DOCUMENT RESUME

ED 321 260 CS 212 410

AUTHOR Chappell, Virginia

TITLE Freshmen in the Library: Making Meaning Out of

Diverse Discourse Communities.

PUB DATE Mar 90

NOTE 13p.; Paper presented at the Annual Meeting of the

Conference on College Composition and Communication (41st, Chicago, IL, March 22-24, 1999). Attachments

may not reproduce legibly due to filled print.

PUB TYPE Speeches/Conference Papers (150) -- Viewpoints (120)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.

DESCRIPTORS *Audience Awareness; Discourse Modes; Expository

Writing; Freshman Composition; Higher Education; *Library Materials; Reading Writing Relationship; *Research Papers (Students); *Rhetoric; Writing

Assignments; *Writing Instruction

IDENTIFIERS *Rhetorical Community

ABSTRACT

The library can assist in grounding college student writing in reading and inquiry rather than in the mere retrieval of information Fundamental rhetorical goals can best by met by getting students into the library to ask questions, analyze sources, and evaluate claims so they can react to and incorporate the work of other writers into their own texts. A successful approach in accomplishing these goals is two-fold. First, inquiry projects based on argumentation become real to students when they are generated by the class as a collaborative rhetorical community in which questions and answers are valued and sought after. Second, a gradual group investigation of the argument from different angles assists individuals in making sense out of a mass of information. Students obtain a better understanding of the materials and issues that they and their classmates have sketched out in collaborative discussion, and they can begin to decide what directions they want to take in papers they are writing individually. The students gain valuable experience abou audiences and contexts of materials, which they can incorporate in their individual projects. (An appendix contains two articles used for rhetorical reading and library assignments.) (KEH)

Reproductions supplied by EDRS are the best that can be made

from the original document.

ED321260

"PEHMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- □ This document has been reproduced as received from the person or organization originating it.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

Freshmen in the Library: Making Meaning Out of Divers Discourse Communities

1990 Conference on College Composition and Communication, Chicago, IL

Virginia Chappell, Assistant Professor Department of English, Marquette University Milwaukee, WI 53233

Our panel's primary purpose has been to redefine the conceptual issues involved in research papci assignments, and so to suggest new approaches to bibliographic instruction through faculty-librarian collaboration. As we see it, the fundamental problem with the traditional model of undergraduate library research lies in its assumptions about the location of the questions and answers the students are working with. If faculty seem to produce the questions (they give the assignment), and librarians know how to find the answers, then the student's role becomes merely that of an information conduit. We argue that both questions and answers are more properly located by and through the students themselves. It is the questions as well as the answers that the students should discover and articulate through their research and composing processes.

If we want to teach students to put the information they find in the library to meaningful use in their papers, we-librarians and faculty alike-must consider more carefully the substantive issues involved in preparing them for the library work and ourselves for assisting them. The forms of collaborative bibliographic instruction our panel recommends go beyond a class visit to the library for a skills lecture or competency exercises. Instead, this collaboration involves establishing a shared understanding of the rhetorical issues involved in forwarding arguments that support knowledge claims within a specific discipline.

My purpose on this panel is to suggest some specific ways in which we can and should take advantage of libraries as a venue for teaching first-year



college students <u>not</u> footnotes and notecards and card catalogs and databases, but-for teaching RHETORIC. Rhetoric as in discovery and change. Rhetoric as in studying and cemedying misunderstandings. Rhetoric as in making use of the means available to instruct, delight, or move an audience.

Audiences are key when one speaks of rhetoric, and freshmen need to learn about them. I don't mean audience as in "write to interest your classmates in the subject." I mean audience as Douglas Park talks about it: "people-as-they-are-involved-in-a-situation" (1982, 249). I mean the audiences whose information needs, pre-conceptions, assumptions, resistances, and even pocketbooks have impinged upon the texts available for students to retrieve and respond to with the papers they write for us. A major problem with sending freshmen off to the library is that they are not aware of the assumptions about audience that have shaped the discourse they encounter there. A still deeper problem is that first year students are just generally naive about the rhetorical qualities of texts: they don't know that texts have contexts, that they are rhetorically situated.

