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ABSTRACT

How different evaluation formats affected test scores for different tracks of high school biology students was studied in an action research case study. For purposes of the study, "A" tracked students were generally college-bound; "B" tracked students were those who had no desire to attend college, especially those in vocational education, or who were below average students whose advisors thought they would not be able to pass a "college-bound" course. Forty-eight A-tracked students and 45 B-tracked students were the experimental groups. Twenty-nine A-tracked students and 42 B-tracked students served as comparisons. Students in the experimental group took the same test control group students did, but, in addition, they were given an additional three essay questions. Their attitudes about the essay test evaluations were noted. Results suggest that adding essay questions to objective tests supplied by textbook publishers is recommended for A-tracked students, who performed well and liked the essay format. However, B-tracked students found the essays difficult and did not do well. The disadvantages of the essay format outweighed the advantages for the students in the B track. Action research was a good approach to investigating the effects of different evaluation formats for students of different levels of ability. (Contains 26 references.) (SLD)

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Evaluation Formats

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Evaluation Formats: A Teacher's Action Research Look at Tracking

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**Paper presented at the annual meeting of the American Educational Research
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EVALUATION FORMATS: A TEACHER'S ACTION RESEARCH LOOK AT TRACKING

I have been interested in action research for a number of years as a means by which teachers can solve problems in their own practice. This study was my first attempt to incorporate action research into my own practice and I learned as much about this process of teacher inquiry as I did about evaluation formats or tracking. Therefore, the study will include insights gleaned from the process of doing action research in addition to the findings of the research questions. This study, however, is not meant to be an action research advocate, nor will it take a stand for or against tracking. It is a case study of one teacher's look at how different evaluation formats affected test scores for different tracks of high school biology students.

Rationale

High school curriculum in many states requires that all students receive credit for one year of biological study before graduation. Although the national trend is away from tracking, many schools still separate their biology courses into "college bound" or "A" tracked classes and "vocational" or "B" tracked classes. For the purposes of this study, "A" tracked students were defined as those who, (1) planned to attend college, technical school, or some form of post-secondary education, or (2) had not decided about college but were pursuing the higher tracked curriculum in case they chose to attend college in the future. The "B" tracked students were defined as those who, (1) had no desire to attend college, especially those students enrolled in vocational courses, (2) were below average students whose advisors believed would not be able to pass a "college bound" course due to its difficulty, or

(3) attended special education classes part of the day and were "mainstreamed" the remainder of the day.

Researcher's Perspective

Material presented in the "A" tracked college bound biology classes was designed to give students a well-rounded background in biology while preparing them for future undergraduate college courses. Material presented in the "B" tracked vocational classes included less scientific terminology and more material relevant to everyday life. The aim of the lower level biology classes was to allow more students to achieve a background in biological science by keeping the material relevant and the level of difficulty within the range of "B" tracked students. It was my experience, however, that an alarming number of these students were still failing the course, being retained, failing again, and eventually dropping out of school. The determining factor for a student to pass was the evaluations supplied by the textbook publishers. Therefore, the purpose of this study was to examine the effect of adding essay questions to the existing textbook supplied tests. It was hoped that more students might pass the course by writing down pertinent information they remembered about the topic, instead of being limited to the objective style of chapter tests supplied with the textbook. The criterion used to determine the effect was the grade point averages from the tests.

Planning and developing a classroom test typically entails the specification of the particular format the test exercises are to take. As classroom testing experts have pointed out, the choice of a particular item format should normally be determined by theoretical as well as practical considerations, such as the relative

ease with which various test objectives are measured, the degree of difficulty in constructing or scoring items, freedom from irrelevant sources of variation in test results, and so on (Gronlund, 1976; Thorndike & Hagen, 1969).

The item formats most often used in the construction of classroom tests may be conveniently classified into two broad categories (Gronlund, 1976). First, the more objective and structured selection type formats (multiple-choice, true/false, matching, etc.), requiring the examinee to select the correct answer among a number of given alternatives, and the more subjective construction type format (essay, short answer, fill in the blank, etc.), permitting the examinee to organize, construct, and present the answer in written form. Over the past three decades or so, the multiple-choice and essay type formats have become two of the most popular formats employed in the construction of classroom achievement tests (Thorndike, 1982). The diverse considerations delineated and discussed in the measurement literature for choosing one item format over another are inconclusive. Additionally, it is unfortunate that aside from a sprinkling of studies focusing on students' perceptions of situations involving standardized ability testing (i.e. Zeidner, 1985; Zeidner, 1987), very little is presently known about student attitudes, dispositions, and preferences of varying tests or test formats. It was the purpose of this study to examine some of these issues using both formats in a single project. Although quantitative data were collected, the study was qualitative in nature, a long term look at two different evaluation formats using two different tracks of high school biology students. The aim of the study was to help

practitioners more fully understand the relationship between evaluation format and level of student.

