

**Course Name: Technical Communication for Engineers**

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**Week- 04**

### **Lecture17: Project Proposals**

Hello everyone and welcome to a new discussion which we are going to have today on project proposals. How to write projects and what are the things which are evaluated in the projects. These might be a research project, maybe consultancy project or some other developmental projects. But the basic things will remain same. So, we will look all aspects related with project proposals one by one including the reports part which we have already discussed while discussing the document which we have to prepare. So, you know that at every stage of our career and no matter whether we are in teaching job or research or you know in private company or anywhere. We have to write project proposals, we have to prepare project proposals and these project proposals then of course, they intend for getting financial support, funding or maybe some other things. So, which are the points which are evaluated most or on which basis the projects are awarded. So, this as mentioned that domain of working may be different but it is always required to prepare such documents. Now of course, the format for these project proposals are many times very-2 different. And suppose if I talk in India and like Department of Science and Technology or Ministry of Earth Science, they ask the project proposals into given format. But most of the other private or international funding, their project proposal formats are sometimes different. But if you look overall, they keep asking the objectives and how the work plan and then of course the funding and budget requirements and then finally that credentials of the proposals. So, these are the things which are important here. So, therefore we should always prepare project proposals as closely as possible to whatever the sponsors are asking. So, like there might be a list of thrust areas in case of research projects or might be a sponsor, maybe a private sponsor specifically want a project proposal to do certain developmental work or certain investigations also. And then they may have different interest and no one would like to compromise on their interest. So, that is why the formats are different. And this is how these things are evaluated world over. So, one of the you know I would say secret that there is no published list of judges or reviewers available. And most of the times your project proposals are reviewed blindly means we do not know who are going to review those project proposals. It is same case in case of research publications in journals, we do not know. So, these are the blind you know for a proposer or a manuscript author, he does not know who is going to be reviewing. And then we do not know how to align our you

know project proposals according to the you know experts or judges or whoever is there. But nonetheless, our focus should be to have all key components of a project proposal.

So, one by one, we will be going what are those key components. Of course, the title. So, when we started discussing under this course, the title, the same importance is also here. It is very important for any project proposal. And you remember that title must be brief, focused and it should tell what is inside the document. Similarly, the title should indicate what is inside a research publication. So, here it has to be very focused, very concisely written title. And also, it should be you know intriguing that the person who first time goes through the title should find interesting that he starts reading further. So, the best technique is to spend some time while developing the title or possible title for a project proposal. And of course, the abstract should match the title of whatever the project which has been proposed. And we have to narrate, we have to highlight the problem, issue which you would like to work through a project proposal. So, the necessity of working in that particular area, the requirement and problem all should come in the abstract part. Another one is what will be done that is covered under objectives. But very briefly what will be done and how it will be done can also come in abstract also. But in a very brief manner and little different manner that means wordings and other things should not be same.

And what would be the outcome and beneficiaries again those because against every project proposal, whatever you are going to do, you are going to create certain output, certain development. So, that should also be highlighted in a 1 or 2 lines in the abstract because the maximum limit might be only 500 words or so. So, these are the key components of an abstract of a project proposal. Now third and most important which I find whenever I was reviewer of any such projects then what I see after the title abstract, I also see very carefully about the objectives. Whether objectives are clear or not.

The thoughts behind writing these objectives are clear or not. Whether these objectives are achievable or not. those things are assessed under this heading, under this objective heading. So, objectives or statement of need depending on the format how they have phrased these words but generally the most common word is objective. So, what are the problems or what are the issues you are going to solve or you are going to address and how it is important that can also be very briefly. And objective in my opinion should always be written in bullet form. one point after another and there should not be many objectives either. One can have even a single objective. But sometimes we have to write 3-4 objectives of the project, no harm. But there should not be more than 5 objectives under a project proposal. Then it becomes unworkable kind of thing. So, objective should be constrained only up to 3-4 points maximum. And the purpose here writing objective or objectives under this that what we are thinking or envisaged to do under that project

proposal. So, if it is a research project, we will very briefly mention that what the research we are going to do it. If it is a developmental project then it is accordingly.

And another important thing is that whenever a project proposal is prepared, the first thing is that one should do the research that what kind of research gaps are there? What is the gap in the knowledge? And those points should be attempted or those points should be listed under this objectives heading. one of the voids or gap in the knowledge or understanding so far. Because you know these are all the time ongoing activities. Nothing has been completed yet. On every stream, there are still some gaps might be.