What I want to do this afternoon is not so much suggest how to address this rhetorical naiveté and so help students write a better research paper—whatever THAT is. Rather, I want to work on this freshmen—in—the—library problem by standing it on its head. I suggest that we use libraries and the myriad kinds of information available in them as a means of helping students discover how discourse is rhetorically addressed, THAT discourse is rhetorically addressed. Assigning library research, in other words, is a way to eradicate rhetorical naiveté. In freshman composition classes, educating students about audiences and their influence on texts is what libraries, and assignments that lead students to libraries, are for.

I expressed some puzzlement a moment ago about what a research paper is.



This may seem to be an irreverent question, or at least a silly one, since the book displays offer us I would guess at least a hundred examples. But it's a real issue. You probably know one when you see one, but what's it for? Why do we ask students to write them? Sometimes I think that "research papers" are the last bastion of product-based composition pedagogy. Time and again I have seen a textbook or a syllabus abandon rhetorical issues once it turns to the matter of library resources. "Process" becomes a matter of "step four, organize your notecards to fit your outline."

But then, in my despair, I remember a line from a 1985 essay by James Reither, called "Writing and Knowing: Toward Redefining the Writing Process." There, wrapping up his argument that academic inquiry is a collaborative, social process that not only results in but from social products, he comments simply that "To 'teach writing' is ... necessarily to ground writing in reading and inquiry" (Tate & Corbett 145). So there is what I say a "research paper" is, whatever its particular manifestation at your school. It's a means of grounding writing in reading and inquiry. Frequently it is institutionalized into a confusing maze of formal conventions and "process" guidelines that, I suspect, little resemble what harried, normal people do when they try to discover and share information and so create knowledge. But here is a touchstone: a means of grounding writing in reading and inquiry.

In essence, there is a serious tension—and to my mind a theoretical contradiction—between the retrieval skills approach that informs so many textbook assignments and the rhetorically grounded inquiry approach implicit in Reither's maxim. The problem is analogous to the whole matter of teaching grammar, or, actually, of not teaching grammar. We all know that students who can do grammar exercises beautifully can not be counted on to avoid grammatical errors in their own texts. Analogously, successfully retrieving information in



a treasure hunt exercise doesn't by any means guarantee that students will be able to marshal the support they need for a paper explaining fetal alcohol syndrome or El Niño. Actually, I don't teach grammar, but I talk about it all the time, in regard to matters of textual clarity and emphasis. Likewise, I don't teach "research skills" or "citation conventions," but I talk about them all the time, in the context of information that needs to be found, or sources that need to be documented so that someone else can, yes, find them, but more importantly, so that someone else can recognize the authority that lies behind a particular assertion. Even the picky details of parenthetical documentation have a rhetorical purpose. But jusc like the intricacies of verb tenses or dangling participles, they are a lot more interesting when they are discussed and used in a communicative context, that is, when the student can see the impact that even subtle changes may have on a reader's understanding.

My argument, then, is that the fundamental rhetorical goals of beginning composition classes can be well met, perhaps even best met, by getting students into the library to ask questions, analyze sources, and evaluate claims so that they can react to and incorporate the work of other writers into their own texts. Basically, the approach I espouse depends upon two fundamental principles: do it gradually and make it real.

Let me talk first about making it real. One popular way of encouraging student engagement with a freshman research project is to assign an argument paper based on library research. The student has to go to the library, do research on a controversial issue, take a position, and marshal outside sources to defend it. As a writing center instructor I watched literally hundreds of students—and at least a score of teaching assistants—flail around with this kind of assignment. It seems like a reasonable goal for a composition course, a miniature version of that academic project, research. That's why it's



inscribed in so many freshman programs. Certainly our colleagues in other departments who want us to train students to do research properly think it's a good idea. But usually such an assignment is not real. It's a Research Paper Assignment. It usually comes suddenly upon the class and is too complicated for the time and background allotted; it gets simplistic results. My experience is that students turn down the intensity of their inquiry so that they can stick with something they can argue—usually a position they held when they first went into the library. I wouldn't want to say categorically, don't use this kind of assignment. I do want to insist that if it is to be valuable as something more than a painful exercise—on both sides of the marking pen—we must rethink its purpose and prepare students for it thoroughly. We must endeavor to involve the students in inquiry. And genuine inquiry is not synonymous with taking sides in a controversy, no matter how real the controversy may be.

