

Final Tips for a Competitive Proposal

April 19, 2018

Ann Beheler - Good afternoon we're ready to get started on our webinar, this is Ann Beheler I am your host for the day and I'm delighted that I have two other really great presenters presenting along with me today on "Final Tips for a Competitive Proposal." We will be introducing them when we get a few slides into the presentation.

Webinar Details

Ann Beheler - The details you will be in listen-only mode, please do ask questions by the question window we're going to do our very best to provide time for the questions these slides are chocked full of information it's going to be a rather quick slide presentation from the standpoint of the detail that we're able to provide you because we want to try to stay more or less on time I suspect we may go over however if you have to leave at an hour and 15 minutes there will be a recording that is posted along with the slides and along with a transcript for the webinar, so you won't miss out but we do hope you can stay.

The CCTA is led by

Ann Beheler - The CCTA is the Centers Collaborative for Technical Assistance, it is led by four National Science Foundation ATE centers.

CCTA Purpose

Ann Beheler - And we were asked by the DOL probably about three years ago at this point in time to provide technical assistance to the DOL TAACCCT grantees those grants are winding down and we have focused now on helping everyone write competitive National Science Foundation ATE grants. We do provide webinars, we have best practices and we host a convening that we will talk to you about toward the end of the presentation.

Poll #1: Your Affiliation

Ann Beheler - Let's do our poll the very first poll we'd like to know what sorts of grants you're affiliated with if any. Christina will you put that poll up, okay if you'll go ahead and select your affiliation as quickly as you can. We're going to close that one in five, four, three, two, one and then we have to wait just a tiny bit for it to show the results. It's always interested to see what sorts of grant affiliations are in our audience. Well okay here we go we have several involved with NSF grants already, only one TAACCCT grantee but we do have some people that have TAACCCT and NSF and then we also have some folks that have none at this point in time and that's okay too, let's go to the next slide.

Poll: How many people are listening with you?

Ann Beheler - How many people are listening with you? Christina, could you put the poll up please? For our evaluator we do need to let them know how many other people might be listening with along with you so that we can understand how many people were reaching live today and then we also keep track of the accesses to the recording. Five, four, three, two, one, so it looks like most of us are listening alone today but thank you very much for joining us. Thanks Christina.

Today's Presenters

Ann Beheler - Without further ado I will introduce our presenters for today, Dr. Elizabeth Teles is a Program Director for the National Science Foundation Division of Undergraduate Education working

primarily on the Advanced Technological Education program and the S-STEM program and Dr. Teles is one of two program officers that are responsible for the NSF ATE program and she is a wealth of knowledge. I'm a principal investigator for a center, an IT Center based out of Dallas and I'm the principal investigator on the Center's Collaborative and I'll talk about a few things that Dr. Teles and then Dr. Bill Alter from Missouri State University who also does some work for the VESTA Center will talk to you about choices of words and how you write your proposal. So Liz would you take it away.

Peer Review Panel

Dr. Elizabeth Teles - Thank you Ann, I appreciate being here today and being invited for and talking to all these nice people. So I thought it's important to kind of know how your proposal is reviewed, so most proposals get about six reviewers sometimes seven who come from education or industry. They represent two year college faculty, four year college faculty, industry and for the ATE program right now they're all meeting face to face here in Alexandria, Virginia. Reviewers review about 12 proposals it ranges from 11 to 14 or 15 but they're going to likely range a wide variety of technology areas so one of the hints later on we're going to talk about is that you have to write it to somebody who may not know exactly your area of technology, but they do know community colleges, but also they may not know about your system. So for example, if you're doing something with you know dual enrollment different states have different rules so you have to be a little bit clear about what that is. So it's important to know who's going to be reviewing your proposal, next slide.

NSF Proposal & Award Process & Timeline

Dr. Elizabeth Teles - It's also this you may not be able to see this, but it's a little bit about the timeline of how the proposals come in and so proposals come in to NSF and increasingly they're getting checked before they ever get to the program officers to even look at to decide if they're going to be reviewed, so we'll talk later today about some of the strict requirements. But one example is it has to be no later than 5:00 p.m. your time on that day. Then it does come to people like myself okay so it's a group of program officers that work on the ATE program all get together when all the proposals come in and we divide those proposals into panels so it we are sure that they get the best review. So actually this is the first time that this project summary that we're going to talk about later is seen, so it's important that the program offices can read that program summary and quickly know exactly what it is you're going to be doing so that we match it with reviewers who have the expertise in that area. So then we send it out to the panelists and they have about three weeks these days to read it a little longer than they used to but remember they're going to be reading 12 or more proposals and there's got to be something that makes it easy for them to read, they'll give you some hints later, but if it's hard to read, if it's too closely spaced together, it's very hard and program officers may only have a minute to scan that project summary to put it on the right pile for review. So then about six to eight weeks after the proposals come in then we bring the reviewers here to NSF to talk about it and at that point they write written reviews from then it comes back to the program officers. So the panelists only make recommendations, it's the program officers that do it, but for ATE is always in early December, so remember there's no need asking about what's happening your proposal until much later than that because it won't have even been reviewed at that point in time. We do try to make at least 75% of the decisions within the first six months but after it's a reviewed it comes back and it's actually the program officers who make the final decision about whether it's going to be recommended for funding or whether it's going to be declined. Some of them are returned without review, last year there was something that just had nothing to do with technician education and nothing to do with ending the ATE program so it can be returned without review or it can be at this point if it's declined it just goes back to you and no one knows about it anymore. Program officers however do not make the final awards; the awards are made by the Division of Grants and Agreements. So the program officers are a little bit like your Dean and the Grant's office is a little bit like

your business office, so it's just kind of important to know a little bit about the flow and again we try to do at least 75% within the first six months, next slide.

Five Review Elements Part 1

Dr. Elizabeth Teles - All NSF proposals have at least five review elements plus some special cases. So the number one is what the NSF is looking for transformative ideas and stuff, so the first one is what's the potential for the activity to advance knowledge and understanding either in its own field or across fields. And the second one is the broader impact is what's the potential for it to benefit society or in the ATE program it's primarily the beneficiaries are business and industries, but it's also the students who are going to be getting good jobs and things like that. So it doesn't mean that it's something totally new that no one's done before but you've got to make the case in there how whatever this is going to add to the literature base, add to the knowledge base of yours. So even if you're adapting some other materials maybe you're doing it in a different technology area or maybe you are doing it with a different group of students or maybe you're bringing in a different recruitment process but there has to be something there that make yours not just something that's not going to benefit anybody but yourself. The next one is again the second one I think I already talked about the transformative ideas, okay next slide.