So, we have to first find out those gaps and then try to mention those gaps under this objective that these are the gaps which we are going to fill or this is the knowledge we are going to develop. And of course, it should also bring very briefly what are the benefits are going to come out of this research project proposal or maybe consultancy or whatever kind of proposal. Because after all anything which is being done for which lot of money might be spent. So, there should be always benefit. Benefit to science, benefit to the engineering, benefit to organization or benefit to the nation and that kind of thing.

And why has not this issue been addressed sufficiently in the past? Basically, it is linking with the gap that why this has not been so far addressed by others. And after doing that kind of research, you have found that these are the things against which we do not have sufficient knowledge and that is why that project proposal is there. Now, under this objectives or statement of need, we can also think that who else would be working in this field and maybe national and international status. So, in many project proposals in the format, these things are always asked that what is the national and international status. of that research or the stream which you are choosing or proposing under this project proposal.

So, we have to provide again in a very brief and concise manner that what is the status of that knowledge or research in the nation and whatever in the international level. Also, you have to demonstrate the proposers or your knowledge of the field. What we are talking here is about the credentials about a person which is important here very briefly but later on the credentials, bio data, CV are also attached with the project proposal. So, whoever would review would see that these are the objectives and what are the credentials of a person or a group of persons who are proposing. whether they are really having a background of that or not. So, that kind of thing is also very much relevant. Provide convincing evidence that you are proposing does not duplicate other work. This is again as important as other thoughts in this that you have to provide in the objective section that there is no such work has been done in the past. And therefore, such kind of projects should be supported. Now you know sometimes this is a problem which one

might face whenever somebody is bringing a new project proposal, absolutely a new idea, new project proposal and may not be appreciated when you go for review work or presentation work also. Because you know that after the review, there might be expert committee meeting in which you have to project or present your project proposal. So, many times people do not appreciate that if it is a new work then there are no references. And they may say since there are no references that means it is not going to work. And it may be otherwise also that the idea which you are bringing is absolutely new and therefore not many people so far or no one has really worked on that idea. So, sometimes people feel that replication of someone else's work is in a new environment that is acceptable to some people. But otherwise, a research project proposal should have to be in my opinion has to be very unique and it should fill the gap in the knowledge or research. So, replication of someone else's work should be always avoided. Except that sometimes what happens that suppose in field of earth sciences or in many other fields, you know that geology of an area is completely different than others. What I am trying to say that geology or subsurface geology of each area is unique. There is no duplication whatsoever.

So, therefore this replication might not imply there but in other fields that is also there. So, one should definitely avoid. And how it can be avoided? That once I have decided to you know propose a project proposal in a certain field then I should do the research and find out what kind of work has already been done, what are the gaps and then this replication of someone works will, this issue will not come at all. Therefore as just mentioned that always one should try to propose the original idea. Sometimes you do not get the support. People may say it is not going to work but does not matter. In my opinion, the original idea will really pay in long term and you may get initially may not get good funding but later on once you start showing the results, you may get good funding here. So, chances of funding might be very high. And let me narrate one of the experiences which I have gone through this one, Once I made a project proposal. And I was called to make a presentation in front of experts committee. And after 2-3 slides, one of the experts mentioned that since there are only one reference given in the project proposal format and then he said that I think the work which you are going to propose is not going to work at all. But then I had to defend and say very you know blatantly or directly that it also does not mean that it is not going to work. It also means that this is an original idea. And therefore, not many people nationally or internationally have worked.

And that is why in a national or international status in the field that point comes here. So, when people have not worked on that idea then there are gap in the knowledge and this gap has to be filled. This is what the project proposal is. So, after some time, somebody said that you know before I end my presentation that whatever you are you know proposing is fine but you know it is not going to bear much results or that kind of thing.

So, again I have to say that I never thought that the organization for which I went for funding, I told that I never knew that this organization only supports replication or duplication of research which has been done in the western world.

So, I am sorry I am withdrawing my project proposal. And then the people from organization side, they said no, no, no. First you complete your presentation and then you can leave. But before that you should not leave. And then finally, I made a project presentation.

Nobody asked further any questions and I left. And in the evening when I met you know the officials of the ministry and they said that we have supported your project. It was really a pleasant surprise for me that why my project proposal has been supported when most of the experts were not in favour of supporting such research. And then what happened that after 3-4 months, you know I was chosen as one of the experts in the same committee which was initially not happy with my project proposals. Because after one year, I showed results, published work and then finally, I started getting support from most of the members of the committee. So, whenever you bring telling my own experience or sharing or narrating my own experience here is that try to always work on original idea. Always try to propose original idea. There might be lot of resistance initially but does not matter. And if you get the funding, then it will really pay in a long time. But if you think that a duplication, replication or changing one place to another area or so will be a good result, good recognition, I do not think so. So, always try to work on the original idea and propose. The chances of getting funding depends on what kind of experts they are sitting there. But one should not lose own focus. Should keep the focus on original idea. Now the fourth and another important component of a research project proposal or a consultancy project proposal is what kind of project activities we are proposing, what is going to be the methodology, what is going to be the output.