Inquiry, or research, projects become real to students when they are generated by the social milieu of the class. That is, when the class itself has become constituted as a rhetorical community in which questions and their answers are valued and sought after. I recommend that you look for ways to foster community engagement with a topic through collaborative activities. A corollary principle of making it real might be, have the research activity feed into something larger. If the research exists merely as the be all and end all of an individual paper, it becomes performance, not inquiry. The class as a whole might be working on a broad topic—such as a controversial issue or the social backgrounds of a literary work. Individuals or, preferably, groups would investigate aspects of the topic from different angles. These task forces, which develop their own internal sense of responsibility and loyalty, then are responsible for reporting back to the class as a whole to assist other



individuals and groups in making sense out of a mass of information.

These task forces also enact my other fundamental principle for freshman library-based projects: "do it gradually." One of the values of team projects on a subject with which the entire class is engaged is that the work helps individual students edge up on a research problem that they can turn into an essay. They get a taste of "what's out there" in a universe of materials and issues that they and their classmates have sketched out in group brainstorming, and they can begin to decide what directions they want to take in papers they are writing individually.

An essential aspect of "doing it gradually" is for the students to have had plenty of experience throughout the term talking about the audiences and contexts of matericis they have read as a class. This begins with the students' own experiences as an audience of readers. In my classes, discussion frequently revolves around the students' readerly responses to various elements of the essays in the anthology we use. We also spend a lot of time on ways the students can involve an audience in a piece of their own writing. I ask them to speculate about what their readers' resistances to their claims might be.

We talk about establishing warrants, about reducing threat, and about constructing enthymemes. The journal entries that I invite them to do as they plan essays include speculations about what their readers already know and what they will still need to know if they are to accept the student writer's claims. About a third of the students end up in the library of their own accord hunting down this missing information, even when they weren't assigned to go.

An important goal here is to help students not just to write with audience needs in mind, but to read rhetorically, a concept that Christina Haas and Linda Flower have defined in their research as "an active attempt at constructing a rhetorical context for the text as a way of making sense of it"



(167-68). Changing students' reading strategies is not an easy task, because students, especially freshmen, get bogged down in content. As Haas and Flower point out, they have been trained in reading as a "knowledge-getting" process, and in writing as a "knowledge-telling" process (182). There's no rhetorical triangle in that kind of reading and writing, just a conduit for information transfer. And so there's certainly no rhetorical situation to be analyzed, and nothing to do in the library except "look up stuff."

One way that I have used the library to tackle this problem of arhetorical reading is represented in your handout. (See Appendix.) You have two articles about a new laser technique for removing birth marks, one version from Newsweek and the other, the first page from the The New England Journal of Medicine report that the Newsweek piece is based upon. I think even a casual glance will suggest a number of points of contrast about the rhetorical strategies of these two "Outside Sources." Sometimes I have freshman themselves go find pairings like this one and then write and talk about the inferences one can draw about the authors' assessment of audience expectations, knowledge, and concerns. This semester, to simplify assignments and to curtail students' frustration over trying to "get knowledge" out of technical articles, I plan to present this pair for class discussion of those rhetorical issues. One of the advantages of contrasting materials like this, by the way, is that it reveals Time and the other newsweeklies not as the objective oracles that students too often take them to be, but as carefully constructed rhetorical objects. (The germ of my approach bere comes from Arthur Walzer's analysis of different presentations of research from the "California Divorce Project.")

In the time I have left, I'd like to elaborate on this "make it real" and "do it gradually" process with an example from my second semester freshman composition class at Marquette. We are reading Farewell to Manzanar, which is



about a young Japanese-American girl's experiences in a World War II internment camp. The final assignment of the semester is to mount an argument relevant to the book, its historical context, or related issues, and support those claims by using outside sources. (Arguing the rightness or wrongness of the internment is specifically excluded from topic options.) One of the ways that I edge up on this gradually and make it real is that very early in our discussion of Farewell to Manzanar, I assign small groups to give us reports on the meaning and relevance of terms and concepts such as "No-no boy," "habeas corpus," and "due process," and of key historical figures, such as Dillon Myer and Gordon Hirabayashi. Several of the items have been generated in a class question analysis brainstorming session; others I assign as background that I consider essential. If you'd like guidance about organizing classes around a purer form of collaboration, with the teacher less directive, I recommend James Reither and Douglas Vipoud's essay on "Writing as Collaboration" in the Necember 1989 College English. They organize whole courses as "Collaborative Investigations" of what they describe as "a more or less original scholarly question or field" (862-63). "Library research," they report, "is always part of the project" (862).