Five Review Elements Part 2

Dr. Elizabeth Teles - The third one is the plan for carrying it out well-reasoned, well organized and based on a sound rationale. So you could have something that's well-reasoned but there's no organization to it or anything, so it's important to organize it well. Then the next is how well-qualified is the team and the individuals who are going to conduct it, we'll come back to this later. But again this is why proposals that actually identify the team that's going to do it are stronger than ones who say we're going to hire all these people. And then finally are there adequate resources available on your campus to do this to carry it out. So if you're going to do it say in a biotechnology lab is the labs going to have to be there or there's going to have to be some equipment in the proposal to do it, next slide.

Some Specific Review Criteria for ATE

Dr. Elizabeth Teles - I'll go ahead and start talking about it while they're putting it up. But the ATE program and every program at NSF the first five are general things to almost all certainly all education projects. But every program has some specific review criterion that you should read and I haven't brought out all of the ATE ones but I brought out what I think are three of the most important ones but this would be specific for ATE. So number one does a project have the potential for improving student learning in science or engineering technician education programs? So it's got to be something about technician education programs for the ATE program or about core courses that are going to be embedded in those other programs but you've got to talk about technician. The second one, has there been an assessment of workforce needs? Again we'll come back to this, but you've got to show that there are some jobs out there pretty much now for these students to get the job that's going to benefit industry. And finally, does it promote diversity in the technical workforce? There's lots of ways that can promote diversity but those are three of the specific ATE criteria. Ann, I think its back to you now. Ann should I keep talking, I think she's coming back in in a minute but maybe I'll talk a little bit about the panel some until she comes back.

Project Summary

Ann Beheler - I'm here, can you not hear me?

Dr. Elizabeth Teles - I could not hear you so.

Ann Beheler - Can you hear me now?

Dr. Elizabeth Teles - I can I'm fine.

Ann Beheler - Okay I'm sorry this is what happens when we have a live webinar but we do run into some issues. Okay so the project summary I think is very important it is the first thing the reviewers read. When I'm on a panel, I read the project summaries for all of them first so that I know what I'm actually working with it is limited to only one page and it's very specific about the sections that have to be input. The overview is the overall idea of the project, what is it supposed to do, who's involved and then the intellectual merit that Dr. Teles just talked about, what are the major goals and activities and of course you can't list all of them but you can talk about the major ones. And then broader impact, how is it going to benefit society, underserved people and how are you going to know if the benefits actually occurred. A tip here the intellectual merit and broader impact belong in the project summary and in the project description and they must agree. It's very confusing when they do not agree, it also is very important and we're going to keep talking about this all the way through that if you're submitting for the ATE program it needs to address technician education not transfer programs. Does not mean that a transfer is not possible for someone who is going through a technician education program but it does mean that if you focus solely on transfer it is not going to review very well. There are also some other tips sorry I'm having a little trouble moving the slides.

Tips

Ann Beheler - Some other tips be very clear in your project summary because it is your first impression and there's a little bit of disagreement about this but I always like to write the project summary first even though that it's going to get revised several times along the way, this is what I actually send to the program officers to get their feedback and then updated along the way. It's also what I use to get other partners involved in a grant. It's important that you do not make grammatical errors and don't just rely on spellcheck to take care of everything for you. It's also important to go back and check when you upload information into the tool that allows you to input the grant it sometimes changes some of the characters and it doesn't make your case if you have a whole bunch of funny characters in the middle of your project summary. Very important to avoid the use of the possessive pronoun, it's very important for example to say use the focus of the project instead of projects focused. Be sure to explain what the targeted technician does and why those people are important and are going to have jobs. Make sure the intellectual merit and in broader impact are very very clear and the same in the project summary and in the description. And you need to as much as you can in the project summary outline what your goals, objectives and activities are going to be.

Sample Sentences that Might be in the Overview

Ann Beheler - I'm going to go through the next ones pretty quickly but these are some sample sentences that could be in an overview. I'll talk about the first one the project that XYZ Community College we know which college is designed to do what? It's going to collaborate with four industry partners and those partners need to be listed; it's not just hey we're going to decide that we're going to work with ten people or ten companies we don't know anything about who we're going to actually work with. What are you going to work with them to do? To develop an industry driven manufacturing technician program. And then the other one is, technicians are needed who can and then you talk about what's going to happen.

Sample Sentences that Might be in Intellectual Merit

Ann Beheler - Other sentences that might be in the intellectual merit, the project builds on a pilot effort at the institution that demonstrated and it's important to say what you learn from that pilot effort or on materials and methods adapted from another program. And if you're going to use other program information it's a good idea to contact those programs so that you can get the information from them and indicate that they may be wanting to collaborate with you. Then, talking about the overall goal of the project and the activities to accomplish that goal.

Sample Sentence that Might be in Broader Impacts

Ann Beheler - And broader impact this can be a little different in this case there in the first one they're working with a business and industry leader leadership team model whereby the business advisory council becomes a co-leader for the work to develop a program that's going to serve regional employers. And on the next one we're talking about a Hispanic Serving Institution and they will therefore include recruitment and retention activities that have been shown to be effective. It is also very important though to say what those activities are just because an institution is an HSI institution that does not mean that you necessarily already know what the effective recruitment and retention activities are. And then in an effort to grow the percentage of female populations that's another justifiable piece of information for the broader impact.

Project Description

Ann Beheler - In the description it has lots of parts and we've covered those already in pretty good detail. The biggest thing to remind you about is it's only 15 pages, if you upload something that's over 15 pages they can choose to return it without review. The logic model is typically upfront that's not a requirement but lots of people like the logic model to be there to guide the understanding of the entire proposal and we're not going to cover that specifically today we're going to give you a link to logic model information from the EvaluATE project toward the end of this presentation. If you've had a prior grant it's important to talk about that the results of that prior support not just what the intellectual merit and broader impact were but what did you learn, what did you do, what was the benefit, the so what factor of what you did on that prior those prior grants. And then the motivating rationale why is it needed this is where you would refer to commitments from local and regional employers you would refer to whatever the labor market information is, for example right now IT unemployment is approximately one percent across the nation so there's definitely a need for workers that are well-trained to fit the jobs in IT. And it's important where you talk about the fact that this is new to your institution or at least it's building on a pilot at your institution so that you can move the body of knowledge forward. And the need actually drives your good idea if there's not a need your idea isn't good and vice versa and then talk about the intellectual merit and broader impact again in the project description I just cut and paste that I want to make sure they do not disagree.

