With today's high cost of establishing and operating industrial technology programs and shrinking educational funding budgets, external funding agencies are a realistic source of needed income. The prospective grant writer must keep in mind that each source of funding has a need to invest money entrusted to it in ways that reflect the goals of the funding organization. Preliminary research of the targeted funding source is critical to the successful award. A 5-year outline for preparing grant proposals should contain both short- and long-term goals tied to specific timelines. A reasonable long-term goal would be to conduct a research project that would yield information for several follow-up studies. Following establishment of long-term goals, a short-term goal outline would be constructed. In conjunction with these specific annual, monthly, or weekly events and tasks, a timeline should be developed. The process of selecting a topic begins with an idea based on an authentic need or problem to be solved; an outline draft would follow. Once a funding agency has expressed an interest, a letter outlining the detailed needs of the program should follow. Public government grant and research proposals often dictate requirements for lengthy documentation; private grants are typically more concise. Most proposal outlines follow a framework similar to this: summary, information on proposed project, basic information, general information, and financial information. (YLB)
External Funding Considerations

For

Obtaining Research And Training Grants

By

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Introduction

Research and training grant writing is often thought of as a complex and difficult task—one that many of us avoid or least relegate to the bottom of the "things to do" list. Possibly due to general misunderstandings combined with the exigent nature of the proposal writing process, it's easy to become overwhelmed with the whole procedure. Perhaps likened to a trip to the dentist, most of us have many reasons why research and training grants are not viewed as an enjoyable task (e.g., excessive time requirements, low success rates or lack of fellow teaming partners, to name a few). Unfortunately, as a result, many grant opportunities are missed. Undoubtedly, the least understood aspect of successful research and training grant writing appears to be in comprehending the process, that is to say, the methodology, mechanics and exacting details that must be followed in order to win grant awards (Bauer, 1985).

In a larger sense, research and training grant writing can be viewed as a process that promotes and encourages collective and specific creative intelligence to attempt to resolve problems that affect us all (Sumerford, 1995). By offering money to resolve problems, funding sources benefit from competition among the sharpest minds and associations that seek their funds (Bauer, 1985). The process, if properly approached, can result in a win-win situation where the institution, faculty, students, and programs all benefit.

The purpose of this paper is to lay-out a five year plan to achieve success in obtaining research and training grants in my field of specialization—Industrial Technology. I will begin by attempting to demystify the process and will suggest a logical, forthright approach to in order to meet the external funding mandate of my new dean.
Time Well Spent

With today's high cost of establishing and operating Industrial Technology programs, coupled with shrinking educational funding budgets, solicitation of funding agencies is more important than ever and can serve as a realistic source of needed income. All avenues of potential funding should be considered—business/industry, federal and state, technical and trade associations, and philanthropic entities to name a few. As educators involved in technologically-based programs well know, the cost of operating laboratories or improving and expanding existing curriculums is expensive. It may difficult if not impossible to keep pace with rapidly changing technologies without outside assistance (Liedtke & Loepp, n.d.).

Where to Begin

It is important to keep in mind each source of funding has a specific mission and perspective based on its values and how it interprets its mission as a granting entity. Consequently, each funding organization has a need to invest the money entrusted to it in ways that reflect their views and goals. The goal therefore, is to submit the best possible proposal to a targeted audience. Audiences are usually divided into two categories—private foundations or public / federal government agencies. With this in mind, the successful grant writer is one who does their homework to find out what the funding agency wants before the proposal is drafted.

Setting Goals and Developing a Timeline

While it seems making the commitment to grant writing is easy—fulfilling that commitment maybe another matter. We all have good intentions and often start out believing that we will schedule ourselves for the time it takes
to prepare grant proposals. With this thought in mind, my five year outline would contain both short and long-term goals tied to specific timelines.

Long term goals require sensible planning, commitment, and consideration of the future events which will impact one's career. For example, one of my long-term goals would be to attain a major foundation grant. Another might be to have a specific amount of funding or type of funding by a certain year. A reasonable long-term goal would be to conduct a research or funded project which would yield sufficient information for several related follow-up studies (Liedtke & Loepp, n.d.). A long-term calendar of events would include such items as—

- submitting three grant proposals each year, of which one will be to a private funding agency,
- increasing each year the number of proposals submitted to agencies, and
- developing a system for gathering information and preparing proposals.