Theoretical Grounding

The concern qualitative researchers have for "meaning," as well as other features characteristic of qualitative research, leads me to discuss the theoretical orientation of this approach. People use the word "theory" in many ways. Among qualitative researchers in education its use is sometimes restricted to a systematically stated and testable set of propositions about the empirical world. My use of the word is much more in line with its use in sociology and anthropology and is similar to the term "paradigm" (Ritzer, 1975). A paradigm is a loose collection of logically held together assumptions, concepts, or propositions that orient thinking and research. When I refer to a "theoretical perspective," I am talking about a way of looking at the world, the assumptions we all have about what is important, and what makes the world work. Whether stated or not, this research is guided by a theoretical perspective or orientation which helps the data cohere, and enables the research to go beyond an aimless, unsystematic piling up of accounts. The theoretical perspective used in this study is "symbolic interactionism" since it most closely aligns with the qualitative approach I used. Therefore, I continue the discussion of theory by presenting my symbolic interactionist perspective and clarifying some issues it raises.

Symbolic Interactionism Perspective

Symbolic interactionism has been around for quite a while, and Mead's (1934) discussion of the perspective from the standpoint of a social behaviorist is

the most cited. A variety of social scientists have expanded the perspective (Charon, 1989; Faules & Alexander, 1978; Goffman, 1969; Manis, 1967; Stone & Farberman, 1981) with little agreement about the use or importance of various concepts of it. It is compatible with the phenomenological perspective (Bogdan & Biklen, 1992) and researchers in the phenomenological mode attempt to understand the meaning of events and interactions of ordinary people in particular situations. Symbolic interactionism narrows the scope of phenomenology by concentrating on the meanings, actions, and interpretations derived through social interaction.

This study utilizes the theories of Herbert Blumer (1986) since his expansion of Mead's original concepts are most closely related to my theoretical perspective as a participant observer. Blumer suggests three premises of symbolic interactionism. First, human beings act toward things on the basis of the meanings that the things have for them. Second, the meaning of such things is derived from, or arises out of, the social interaction that one has with others. Third, these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things encountered. Symbolic interactionism views meaning as arising in the process of interaction between people, thus as social products, as creations that are formed in and through the defining activities of people as they interact. It is this premise that is closely aligned with the methodology of my attempt to increase the success rate of biology students. It was the interaction and emerging interpretation between the students and myself that helped clarify the observed change. Blumer further emphasizes that symbolic

interactionism is grounded on a number of basic ideas, or "root images," which refer to and depict the nature of human groups, interaction, objects, human action, and the interconnection of the lines of action. These root images constitute the framework of this study and its analysis.

Bogdan and Biklen (1992) point out that objects, people, situations, and events do not possess their own meaning, but rather that meaning is conferred on them. The meanings people give to their experiences and their process of interpretation are a product of the individual, and to understand this behavior, we should understand the process by which they are produced. People act as interpreting, defining, symbolic individuals whose behavior can only be understood by having the researcher enter into the defining process through such methods as participant observation.

From the symbolic interactionist's perspective, interpretation is not an autonomous act, nor is it determined by any particular force, human or otherwise. Individuals interpret through interaction and the construction of meaning. Groups sharing experiences, problems, and background often develop "shared perspectives" constituting "shared definitions," but these meanings are always subject to negotiation. When acting on the basis of a particular definition, participants may have problems, and these problems may cause them to develop new definitions. How such definitions develop, this process of change, is the subject matter of this investigation.

While as a symbolic interactionist, I tend to be phenomenological in my orientation, I am not a radical idealist. I enjoy the study of a particular

phenomenon and immersion into the data through participant observation, in this case the effect (on grade point averages) of adding essay questions to objective tests at different levels of tracked students. I emphasize the subjective, but I do not deny the reality "out there" that stands over and against us as human beings, capable of resisting action toward it (Blumer, 1980). Reality comes to be understood to human beings only in the form in which it is perceived. As a qualitative researcher, I emphasize subjective thinking because, as I see it, the world is dominated by we who live in our "symbolic" imaginations. It is a world where, through interaction with the rest of the world, we have constructed unique interpretations and understandings, a world where the settings are more symbolic than concrete. It is this world within education that I began to uncover through this action research study.