Project Description continued

Ann Beheler - Then the largest portion of the 15 pages in most of the proposals that I have written is covering the goals, the objectives, the activities the responsibilities of the people to accomplish their work, the timeline, all of that it also refers to any collaboration with previous projects. Then you must have a management plan who's going to manage this grant and how are you going to have those folks communicate so that they manage it. An evaluation plan, a dissemination plan and a sustainability plan and we've talked about those before I'm going to highlight some of these but I'm going to refer you to the previous webinars for the rest of the details.

Goals, Objectives, Activities, Timeline

Ann Beheler – Goals, objectives, activities and timelines, in our February 2017 webinar we talked about SMART goals. The SMART goals are specific, measurable; the A can stand for various things but its actionable is a good way to look at it. Relevant and time-bound and you really want to have a story that makes sense with a realistic timeline, if the story doesn't make sense if it doesn't flow that the goals and objectives and activities work together to accomplish what you're trying to accomplish that's very difficult. Very important to show who's responsible for each of the activities and goals and which activities support each objective and how they support it. Now I like to use a table short narrative prior to each goal so I would have a table per goal with all the objectives for that goal, all the activities under objectives and I would say the timeline as to when the activities will take place. I also put who's responsible in that table, what I find is that is a very good way to cover the information without spending a lot of pages explaining the pros plus I think people like to look at tables they're easier to follow. We also do a quarterly timeline we don't ever try to go by month because you don't know exactly which month you're going to have the grant awarded and quarterly is granular enough.

Evaluation Plan Must be Clear

Ann Beheler - The evaluation plan has to be tied to your goals, objectives and activities not just accountability though. It's expected that you're going to do what you say you're going to do but you need to worry about the impact and the effectiveness; did it work, who did it benefit, how do you know and how are you going to determine if the work was successful. Fortunately National Science Foundation is a grant as opposed to a contract so if you try something and it doesn't work so long as you explain why it didn't work that is okay too that's not necessarily wonderful but it sometimes happens; but it's important to say what kind of data you're going to gather, who's going to gather the data and who's going to do the evaluation, how are we going to know if each activity we did actually did further the work. It's important to include the name of the evaluator and the qualifications if you can some colleges cannot do that because of their procurement policies, but it's important to do so if you can and to include the evaluator in the biosketches if you possibly can. It's also very important not to just use percentages in your goals but tie those to the actual numbers, for example if you have only 20 students in a program and you hope to increase by 5% per year that's only one additional student per year sounds pretty reasonable until you get down to thinking about I'll call it the N the number of people that are actually affected.

Other Attachments

Ann Beheler - I'll turn it back over to Dr. Teles.

Dr. Elizabeth Teles – Yes, I want to make two comments about Ann saying tables are great but not if the reviewers can't read them. A lot of people try to put so much information in them till they're really really small and then they frustrate reviewers so make sure it's in the same kind of font everything else is. You can sacrifice putting in some details for clarity and Bill will talk more about it but I did want to emphasize that using tables use them correctly. And the second thing is we're kind of overwhelming you a little bit with what should be in these proposals if you haven't done one so you probably should try to get a couple of copies of some proposals that have been funded I know the Mentor-Connect has a few on their website that you might look at but that's just another little hint. Okay but besides all the things that Ann talked about there are three other sections and they're required sections and they're not ones they're a little obscure a little bit but they are required and you have to put them in it's just one of those things and one is the data management plan and this is only about five years old but you have to have in this data management plan how you're going to preserve everything the grant created, how it's going to be archived, how you going to protect the privacy of the individuals, but at the same time how you're

going to make anonymous data available for other researchers to use and to summarize. So what I'd recommend is that you go to this website and just look at a data management plan that people said is good and I think maybe Mentor-Connect may be putting out some of these, so you just go to one and kind of just use it as a template almost. But even more important these days is this facilities plan because NSF does not allow cost-sharing but it doesn't mean that this project you've got isn't building on what our at the institution, so you can describe here the lab that you've got that are going to be available and any other kinds of things that are already there that you're going to be using to carry out the project but there also may be some people on the project that you're not requesting money for but they're going to be involved in the project because it's just part of their regular job at the institution. So for example if there's a CTE recruiter already on your campus who works with the high school CTE teachers they may be a very important component of the project to recruit students but that just may be part of their regular job so you can describe that here, sometimes it's some of the deans and all or describe carefully in your projects that they've got an important role in the project but they're not getting money. But never put in here something like you know five percent of their time you just have to emphasize that they are available to work with this project but its part of their regular work, next slide.

Budget

Dr. Elizabeth Teles - You also have to have a budget and an a budget explanation and so the budget there's a budget for each year as well as a summary budget but it must carefully align with what it is you've said you're going to do in the project. So if you say you're going to develop you know three new courses then there ought to be someone on here who is going to develop those new courses. You need to be careful about what's the maximum for the type of grant you're proposing. So for example small new ATEs are two hundred and twenty five thousand, project grants are now six hundred thousand, there's two new opportunities in ATE one is for equipment and Instrumentation which I think is five hundred thousand and adaptation and so you have to carefully read the program solicitation to know. Because NSF does it allow cost sharing your indirect rate that you put on here has to match exactly what the colleges is and I may not know what it is but when it gets to the Grant's office they look it up so you can't say you know our normal indirect cost rate is 36% of salaries and wages but we're only going to take 15% for this grant and the rest. You can't do that you have to take the full 36%, now of course NSF doesn't tell you how you spend that indirect costs when you get it that's between you and your institution. But if you don't have a rate or even if you have a rate you can never get it on NSF things on anything in participant support anything in equipment and equipment is actually things that are over \$5,000 things under \$5,000 are in materials and supplies so that's why the 5,000 there, or an amount over 25,000 of sub-awards. So if you don't have a rate and once you get an NSF awards you should immediately get a rate but if you don't have a rate you can use 10% a modified direct cost which is all your direct costs taking out equipment, participant support and indirect on awards the amount over \$25,000 of a sub award. And then that budget explanation should line-by-line discuss what it is you're requesting and what that's going to be used for in the project. So they've now extended that I think from three pages to six pages or five or six pages read the current solicitation because that budget explanation has to match what the money that you're requesting and then you have to be able to make sure that that money is for what you say you're going to do in the proposal. So don't all of a sudden start talking about workshops if you haven't mentioned workshops in the proposal itself, next slide.

