyone. When we are expecting something more, then we have to think differently and be confident to face challenges. It is our responsibility to make our students to realize that they should serve our society as an educated young adult.

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