So, these 3 components are here. So, first of all that how I am going to achieve the objectives which have been narrated in the previous section. And what are my approaches is going to be? That is the methodology part. What kind of data I am going to collect? What kind of the data analysis I am going to do? And what kind of model I am going to use or going to develop? And if I am going to develop then that will also come under this outcome section. So, depending on the project proposal, we have to provide sufficient focused information against these key components that is project activity, methodology and outcomes. If there are very specific activities involved in the proposed project then we should mention. And sometimes there are collaborated projects. So, we can mention very clearly that this activity will be done by such and such people or this organization. and other activity will be done by this day. So, there are no problems. At the stage of

project proposal, one should very clearly mention that who is going to do what that will always help to run a project and can bring good results. But if these are the things which have not been pointed out very clearly in the project proposal then the entire project if it is awarded will have a problem later on while working.

Another important thing is the timeline because like if I give the example of a research project proposal typically in India, we are having a timeline of 3 years. Sometimes they ask for 2 years or sometimes maybe within 6 months also. Similarly for consultancy projects, the time is not much there. So, maybe 3 months, 6 months, maximum 1 year may be given for a consultancy project. So, timeline of all activities should be very clearly mentioned. And if it is possible, present all these things in form of tables, charts and other things. The timeline or work plan can easily be presented in form of charts or table also. Whether you are going to generate data or you are going to use someone's data, so that also should be mentioned here. Crystallize data, breakup pages of narrative and convey extensive information well in a limited space. That means in a very brief and concise manner, all these information should come. Now, another key component which is methodology. How the work is going to be done? And so, this is another essential piece, important component of a research project or a project proposal in both ways be quantitative way and qualitative way. how these are feasible, these methodologies, how they are going to work. And of course, we have to be very clear about methodology we have to use. And then another important thing here again, we can use flowcharts showing different steps which are proposed in the project proposal under this methodology heading. that will help the reviewer to see that how the work will go through different steps.

Instead of writing in the text form, if a flowchart is prepared of the work plan that is always very good. Now one of the again important point that whatever the outcome is going to be. How it will be disseminated? How it will be you know whether you are going to publish or whether you are going to advertise or do the groundwork or maybe some project might be related with really directly with the society, villages or other thing. So, how you are going to disseminate this information or the achievements of the projects which have been achieved and that these goals and other thing that should also be very clearly mentioned. Basically, what we are talking about are the benefits. The benefits will come or the outcome which will come under this any project proposal, how it would be you know shared with the people. So, that should be there whether your output is going to be helpful to policy makers. You may approach depending on what kind of work for the publications maybe through media or whether it is going to be affected certain part of population, that kind of thing should also be highlighted. Because whoever is going to fund your project, the organisation, they would like to know what are the benefits or beneficiaries of the project. So, this is how this should be described. Also how one would

publish the work, where it will be brought, all those things. So, again in the dissemination of the information or outcome, one has to be very creative. Maybe sending an article to a journal manuscript. Typical in research project, this is what we do that we try to publish in a reputed journal. And sometimes, we have to share the information with the media also if it is not creating any sensation or other things, it is always good to share the outcomes.

And then maybe for popular periodicals and not you know high impact factor journals but lower so that our dissemination of the information becomes available easily to the public. And another very good activity of showing the project outputs are through the conferences or the presentations made in the conferences. Maybe community outreach activities, that is another thing. Maybe to presenting the outcome to the policy makers.

maybe for community groups, etc. So, these are the things. The advantage of presenting in a scientific conferences or otherwise conferences is that suppose I am middle of the project which I am doing and I go and make the presentation on the work which I have already done, maybe halfway through. But when I go and make a presentation, many times there are good suggestions. would come through once we complete the presentation. People may ask in the audience the questions which we can consider very seriously and can try to improve our approach in midway. Or some people might give you suggestions that instead of this dataset, you should have used this dataset or instead of this methodology, a new methodology can be used or model you can use likewise.