Supplemental Documents

Dr. Elizabeth Teles - The other one is supplementary documents and we've had a lot of trouble with this first of all it should never be over 30 pages total. People use it and put all kind of things back there that are available, my guess is that if it's over 30 pages in the near future they're going to be returned without review. So don't do that, the ATE program is unique in this supplemental documents is that we

allow unique commitment letters, other programs in the division and across NSF only have kind of boilerplate kinds of things that just say that anybody mentioned in the proposal has to have this boilerplate but ATE lets you have unique letters. So you can have commitment letters from your business and industry partners, from your college president, from your dean, anybody that's important to show they should be commitment letters though where they say what it is they're going to do. So these are going to do internships it should be in there we'll talk a little bit more of that later. You might have one example or a short example of a curricular project that you've discussed earlier so maybe you're developing a lab and you could have one example of a laboratory back there. Your evaluation plan has to be in the proposal but back there if you've already developed one of your instruments you're going to use you could put it there. Don't put anything there that belongs in the proposal, for a while people work trying to get away with putting the evaluation plan back there, that's not an appropriate place your evaluation plan has to be in the proposal itself. It should not exceed this 30 pages and I would limit it to ten to fifteen just because reviewers are not required to read it so make sure again it supports relative things you've mentioned in the proposal so you can say we have the following three industry partners and then there can be commitment letters from there. So again ATE is unique in the supplemented documents are allowed and but we'll discuss a little bit about this later. Ann back to you, actually I think it's on to Bill now.

How & When Words are Used Can Make a Big Difference in Proposal Success

Dr. Bill Alter - Great just checking in can you hear me - loud and clear?

Dr. Elizabeth Teles - I'm fine with you.

Dr. Bill Alter - Okay oh good afternoon everyone I'm sitting here in Missouri and the sun is shining so hope its nice weather where you are. One of the things that's really important to look at is when you're putting this proposal together you're presenting your ideas to reviewers and a review panel. As was mentioned earlier by Liz you've got a number of people who've been reviewing your proposal and in fact they will be reviewing multiple proposals. You want to make it as easy and pleasing to them as possible as to what they're reading about your ideas. And so when you're starting you're looking at establishing your credibility you want to make sure that they understand you and your team are fully capable of doing the project, you convey the importance of your project throughout the proposal and most important you'll hear about internal reviews later on but you want to make sure you've anticipated the questions they're going to ask before they even ask them and you've answered that question in your proposal, next slide.

You Have Only One Chance to Make a Good First Impression

Dr. Bill Alter - As was mentioned earlier you have only one chance to make a good in first impression here are some very important people around the world to Sally Ride on the left Mother Teresa on the right you want to convey to your readers that you are knowledgeable in what you're doing, you understand the problem and you have a way of addressing a problem. You want to have them have an image in their eyes of these type of individuals not, show the next one please, a very famous clown Emmett Kelly you want the first impression to be very positive, next slide.

Characteristics of a Successful Proposal Writer

Dr. Bill Alter - What are the characteristics of a successful proposal writer think of a scientist, a scientist is very organized and methodical about the way they do things. A novelist tells the story and if they want to sell a novel they make it interesting. An artist paints a picture, tables and graphs paint pictures, and this was mentioned earlier they can convey a lot of information. A teacher, a teacher talks about what

they want to convey to the students in a language they'll understand this is important when you consider the reviewers may not be experts in your area. And of course a salesperson, salesperson is a very convincing one they can tell you this is the most important item that you would ever want to buy and that you want to purchase this before anybody else does, you want to convince the reviewers that you get the best project possible, next slide.

The Art of Proposal Writing

Dr. Bill Alter - And proposal writing is an art to this you want to make sure the words you use convey exactly what you want it to say. Of course we're not putting proposals on paper anymore we're putting them on the computer so you want that computer screen to be visibly appealing to the reviewers, okay next slide.

Read the Solicitation

Dr. Bill Alter - And where do you start? You start with the solicitation, the solicitation is your guide it is telling you exactly what needs to be done, how it's to be done and you want to make sure it's the current solicitation which right now is NSF solicitation 17-568. Do not follow the earlier one 14-577 there differences, make sure it's the current solicitation.

NSF- Proposal Preparation Instructions

Dr. Bill Alter - The second thing that you start with is of course understanding the rules, the rules are laid out for you in the National Science Foundation's proposal awards policies and procedures guide and in chapter 2 section b2 you will find the information on page limits, font and size and all of the other things listed here. These are not guidelines these are the rules, NSF has the money they set the rules you play by the rules and of course one myth was mentioned earlier by Liz tables and graphs are important but they must be readable. Now let's look at some of the important points about your proposal, next slide.

Formatting Matters

Dr. Bill Alter - Instead of the reviewer looking at 12 proposals working late at night. If you justify your text as shown on this slide, it gets very boring, there is little white space left around it. It can get monotonous; instead take a look at the next slide.

Untitled

Dr. Bill Alter - Where the same information has been sorted out, has been left justified now you're sacrificing two lines of text but it's much easy to read for the reviewers, it's more visibly appealing, next slide.

Essential Components of a Proposal

Dr. Bill Alter - Now keep in mind at 3 o'clock in the morning you have a great idea, sitting around having a glass of wine with colleagues you have a great idea but how does it become a winning idea? Well, the winning idea has several components. Timely is one thing to consider, the needs are current. You've done a survey the industry the needs for workforce, the needs for new technologies are clear and well understood and you're able to convey this. Your project has an innovativeness to it and that is you may not have a totally innovative idea but you may have grouped together several different projects that had innovation and so you've grouped them together is innovative and it can last beyond the funding of NSF its sustainable. And most importantly going back to the solicitation is the purpose of your project in fact current with the purpose listed in the current solicitation 17- 568, next slide.