To keep students focused on rhetorical is wes, there may be times when simplifying the search process is in order. For the Manzanar project, I put the most relevant books in our library's holdings on overnight reserve. I know this short-circuits experience with the subject catalog, actually with the subject command for the on-line catalog. But I rationalize the decision three ways. First, there are plenty of other materials for them to uncover on their own, and when they are engaged in answering questions—as opposed to "doing a research assignment"—they do hunt down other information. Second, the catalog subject search on this topic happens to be quite straight-forward from both



"Manzanar" and "Japanese Americans, Evacuation and Relocation" to the books.

It's the search among and within the books that is significant and revealing.

That search is still possible; it just takes place at the reserve desk instead instead of in the stacks. Browsing the stacks can be valuable, I'll grant, but I've decided that that broadening experience has to be postponed to another course, partly because of my last rationalization, a matter of sheer practicality. There are 25 or so students in this class, and only 20 or so relevant books, all of them packed with different types of information. Those books need to be readily available to everyone, so I put them on reserve.

While individual students pursue the research problems upon which their final papers will be based, we spend class time practicing rhetorical analysis on Manzanar-related materials. Throughout the semester, the students have been using their journals to summarize and react to assigned readings (a process called glossing in Berthoff's Forming/Thinking/Writing, our textbook). Now we do an in-class workshop glossing materials that describe internees' reactions to the camps. In another session, we look at statements from the Army colonel who directed the evacuation and examine his explanation of why the internment was necessary and justified, and why he would do it again. We talk about the audience and purpose of these texts, the purpose, the historical context, the circumstances of publication. Some of this they must glean from the conventional citations I provide on the handouts, a process that shows them the communicative purpose of citing sources. All of it prepares them for evaluating the claims they find in the materials they use for their final papers.

The point I want to leave you with is that this kind of thetorical analysis, which the library enables a hundredfold, is not only absolutely crucial to using research assignments in freshman classes, but the real reason for them. The goal is to ground writing in reading and inquiry.



Freshmen in the Library: Making Meaning Out of Divers Discourse Communities

1990 CCCC Convention, Chicago

- Works Cited and otherwise recommended:
- Berthoff, Ann E., with James Stephens. Forming Thinking Writing. 2nd ed. Portsmouth, NH: Boynton/Cook, 1988.
- Haas, Christina and Linda Flower. "Rhetorical Reading Strategies and the Construction of Heaning." CCC 39 (Hay 1988): 167-83.
- Hairston, Maxine. "Using Nonfiction Literature in the Composition Classroom." Convergences: Transactions in Reading and Writing. Ed. Bruce T. Petersen. Urbana, IL: NCTE, 1986. 179-188.
- Kantz, Hargaret. "Helping Students Use Textual Sources Persuasively." College English 52 (Jan. 1990): 74-91.
- Park, Douglas B. "Analyzing Audiences." CCC 37 (Dec. 1986): 478-88.
- ---. "The Meanings of 'Audience.'" <u>College English</u> 44 (Mar. 1982): 247-57. Rpt. in <u>The Writing Teacher's Sourcebook</u>. 2nd ed. Ed. Gary Tate and Edward P.J. Corbett. New York: Oxford UP, 1988. 158-68.
- Petersen, Bruce T., and Jill N. Burkland. "Investigative Reading and Writing: Responding to Reading with Research." CCC 37 (May 1986): 236-41.
- Reither, James A. "Writing and Knowing: Toward Redefining the Writing Process." College English 47 (Oct. 1985): 620-28. Rpt. in The Writing Teacher's Sourcebook. 2nd ed. Ed. Gary Tate and Edward P.J. Corbett. New York: Oxford UP, 1988. 140-48.
- Reither, James A. and Douglas Vipond. "Writing as Collaboration." College English 51 (Dec. 1989): 855-67.
- Walzer, Arthur E. "Articles from the 'California Divorce Project': A Case Study of the Concept of Audience." CCC 36 (May 1985): 150-59.
- Textbooks with exceptionally useful sections or approaches:
- Bazarman, Charles. The Informed Writer. 3rd ed. Boston: Houghton Mifflin: 1989.
- Johnson, Jean. The Bedford Guide to the Research Process. New . rk: St. Martin's, 1987.
- Kaufer, David S., Cheryl Geisler, and Christine M. Neuwirth. Arguing from Sources. San Diego: Harcourt, 1989.