Following the establishment of long-term goals, a short-term goal outline would be constructed. These are the specific annual, monthly, or weekly events and tasks which would fortify and detail the long-term goals. In conjunction with the short-term goals, I would develop a timeline. As an example, using the first long-term goal stated above, a short-term goal outline would be as follows—

- determine two viable funding agencies by a certain date,
- obtain and review the guidelines,
- outline the proposal,
- spend two hours per week (day and time) to complete the grant proposal, and
- conduct a library search for related literature.
Selecting A Topic

We all may know individuals that have little difficulty in regularly producing fundable ideas. Transformation of ideas into research and grant proposals may come with ease to these "select" few. However, this is the exception and not the norm—most of us have to spend a good deal of time just selecting a viable topic—much less drafting, editing and submitting a proposal (Liedtke & Loepp, n.d.). To encourage participation in the proposal process and to increase the odds of award, a more systematic approach may be needed.

The process of selecting a topic begins with an idea, followed by an outline draft. The idea should be based on an authentic need or problem to be solved. It could, for example, be a need at your school or community for implementing a new technology or enhancing/developing new curriculum. It could be pure experimentation, "what if..." or "why doesn't this work..." or a project taken from previous research (Liedtke & Loepp, n.d.). As a source of additional ideas, consider articles in trade journals or educational literature (e.g., Journal of Industrial Technology, Techniques, Manufacturing Engineering, etc.).

Generally, as you might suspect, the best person to fashion the draft is the one that had the original idea. Once the idea is put to paper and a possible fit or match with a funding agency is achieved, contacting the funding agency (s) to sell the idea is the next logical step. Full-blown proposals blindly forwarded to funding agencies or simply "tossed over the wall" rarely succeed. The main thought at this stage is to place the emphasis on selling the IDEA and not your institution.

Once a funding agency has expressed an interest, a brief introductory or full-blown letter outlining the detailed needs of your program should follow. Most guidelines for funding agencies require an introductory letter to the
foundation for preliminary appraisal. Often, if they are interested, the funding agency will request a more detailed outline (Brewer, 1995).

Private Vs. Public Government Grants

Public government funding agencies are typically where most of the major sources of money are found. These types of grants are based on written legislation, impact specific groups, pay direct and indirect costs, require lengthy proposals, favor successful grantees and depend on political trends (Sumerford, 1995).

Private grants, on the other hand, tend to focus on emerging issues, put less emphasis on proposals, give grantseekers more flexibility and cut down on red tape, vary tremendously in size and scope, allow no indirect costs and seldom give reasons for not funding (Sumerford, 1995). Private funders also change priorities more often and much faster than their federal counterparts, allow flexibility in project administration and are more interested in specific outcomes. Unlike federal funding, private funders do not always limit funding to strict categorical divisions—with the understanding that is not how real world problems exist (Sumerford, 1995). Reviewing specialized publications on private grant opportunities such as the Chronicle on Philanthropy or the New York based Foundation Center, can increase your understanding of this type of grant.

Finally, private grants need to be thorough, but brief. Private funding agencies tend to prefer initial letters of inquiry similar to a federal abstract with an introduction to the grantseekers organization and a statement linking the project purpose to the goal of the founder (Sumerford, 1995).

Identifying Funding Agencies

Another key to successful research and training grants is finding the agency that provides funds for your particular interest or cause. By narrowing down the
prospective agencies to those that share common interests, the chances of being selected are increased. This may add to promoting a positive attitude making the draft proposal a little easier to tackle. Sources for funding may be located in directories or cd/rom computer database searches located in public or educational institutional libraries, (e.g., ERIC, ABI, Psyclit, INFOTRAC, etc.); through computer searches on the Internet (there are dozens of sights on the web, e.g., IRIS Funding Opportunities Database—University of Illinois, http://carousel.lis.uiuc.edu/~iris/search.html); or through the trade and technical associations found within the industrial technology profession.