Readability of a Proposal

Dr. Bill Alter - Now the certain things you want to make sure you do in a proposal. Every paragraph especially the summary that the reviewers are going to see in the project office is going to see should open with something that grabs their attention. The paragraphs, the sentences should be short and to the point and keep in mind reviewers are knowledgeable in general areas but not necessarily knowledgeable in your area and so the terms that you use the acronyms are important. Make sure you use active versus passive verbs wherever possible and of course you want to demonstrate at all when you're putting in references in there that you're aware of what's in the literature, next slide.

Readability of a Proposal

Dr. Bill Alter – Jargon, abbreviations and acronyms as I said should be avoided, you don't want the reviewers to depend on a glossary of terms that they have to write down in order to understand those terms that you've been using. Don't hide your important points behind a lot of dependent clauses and has been mentioned before spell check, will give an example that something you have to be very careful about. And yes you know the English language but don't try and impress the reviewer with complex terminology, next slide.

Clear Word Meaning

Dr. Bill Alter - The words you use are the most important part of your proposal because they convey your ideas. You must describe the plan, demonstrate confidence, and show you're committed to the project and of course going to reduce the perception of risk. Consider that the reviewers are acting on the part of NSF and NSF is going to make an investment in your project, the risk perception on the part of the reviewer should be very small. When you talk about commitments to the project if you will think back to or look back when you get a chance to what was talked about earlier in terms of Ann's slides on the project description you saw the word will throughout, will is a very strong term could, should and would are not as strong demonstrating commitments, will and shall are very important to use, next slide.

Should You Depend on Spell Check

Dr. Bill Alter - And here comes the concern about spell check you may have wanted to express the importance of a learning model not leaning disorders. You wanted to convey a message not as someone if they wanted a massage. And principle and principal are the terms most often misused, principals are person's p-a-l pal, principle, p-l-e is a truth or a rule. Do not confuse the two. And interesting enough at Missouri State University we have a statewide mission in public affairs while reviewing a proposal many years ago the first line of the abstract indicated that the university had a mission in public affairs. Don't depend on spell check make sure the words are spelled correctly, next slide.

Ensure that Your Proposal is Coherent

Dr. Bill Alter - Here of course we look at just use the two images at the bottom, your ideas flow logically between sentences, between paragraphs and cross-sections. The goals should flow into the objectives flow into the activities and as Ann talked about all of that tied together in table can be very helpful, next slide.

Convincing

Dr. Bill Alter - You want to be convincing in your proposal, you want that salesman point, and you want to have important points emphasized in your proposal. Always demonstrate the connection to the ATE priorities. Make sure that you are conveying the passion, the interest, the commitments of your team

and the project that you propose to do. And prove what you're contending, make sure that you get facts and references to support not just hearsay, next slide.

Keep It Simple in Telling Your Story

Dr. Bill Alter - And here of course you want to make sure that the proposal is well organized as the scientists would be. The teacher communicates it well. Its visually appealing as an artist would be. Again using those charts and tables can be very helpful but at the bottom line you want to be convincing as a salesman would be, next slide.

References

Dr. Bill Alter - And the references of course can do a lot to establish your credibility, you're aware what previous work has been done, its relevance to the work that you're doing. You must make sure you accurately cite it, because in fact a reviewer on your panel may be one that you're citing so make sure that they're accurate. And they must be relevant, don't put in unnecessary references and use the standard format you can go to the PAPPG and go into that you find the specifics there. And finally when you start talking about a proposal it's going to be, next slide.

Does the Proposal Say What You Want?

Dr. Bill Alter - We're going to be reviewed by a review panel you want it reviewed by someone or groups of people before it actually leaves your institution. You would provide those reviewers with the current solicitation, the guide as well as a draft of your proposal. Now who should be those reviewers well of course you've got team members but those team members are very close to your project, they can see that you conveyed the ideas and each team members put into their section what's important but they're very close to the project. You would like an outside group, an independent group to review your proposal, find the gaps, ask the questions, find gaps in the approach, and find gaps in the evaluation plan, so that those questions that they ask are anticipating the questions that would be asked by a review panel, next slide.

Consider the Reviewers Who Have to Read Your Proposal

Dr. Bill Alter - So if anything you can remember think of the reviewer, think of the reviewer as a person that's most critical to a decision on your proposal and make sure that you understand they've got a lot to review, you want the correct words used and you want to make sure that they understand that you're committed to this project. Back to you, Ann.

How to Write a Great Proposal That Won't Get Funded

Dr. Elizabeth Teles - Thanks Bill that was an amazing amount of detail and wonderful information you put in. I'd like to emphasize one thing about these references, they should be reasonably recent references, I mean not particularly last year's but if all your references are from 1980s which we've seen proposals like that, it shows you haven't been, it's not building on the current thing. So what this part is called is "How to Write a Great Proposal" because this is kind of said final thoughts okay "That Won't get Funded." So one is all the commitment letters from industry are exactly the same or virtually the same. So if you're going to do this if you're going to write them for them, make sure that they have some unique things that they are saying in each of those. Three unique letters are much better than ten identical letters, another way you could do it; you can have a commitment contract so that you've got and ensure there an example in there and summarize what it is in the thing. So you might have a little smaller table and then things listing your six industry partners with other side of the table with what they're going to provide, maybe they're going to provide internships or they're going to serve on your advisory board or something like that but the things reviewers really seemed to really like is if you've convened this industry meeting in advance and these people have committed to working with you and

so what you've done is prepare kind of a joint letter going to the project that talks about their commitments to the project okay and maybe that's accompanied by an example of what kind of contract you've got with them. But having these names and some real commitments again you don't want to have a letter that says we love ABC community college and support all they do and we'll think about looking at their graduates maybe, that's just a god bless you letter and it is not worth very much but again, Ann could emphasize this too that they love these meetings because they know you've actually met with these industry people and have some names on it. Another is remember we talked about earlier that the ATE program has to have a workforce assessment or something like that, so if you base the project solely on national data that's going to be one of these fatal flaws because it's not too important that maybe the country needs 200,000 more biotech technicians if there are no biotech companies in your region. So it needs to identify a regional group of partners who are going to be working on the project with you and show there are some real jobs in that area that are available for a student for these degrees, next slide.