TECHNOLOGY

Erasing Port-Wine Stains

A new laser makes the birthmarks vanish

arch Pease settles into her mother's lap in the dentist's style chair, shuts her eyes and wraps her security blanket around her hand. Her mother puts suntunning goggles on the little girl as Dr. Oon Tian I'm picks up an eight-inch-long wand. To Sainh, 6, it is as magic as any wand in her storybooks: it shines an intense green beam of Inser light onto her cheek, which is discolored from ear to nose with a reddishpurple port-wine stain. For about 400 microseconds Tan zaps a laser dot onto Sarnh's skin, then another, until several rows of blue-gray spots appear. In about a week the spots should inde; with several more treatments the stain will be gone forever.

Tan and her colleagues at Boston University School of Medicine have scored dozens of such successes. Last week, in The New England Journal of Medicine, they reported that they had used "tunable dye lasers" to erase port-wine stains in 35 children between the ages of 3 months and 14 years, making this the first reliable way to treat children with the congenital defect.

The stains, technically called hemangiomas, are caused by a malformation of tiny blood vessels just under the skin. They appear on about three out of 1,000 children, typically on the face and neck, and persist into adulthood. Although usually neither painful nor debilitating, the stain often subjects children to such taunting that they are left with deep psychological scars. "I remember coming home crying," says Aimee Lucas, a high-school senior. "I've

been called names and asked if I'd spilled grape juice on my face." In some cases, more than the psyche is injured: the abnormal blood vessels can penetrate muscle or bone, causing glaucoma if they enter the eye or seizures if they reach the brain. Physicians have tried exasing the stains with radium, liquid nitrogen and even tattoo dye, but the only effective treatment has been with argon lasers. In children, though, argon-laser therapy often left disfiguring scars.

The new, tunable laser seems to erase the birthmarks safely and permanently. In contrast to the argon laser, which emits only a mixture of several colors, the color of the light from the tunnble Inser can be precisely adjusted-hence its name-down to a hundred millionth of a centimeter. That means the light exactly matches a wavelength that oxyhemoglobin, source of the reddish-purple color, absorbs most strongly. When this red pigment sonks up the laser's energy, heat is generated, destroying blood vessels (dingram). Only healthy blood vessels regenerate; those in the stain seem to be gone for good. About six treatments, each two or so months apart, are needed to erase the stain completely, reports the BU team. "Port-wine stains can be truly devastating," says Tan. "By treating children at a very early age, we can hopefully save them from years of emotional suffering and really after the course of their lives.

SHARON Bedt. Ex with KATE ROBINS in Boston

RIC Text Provided by ERIC

12

TREATMENT OF CHILDREN WITH PORT-WINE STAINS USING THE FLASHLAMP-PULSED TUNABLE DYE LASER

OON TIAN TAN, M.D., KAREN SHERWOOD, M.D., AND BARBARA A. GILCHREST, M.D.

Abstract Thirty-five children, three months to 14 years of age, with disfiguring port-wine stains were treated with a flashiamp-pulsed tunable dye laser. All had complete clearing of the stains after an average of 8.5 laser treatments to each lesional area; skin over bony prominences required approximately half as many sessions as skin on the cheek. Children less than seven years old required fewer sessions (mean ±SD, 5.8±1.1) than older children (7.1±1.1; P<0.05). Treated skin was identical in texture and color to adjacent normal skin in 33 (84.3 percent) of the children, whereas 2 (5.7 percent) had small, isolated, depressed scars in areas accidentally traumatized soon

after laser freatment. The only other side effect was transient hyperpigmentation, which occurred in 20 patients (57 percent).