So, it is always good that whenever somebody is doing a project one should always try to expose the work outcomes through a conference and that will really help to improve our work. Nowadays if it is a very big project, one can also think of launching a website or blog or other thing. Basically, the purpose here to share to the world that what kind of work is being done or has been done. So, this is always important. Also, sometimes we can share our work with the peers and those matters and maybe experts of certain committee or so that they know that what kind of work has been created or what output has come. So, papers, press release, videos depending on the work. All work should not go for press or videos or other thing but depending on the work, they are there. Now another important component of a research project proposal or a consultancy project proposal is the budget and continuation funding. So, budget is important. After a reviewer, once he sees the title, read the abstract, read the objectives then the next focus point is the budget because based on the objectives, if budget is too high, then there are problems might be during this stage of review. So, one has to make a very nice well-calculated, well-thought budget. It should not be too high, it should not be too low. So, it should be actual budget. Basically, what are the expenditures which are going to happen during whatever the work which is being proposed. that should come very clearly. And

always these project proposal formats will ask you to prepare the budget in a tabular form.

And one should always try to narrate or bring all points and sub-points means each item against which the expenditure is going to incur. All those items because if you just write salary 10 lakh rupees. then it is not convincing. But if you break up that I am going to have a lab staff, I am going to have a junior research fellow, I am going to have a senior research fellow and then their salary, the prevailing fellowships and other thing and then the total should come. So, as breakup in the budget as you can provide against each item, that is also good. Another thing is that inside the budget table, you should provide the justification against each proposed expenditure. Why do you want so many people? Why do you want that equipment? Why do you want that field work and that kind of expenditure? So, those things must be there. Again another secret here that as I have just shared that the budget should be broken in all heads, all possible heads. Advantage of this that against individual heads, budget may look small. Because if you like just one salary component or fellowship component looks big but if you break in different component then it looks small you know. And only include other source of funding if required by the sponsor. So, that should be also mentioned. Sometimes you know that many institutes or organisations having matching grant scheme. So, if I bring a project proposal of 50 lakhs, I may get a matching grant of the same amount from the institute also. So, that should also be mentioned that though the budget required the 1 crore rupees to do this kind of work but if the sponsoring agency gives just 50 lakhs, the remaining amount will be met by the institute or other organization. If that is indicated then whoever is funding your project will definitely would be happy to do that kind of thing .

So, what is generally reviewed in the project proposal? Very briefly, title, abstract, objectives, methodology, timeline, budget and credentials of PI and co-PI. Suppose I am working in the field of earth sciences, remote sensing, GIS and I made a project proposal which is completely in a different field. For example, maybe in biotechnology or some other things, my credentials are not in that field. And whatever the way I have written these parts, I am not going to have funding. And if I do get that one, then I am not going to create any output against those objectives which I have narrated in that.

So, this is another very important thing. And therefore, if I am having expertise in certain fields, I should only propose against that field. then there are chances of getting funding. So finally, we are having few points which one should consider while preparing such project proposals that keep simple English because this is not English literature proposal or English literature write-up. So, keep it simple. Use short sentences, use direct speech and preferably write in third person. Avoid using we, I, she, he, yours, they and likewise. Research project proposals are generally evaluated by a review board, expert group and



individual expert. So, therefore while writing, we have to think in that manner also at the time of preparation of such project. And these are evaluated to ensure that whatever the funding which is going to be given, whether this person is capable of producing that thing or not. And therefore, it is very-2 important. Now, we are coming almost end of our discussion on project proposal. So, objectives of course, they are evaluated very carefully. So, sampling plan, how you are going to collect the data, plan or other things. Questionnaire, evaluate the questionnaire. Sometimes that is also provided to you while you prepare a project proposal. So, you know that against which points your project will be evaluated. Data collection approach that is another thing that is there. Data processing approach that is also evaluated. Analysis, they will also evaluate once the data has been collected, how the analysis going to be done, when the samples are connected, whether they are going to be analysed in the lab, what kind of standards, what kind of instruments already available, what new things you want. All these things will be evaluated and also deliverables. Evaluate the deliverables that is also checked or evaluated. Specific project type, always try to be focused project, not a very generalized project. Organization culture, that is another important. Consider whoever is going to support what kind of organization culture they are there. And then other things are like consider the marginal skills impact, what kind of impact it is going to create.

Feasibility, whether the project proposal which you are giving is really feasible or not with given timeframe and available resources, that is another important thing one should keep in mind. So, we are coming to the last few points of this discussion that we should raise some questions to ourselves before finalizing our project proposal. That is does the proposal clearly outline methodology? This is the checklist.

before we submit. And because nowadays lot of project proposals are being submitted online. So, one has to be very carefully go through these points whether the proposed project does have the good methodology, design, participants, instruments, procedures. Are the details of methodology sufficiently well defined to allow a meaningful judgment on their value? And another point is the methodology likely to be feasible? Whether it is going to work or not? And who are going to be the participant in the project because there might be group of people. So, people who will be working which are the organizations, what are their strength, their credential that should also come. So, with this I end this discussion. Thank you very much.