How to Write a Great Proposal That Won't Get Funded (Continued)

Dr. Elizabeth Teles - Another one is that all the funds go to support people who are going to be hired without any details about them. It doesn't mean you can't hire somebody on the project just to do it, I mean maybe you need a recruiter which might be part of it and you don't know exactly who that person is but the people who are going to be developing the curriculum and things like that you really need to know what they're going to do. So the ATE program likes you to provide funds for faculty at the college who will be doing the bulk of the work and named those people in it. If you're going to be hiring a recruiter or something that's not part of their regular duties or you going to have a part-time industry recruiter or something talk about what characteristics you'd be looking for in this person. This is something that's pretty new for the ATE program which is beneficial if the college policy allows it and it has to be a written college policy it can be overload pay during the year. So for example if you're used to getting an extra three credits of teaching load as part of your regular duties NSF could pay for those extra three hours again it has to be something that the college allows for everybody not something just made up for this project. But if there are people on it who are going to be working at but you're not requesting any money be sure to include that in the facilities form that we talked about earlier. Again here kind of a killer kind of thing is to say the only PI on the project is an unknown person who's going to get all the money and they have no idea what their qualifications are or what they're going to do or how long they're going to be around, that's just not going to review very well. And similarly a lot of projects will do something like put on the college dean as the PI and then request no money in the budget and all the money in the budget even though that person is a PI all the money goes to hiring some unknown person so again just be sure to provide as much detail as you can about who's going to be doing the project, next slide.

How to Write a Great Proposal That Won't Get Funded (Continued)

Dr. Elizabeth Teles - Insert a boilerplate evaluation plan, so a lot of evaluators who evaluate a lot of ATE projects have their unique styles and they're willing to supply you some of the information and maybe work with you to make it a little bit unique for your project but it's got to be changed so that it reads for your project. It's not too good when one evaluator maybe is working on four proposals that all get assigned to the same panel and it looks like this evaluation plans just been dumped in without making it unique. So you could do something like that Ann talked about evaluation earlier. Now you can use the college research office, institutional research office to do some of the data gathering to help the reviewers. The other kind of killer with this evaluation plan is to have the principal investigators be doing all of the evaluation there has to be some external evaluation of the project, next slide.

How to Write a Great Proposal That Won't Get Funded (Continued)

Dr. Elizabeth Teles - Here's a few others discuss some other funding the project has which used to be a little bit hard with the TAACCCT ABAT, they would say here's all the wonderful things we've done and you've got to build on what you've done but no idea what this particular money is going to do over and beyond what that project did. So you can talk about how you're going to build on a leverage that but it can't just talk about all the wonderful things that had been done without discussing what's going to follow, so if you spend too much time talking about what you've done you won't have any space to talk about what this project is going to do. The next one and Bill talked about this but assume deadlines, font size, page limits and other technical things aren't enforced; they're getting increasingly enforced at the level before they even come to the program officers. Another one is that the college grant writer has a very important role in the project but they're not the principal investigators, okay, it's kind of like their a separation the principal investigators are the content people who are going to be doing the work who know the technology field and things like that. The grants person is the one who knows how to get the proposals in to NSF, they can help clean up things, they're the ones who submits the proposal on behalf of the institution because NSF grants and in general do not go to individuals they go to the institutions. So that's the role of the grants person is to be the institutional representative for this project while the principal investigators are the people in the technician programs that are going to be implemented, next slide.

How to Write a Great Proposal That Won't Get Funded (Continued)

Dr. Elizabeth Teles - Another is again we talked about this have the college dean be the sole PI without any funds requested for their time. Now it could very well be that you're going to request some time from the college dean to be paid out of the grant on this if you can demonstrate that they have the time maybe there's a person who convenes the industry group, they may be the person who's getting things through the approval chain so it certainly could have a clear role for them but they could be on there as one of the other principal investigators but not requesting any money, but if they don't request money remember to put them back in the facility form, about how this was part of their job. Another one is target strictly transfer programs like engineering or computer science without any reference to technician education or what technicians do, now it is a very strong strength of projects if they show that they're always pathways for these students who graduate with these associate degrees, there are some four-year programs they can go to and they're a lot more and increasingly doing this. But the other is proposed improvements in care STEM programs, so for example we're going to improve mathematics by in doing more project-based learning in projects or something like that there could be a lot of good mathematics ideas but if you put that core course in you've got to figure away so you're making sure that the students in there are in the technician programs that are being served by that. It could be that there may be some special sections of this course that are open to the technician students or something like that, we had a couple in the last few years where they wanted to do undergraduate research in chemistry or biology or whatever but without showing how it was technicians who were participating in this or future technicians. So you can do core courses but they have to be ones that you can demonstrate are ones taken by students in technician programs, next slide.

Last Thoughts: Plan Ahead for Proposal Creation

Dr. Elizabeth Teles - Ann's got giving you a little bit more about the rest of the ideas.

Ann Beheler - Thank you, Dr. Teles. I want to emphasize planning is not an option planning and sufficient time dedicated to actually creating the proposal is a must. There are lots of different moving

parts, I actually like to plan to use about six months not six months working on it solidly but I like to start six months ahead of time for the due date. Three months may be fine. It's important to send a one to two-page summary to the program officer to review, they may give you information about someone else who's in your area that you might not know about that becomes important or maybe they might have suggestions for making the project be a little more focused. It's also very very important oh and by the way I do use the project summary, the initial project summary for that other people do not. It's important to schedule regular working sessions with the stakeholders especially with the PI and coPIs. It does not work for faculty, for example in a district where you have faculty on two different campuses to be hitting and missing about getting together to actually write the ideas for the proposal, a grant writer can help, but a grant writer really can't come up with the ideas and can't come up with the goals and objectives and activities that's something that the PI and the coPIs need to do. You can delegate the creation of the parts of the proposal among the faculty or the coPIs but it's important to have at least one person not at least, to have one person combine all the parts so that you have a single voice and tone and it flows well. I like to finish the entire proposal a month prior to due date I have to say that's our goal we usually don't get it but we do try to go for two weeks ahead and that gives us time to have the proposal read by somebody that is not in the weeds with us. It's important to have it read by someone who might kind of be generally knowledgeable about your discipline but not an expert in the discipline, because as Dr. Teles suggested the reviewers may or may not be from your discipline. Take time to evaluate and incorporate any suggestions and if you make it a month ahead of time you can have the updated draft reviewed again and that's a good idea too.

Dr. Elizabeth Teles – Ann can I put in something lets make that a one-page summary because this is the idea eventually you're going to have to be able, we've talked a lot about that project summary this is a good time to make sure you can get your major ideas across in one page. Also I would say program officers are gone, we do lots of other things so give a sufficient time to give you some feedback on these things and sometimes it's good to arrange a telephone call, don't try to just call us but arrange a telephone call may be easier than I was writing written comments back on it, thanks.