Once the appropriate funding agencies were identified, call or write to obtain their particular guidelines for proposals. While in contact, request a listing and description of the projects that were funded in the previous year. This would give additional insight as to what types of proposals were funded to help determine and insure you are at the right place (Liedtke & Loepp, n.d.).

The moral of the story is this—attempt to know who you are targeting, what they have funded in the past, what they require, and follow their guidelines in exacting detail when composing the proposal.
Organization

Although there is no one standard approach to a proposal outline, most follow a framework similar to this.

1. Summary—**a one page overview of your proposal.**

   This very important piece of the proposal is sometimes referred to as the "proposal abstract" and is typically the first paragraph of a letter-type proposal. Since this is most probably the first section the funding source will read, it should *not* be viewed as an afterthought. It should include such things as who you are, and the scope and cost of my project (Kiritz & Mundel, 1988).

2. Information on Proposed Project

   a. Evidence of the need for the project,

   b. Objectives of the project,

   c. Benefits of the project, expected results, who will benefit,

   d. Detailed budget,

   e. Overview and Schedule

      (1) Activities outline and dates

      (2) Checkpoints where project can be measured and progress evaluated.

3. Basic Information

   a. Name of organization,

   b. Address,

   c. Telephone number,

   d. Contact person and title,

   e. Names and affiliations of directors and trustees,

   f. Copy of my organization's IRS exception letter (letter showing that you are a 501(c) (3) organization). This letter from the IRS contains information
regarding the basis for your exception and the requirements associated with maintaining it (Kiritz & Mundel, 1988).

4. General Information (provide some general information about the nature of your organization)

   This part of the proposal can be broadly described as the "credibility" section. Is your institution well-known in the respective field or are the members of your board of directors made up of prominent scholars or distinguished philanthropists? Or are your board members reflective of those who have contributed to their communities on a local level (Kiritz & Mundel, 1988). This section typically includes—
   
   a. General purpose of the organization,
   b. People and constituent groups the organization serves,
   c. Type of organization.

5. Financial Information

   a. Most recent three years' financial statement, preferably audited, and three years IRS tax forms 990,
   b. Sources of the organization's funds, both public and private.

   (Technical Foundation of America, 1996).

Conclusion

   This external funding strategy, depending on the program needs, the perseverance of the writer, and the funding agency targeted involves several different strategies. Undoubtedly, approaching and soliciting individuals or organizations for money is a difficult and time consuming task and as such, research and training grants do not rank vary high on the list of enjoyable things to do. However, I believe it is possible to simplify the process given some organization coupled with a *positive attitude.*
Its important for the prospective grant writer to remember that each source has a need to invest the money entrusted to it in ways that reflect how they view the goals of their organization. Upfront research of the targeted funding source is critical to the successful award. Finding out the purpose of the targeted grant program, along with priorities, selection criteria, guidelines and past funding can vastly increase your understanding of how your proposal "fits" the funding organization.

Fundamental differences exist between government and private grants. Federal grant and research proposals often dictate the requirements for lengthy documentation in detail, such as vitas, job descriptions, proof that your organization is non-profit, audited financial reports, current contributors and names of board members. Private grants, other hand, are typically more concise keeping the amount of required information to a minimum.

The key is to include exactly what is requested—nothing more or less. Above all, search for what and why the potential funder is interested in funding. Ask yourself, did the family or corporation establishing the foundation have a particular interest in mind that was translated into its grant awarding guidelines? Or is it simply an organization that desires better prepared high school graduates as potential employees?

Effective proposal writing comes down to this, the recipient of the proposal desires a clear and accurate picture of—

1. Your organization,
2. What your project is all about,
3. Who will benefit and how, and
4. Your estimate of the project time length and what the project will cost.

By selecting my funding agency (s) carefully, supplying exactly what is requested and insuring they have a viable need (coupled with some divine
intervention), I believe the research and grant proposal process as outlined above can be a rewarding and satisfying experience and will result in meeting the needs of my dean and institution.
REFERENCES


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