These results can be attributed to two distinguishing characteristics of the flashlamp-pulsed tunable dye laser; an emission wavelength of 577 nm, theoretically ideal for selective absorption by the intravascular target oxyhemoglobin, and a pulse duration of 360 µsec, which closely matches the thermal retaxation time for dermal blood vessels and hence avoids diffuse nonspecific thermal necrosis with subsequent scarring of the treated skin. (N Engl J Med 1989; 320:416-21.)

THE port-wine stain is a congenital malformation $oldsymbol{L}$ of the dermis, involving venules, capillaries, and possibly perivenular nerves, that occurs in an estimated 3 children per 1000 births. 2 Most lesions appear on the face in a quasi-dermatomic distribution. Approximately 5 percent of patients have associated glaucoma, mental retardation, and seizures due to the involvement of the vasculature of the eye and the central nervous system - a constellation of findings called the Sturge-Weber syndrome. In early childhood, port-wine stains are classically faint pink macules, but the lesions tend to darken progressively to red-purple, and by middle age they often become raised as a result of the development of vascular papules or nodules. These changes in color and contour are attributed to progressive ectasia of the abnormal dermal vascular plexus.3

The chief morbidity produced by the port-wine stain is psychological. Personality development is adversely influenced in virtually all patients by negative reaction of others to a "marked" person. The eventual hypertrophy of underlying bone and soft tissue further disfigures many patients. Other problems include easy bleeding after trauma and occasional glaucoma, even in the absence of other noneutaneous involvement. 10

Over the part decades, many treatments have been attempted, most with very limited success. The excision of port-wine stains results in poorly color-matched, cosmetically unacceptable skin grafts and usually requires general anesthesially radium Implants cause scarring, with very little fading, and have an unacceptable risk of subsequent cancer 12; carbon dioxide "snow" 13 and tattooing with flesh-colored pigments 14 have been minimally effective.

The argon laser was the first major advance in therapy for port-wine stains 15-17 and has been med extensively for approximately 10 years. This approach

uses the very-high-intensity blue-green light emitted by the argon laser to destroy abnormally large yes. sels through preferential energy abscrition by have vascular hemogloliin, the chromophore or tissue target of complementary color. Laser light directed at the skin surface at these wavelengths (488 and 514 nm) penetrates to a depth of the superficial vascular piexus, where red hemoglobin preferentially absorbs its energy and generates heat, thus producing thermal damage that is centered on the dilated, bloodfilled vessels. in Over several months, the necessic dermis is replaced by connective tissue containing venules of more normal diameter, and the skin color gradually fades toward that of the normal skin. Argon-laser treatment provides good-to-excellent results in about 80 percent of adult patients, 15-17 with hypertrophic scarring in fewer than 5 percent,1" although slight sclerosis, persistent pink-red crythems, and altered skin markings are common. 20,21 Unfortunately, however, argon-laser therapy produces cosmetically unacceptable scars in up to 40 percent of children; it is therefore recommended that children younger than 18 not be treated. 17.20 This is an unfortunate situation in light of the serious psychole ical impact of these disfiguring facial fesions on developing children.

Explanations for the high risk of scarring with argui-laser therapy in children include a poor vacular "target" in these characteristically light pink macular lesions, 17,20,21 an innate tendency in this age group to hypertrophic scarring after cutaneous injury of all kinds, 20 and frequent inapparent bacterial infections resulting from poor compliance with routines for poste perative care of the wound. 22 It has also been suggested that the typical pink macular lesions of port-wine stains in children may often scar no more severely after argon-laser treatment than do purple-red papular lesions in adults, but that the pink-red, slightly raised or depressed scars that result from this therapy are simply more apparent on 2 child's skin. 25

The recent development of a flashlamp-pulsed tunable dye laser, theoretically better suited than the argon laser for the treatment of cutaneous vascular

From the Laser Center at Boston University Medical Center and the Departmr at of Dermatology, Boston University School of Medicine, Boston, Address reprint requests to Dr. Tan at the Laser Center at Boston University Medical Center, 80 E. Concord St., Ros.on. MA 171118

Center, RO E. Concord St., Bos.on, MA 02114.

Rannorted in part by a grant (ADDK-A 5 R 29 AR38332-02) from the National

to of Hoshib and by the Candela Laser Carporation.

ERIC Full Text Provided by ERIC