Last Thoughts and Reminders: Read Solicitation and Use PAPPG

Ann Beheler - Thanks that's good. Okay some other last thoughts and I'm not going to belabor this read the solicitation and use the PAPPG. Judge everything you do against the solicitation and remember that the solicitation trumps the PAPPG. And I think we've now said it all three of us have said it formatting matters, on the table setup that we use we do not use any smaller font for the words in our tables than we use for the words in the narrative I think we're actually allowed to but that does not work in your favor because people can't read it.

Reminder – Identifying Existing Awards

Ann Beheler - Remember there's a way to identify existing awards, we showed that I think not in the last webinar but in the previous one. Here's the link, you can enter your search words and you can find the abstracts of the existing awards in your area. Please do contact those PIs to identify if there are opportunities for collaboration and you can very often get commitment from them.

Enter the Proposal Early

Ann Beheler - Enter the proposal early, I like to enter the various proposal parts as they are completed, my grants office does not do that for me, I actually do that. But I like to have it in early, we can always update a section before the we actually press submit to get the authorized organizational representative to review it and do the final submit so you need to allow time but once pieces are done I put them up there. Register the PIs or the potential PIs early, it's very important that the PIs and coPIs are in the

database and you don't want to wait till the last minute for that to. And remember the authorized organizational representative may or may not be just sitting there waiting for you to press enter so that they can then review quickly and press enter. I keep them involved all the way along the way they know what's out there, they also know the timeline and they're able to press enter usually pretty quickly.

What to Expect, Submission and After

Ann Beheler – Dr. Teles, would you sum it up?

Dr. Elizabeth Teles - Okay thanks a lot Ann. Again you can do it early and the reason for registering the PIs is to keep social security numbers and things like that private. But now you should know you've written this great proposal and you've put so much time into it that we know you're waiting with anxious breath about what's going to happen to it, so the due day is October the 4th this year and that means 5 o'clock your time. Even if you're in Hawaii, if your institution is in Texas it means five o'clock Texas time they that's what that means. But the panels don't meet until early December and NSF is a little bit like a college that between Christmas and the middle of January people go off on vacations so truthfully it's about the middle of January before most program officers start contacting institutions about it. If you are contacted by a program officer we do try to negotiate in good faith it doesn't mean that we're going to fund everyone but if you give us the answer and we will keep working together with this we do mean to do something with it. If you've never had NSF funding before you're also going to have to do something through our grants office to show that the institution can handle it. So all of this can take a long time, we very seldom I don't remember ever just saying okay you have the money it actually gives you some chance to expand on some of the information you put in the proposal that we may have some questions about. But be patient, don't start sending notes to your program officer and the institution can find out who it is who its assigned to, it initially will go into the ATE program lead if they're doing ATEs or whatever. But I would say wait at least that six months and this isn't true of everybody but in general most people are try to do the declines before the awards. But again this is how we work with it, next slide.

Resources

Dr. Elizabeth Teles - These are some of the resources we keep talking about the proposal and awards policy and procedures guide, this is really the grants person that needs to be very very familiar with this to provide some guidance on this. But at least the PI should have some knowledge of what's in there you know overall what's the page size, what's the font that's allowed, whatever all our reviewers don't have great eyes so again sacrifice some extra information from making it readable and all. But that's exactly those that Bill talked about the NSF rules and that. Even more helpful Mentor-Connect library has a lot of resources out there that you can use. They've got a new site that's just put up and so use their information and they can help you a lot they're. The Centers Collaborative for Technical Assistance is Ann is putting on this webinar and they have a lot of information about their connections on the ATE Central website. I would also say the ATE Central website is also a wealth of information about what ATE funded before and so it's a good place to go do some searching. So for example if you were going to do something on project-based learning you could do a search of that site for it. So the ATE Central is more than just for this collaborative. The logic model there's a link to the evaluation workshop you might also want to attend some of the Evaluation centers very well done webinars too. And we gave you the NSF site for searching for awards and the awards there that have been funded. I'll also let you have the contact information about how you can contact the principal investigators, next slide.

Ann Beheler – Dr. Teles, let me correct something here on the Center's Collaborative for Technical Assistance it's actually ATEcenters.org as it is shown on this slide (Previous CCTA Webinars) we have gone through these slides I don't know at least 15 times and we still overlook that. I apologize.

Previous CCTA Webinars

Dr. Elizabeth Teles – Okay, well why don't you handle this next slide.

Ann Beheler - Okay this one is a place for you to go to hear recorded webinars. We had four webinars last year on creating a competitive proposal and then we updated them this year with more information and actually to represent the changes in the solicitation so there is a wealth of information there. There are also supporting documents if I recall correctly my layout for how I do tables with goals, objectives and activities, responsibilities and timelines I think that layouts actually there too. And there are transcripts if you don't want to take the time to listen to one of the webinars you can actually skim through the transcript so that you can see if there's something you want to know about.

Questions

Can you speak briefly about the new submission portal Research.gov vs Fastlane and any critical changes you would highlight?

Dr. Elizabeth Teles - Okay well that's just in the experimental stage right now it's just started to be available you can submit it this fall I probably truthfully wouldn't recommend it until it's gone through a couple of these phases it's not available for certain types of proposals at this point in time like collaboratives and these kinds of things but research.gov is coming just like it's already used for submitting reports and things like that it's supposed to be a lot more friendly and easier to use eventually but at the moment it's just entered its first experimental stage and so I guess I would say stick with Fastlane this fall. The dates I've been hearing are twenty twenty to twenty twenty-one is kind of when they think they're going to be bringing it on.

Ann Beheler – Dr. Teles, I'm going to interrupt you because some of the information that I found online said that after April 30th we had this year that we had to use that new site so why don't we commit from CCTA that we will put out a small webinar or at least something that explains that to everyone because I know we're all going to need to know how to do it if in fact we don't have a choice. I am very very pleased to use Fastlane and I'm hopeful that it's going to function very similar to Fastlane once it's on Research.gov but again one of the advisories I saw said that we were going to have to use it after April 30th this year.

Dr. Elizabeth Teles - Well I did inquire about that and I was told that you will have the option. You have to use Research.gov now to submit reports and things like that after it's been funded but I'm sure they're going to start encouraging you to use it but I may not have sent you the final information I got but this is the information I got. That it's just in the experimental stages this year and the pilot efforts and I'm pretty sure ATE is not one of the required pilot ones for it but I would say if it turns out and then subsequent information that perhaps Ann would agree to try to send some kind of quick email out to folks saying here's something to be to be looking at but my best information is 2020.

Ann Beheler - We will and we could do a short webinar on how to use it to once we figure out how to use it.

Dr. Elizabeth Teles - Sounds good. There will be like NSF's Fastlane there will certainly be a support center for you to use but you can't use that unless you start early and the first time you use Research.gov you may want to give yourself even a little extra time.

Is there a general rule of thumb about asking for funds less than the total allowed? If the amount is too small is the project theme less than worthy or is it most important to align the budget with what is truly needed to fund the project activity?

Dr. Elizabeth Teles - You want to align the budget to match the project activity. I very seldom see them come in too small. There's a tendency to always request the maximum amount of money so if you say six hundred thousand for projects say ninety six percent of them come in at five hundred ninety nine thousand eight hundred and six dollars or something like that. So I actually find ones that are more competitive may have come in at 425 because they really thought about how much money it takes and you know whether people will have the time to do it. On the other hand you don't want to request too little because although I've seldom seen that but occasionally I've seen one that asks for twenty-five thousand and is not apparent how that amount of money could possibly do what the project wants to do so it's important to match the budget carefully to what activities are going to be carried out. Sometime it means you have to cut back on the number of activities you want because you can't do that with the amount of money that's requested that's particularly relevant I think for the small grants.

It was mentioned about submitting a proposal early but can you submit a proposal too early?

Ann Beheler - I guess what I would say is put the information up there but you do not need to press the final submit button until closer to the due date but if you go ahead and upload all the various parts as you go as they get finalized then it makes it less onerous right close to the due date to try to get everything up there.

Dr. Elizabeth Teles - I agree I guess I would say our fiscal deadline at NSF is September thirtieth and at that point if it becomes the next fiscal year and it's probably better not to do that formal one until like October 1 or later so you know October 1st or 2nd just push that final button but one of the really unique things that I think is really great about NSF is you can start uploading sections now for the fall or something like that so it's a temporary proposal number. The reason I wouldn't submit it after October 4th is because it has a different number and sometimes we've had to search to find ones when we run reports to see if something's missing or not there.

Liz, if you had to give one top tip to someone writing a proposal for it to be a successful competitive proposal what would your one top tip be?

Dr. Elizabeth Teles - It would be to have a great idea of how you're going to prepare a super great group of technicians that clearly serve your identified industry partners.

Bill, what would your top tip be?

Dr. Bill Alter - I'll make it three parts you know what the solicitation says. You begin with the reviewer in mind and you ensure your proposal is readable.

Ann, what would your top tip be?

Ann Beheler - Address your good idea with a compelling story and provide details in a concise manner.

Dr. Elizabeth Teles - I'm going to go back and say Amen to Ann, I've been reading some in another program, they're so dense so you can't read them I mean and they try to get in every last detail so think about you know what's the important ideas together cause here too.

Dr. Bill Alter - I might offer something there, when you're rewriting a proposal your initial stages are not to write it to be 15 pages long, write it as long as it takes to get down the information you want and then recall accordingly, maintain what's important get rid of the riffraff.

Ann Beheler - That's a good idea so are we ready to move on Christina?

For ATE projects what is the advantage of having multiple colleges engaged as partners? Is regional coverage seen as important or beneficial?

Ann Beheler – Dr. Teles you want to handle that one?

Dr. Elizabeth Teles - You want me to try to have at that. Only if it makes sense in the context of what it is. I guess you don't want to force this if it's not part of what this creative thing for these. Now on the other hand you have to show that it's going to impact beyond your college, so let's suppose you're creating something new in cybersecurity that's attached to what it is you have to find a way so maybe you're going to have a workshop for three other colleges or they may be two colleges in your system or another college in your campus where it's natural for you to work together you know the PI's have already communicated together. So I would say you don't want to force it but it could be good if it's not something that looks artificial. I guess I don't want it to look artificial but it does have to look something that's not just local just for you. So inviting several colleges there is something coming up and a new opportunity you should probably investigate a little bit which is called Collaborative Network so you might want to look at that as an idea but that's to create new networks that aren't there before so you might want to look at that as a way to perhaps be doing some of that. But again that's something if you want to do one of those I would share it with Dr. Carter. A tip is don't do anything that you don't have the people and the resources to do and a management plan to make it work, but inviting your three other neighbors and community colleges to come in for a workshop toward the end of the project is often a good idea.

Ann Beheler - I will say as a reviewer all things equal if the story that goes with the good idea makes sense to have other colleges involved, I view it as favorable because it's kind of built in broadening participation if you have other colleges involved. But if it doesn't make sense it doesn't make sense and then it's really obvious when another college has been turned in just to have another college. Anything else Christina?

Dr. Elizabeth Teles - If you do that if it's a true collaborative you probably should have principal investigators from both of the institutions and that's different than involving them later as people who might adapt some of your ideas.

Join us in Miami!

Ann Beheler – Okay, well we're going to wind this up if you haven't had enough of us or enough of the subjects please join us in Miami for the HI-TEC conference. The conference actually runs from the 23rd through the 26th at the Intercontinental Hotel in Miami, Florida.

Register for HI-TEC and DOL and NSF Workforce Convening

Ann Beheler - But there is a free workforce convening for DOL and NSF purposes right after the conference on Friday July 27th from 8:30 to 12:30 there will be one or more program officers there I don't believe that Dr. Teles can be there because she's going to be on a vacation but we're going to have one or more program officers there. We will have several of the leads from major grants there to provide one-on-one consultation for you and also we will have a panel and cover a lot of the frequently asked questions believe it or not there are lots more questions that can be asked. So we will do that on the 27th and that's free, you do need to register on the High Impact Tech website which is up above there is a registration for this convening.

Contacts

Ann Beheler - Here are our contacts. Dr. Teles thank you very much for taking your time to do this webinar with us I learned some things today and I've been writing grants for a very long time I think it was great. And Dr. Alter thank you very much for you being involved again I learned some things from you too and I appreciate both of you and I wish you well everyone on this group I wish you well in creating your competitive proposals for submission this fall. That's it thank you very much and here comes the survey as you exit, we do appreciate you doing that thank you.