Methodological Framework

As is the case with most classroom teachers, I did not have the expertise to conduct an appropriate quantitative study. I did have a good idea of what I wanted to accomplish and sought help from university professors as I began graduate school. I was led to a qualitative approach with an action research element. There are a variety of research styles that fall under the heading of action research so for the purposes of this study I will define action research as myself, a teacher, conducting qualitative research in my own classroom, answering research questions of personal interest to me. I conducted the research in "cycles," which included (1) a period of planning, formation of research questions, and initial (baseline) data collection, (2) the use of strategies or "actions" in an attempt to answer the research

questions, (3) the collection of secondary data for comparison with the baseline data, and (4) reflection on where the data was leading, adjustments to research questions or methodology if necessary, and planning for the next cycle.

Collaboration with university personnel occurred before, during, and after the study, and their help was needed and appreciated. I would recommend that a study of this type be conducted collaboratively throughout, and I have personally pursued university researchers to work with in all subsequent studies.

Design

The design of this study is that of a qualitative case study, specifically a particularistic, descriptive, heuristic, inductive inquiry. Key concepts and the general design of this study are based on the ideas and recommendations of Sharan Merriam (1988). The nature of the research questions, the amount of control, and the desired expansion of the research literature were issues considered when deciding that qualitative case study was the most appropriate design for this investigation. A fourth and probably deciding factor was that the study incorporated a "bounded system" (Smith, 1978) in which I could focus on the specific phenomenon of interest, the relationship between evaluation formats and tracking. The "bounding" of one teacher conducting action research with one grade level of biology students was very useful for collecting the thick, rich data desired.

Case study has in fact been differentiated from other research designs by what Cronbach (1975) calls "interpretation in context" (p. 123). By concentrating on a single phenomenon or "case," this approach aims to uncover the interaction of significant factors characteristic to the phenomenon. The case study sought holistic

description and explanation. As Yin (1984) observes, case study is a design particularly suited to situations like this one where it was impossible to separate the phenomenon's variables from their context. Wilson (1979), for example, conceptualizes the case study as a process "which tries to describe and analyze some entity in qualitative, complex, and comprehensive terms not infrequently as it unfolds over a period of time" (p. 448). Most appropriate to this study is Becker's (1968) definition of the purpose of a case study "to arrive at a comprehensive understanding of the groups under study" (p. 233).

This case study can be further characterized by its special features. "Particularistic" refers to this study's focus on a particular situation, program, or phenomenon. This specific focus makes it an especially good design for the practical problems, questions, situations, and puzzling occurrences which arose during the study. The design concentrates attention on the way particular groups of people confront specific problems, is problem centered, and takes a holistic view of the situation (Shaw, 1978).

"Descriptive" refers to the end product of this study as a "thick description" of the phenomenon under study, including the viewpoints of all involved. Thick description is a term from anthropology and means the complete, literal description of the incident or entity being investigated (Merriam, 1988). It also means "interpreting the meaning of ... demographic and descriptive data in terms of cultural norms and mores, community values, deep-seated attitudes and notions, and the like" (Guba & Lincoln, 1981, p. 119).

"Heuristic" refers to the form of phenomenological inquiry that highlights the personal experience and insights of the researcher and participants (Patton, 1990). It is the intent of this study to illuminate the reader's understanding of the topics under study, to bring about the discovery of new meaning, extend the reader's experience, or at least confirm what is known. "Previously unknown relationships and variables can be expected to emerge from case studies leading to a rethinking of the phenomenon being studied. Insights into how things get to be the way they are can be expected to result from case studies" (Stake, 1981, p. 47).

"Inductive" refers to the fact that this study, for the most part, relied on inductive reasoning. Concepts and generalizations (if any) emerged from an examination of the data which were grounded in the context itself and were subject to reformation as the study proceeded. Discovery of new relationships, concepts, and understanding, rather than verification of predetermined hypotheses, characterized the reasoning in this study. The major data gathering technique in the study was participant observation and the focus was on the particular setting, but the concepts particular to the research questions examined in this action research were "induced" from the data, not preconceived. The decision to focus on a qualitative case study stems from the fact that I was interested in insight, discovery, and interpretation rather than hypothesis testing.

Setting, Sample, and Method

The setting of the study was two rural high schools located in the southeastern United States. The schools each contained about six hundred students from predominantly middle to lower-middle class families. Variations in ethnicity,

socio-economic status, and cultural orientation were small. Community involvement in the functioning of the school was present, but limited. The sample for this two year study included all students enrolled in five classes of "B" tracked (vocational) biology during the 1990-91 school year, and in four classes of the "A" tracked (college bound) biology at another rural high school during the 1991-92 school year. Ninety-seven "B" tracked students (1990-91 school year) were divided into two groups. The first group consisted of all forty-two students from the second and fourth period classes. This group became the non-participating comparison group and no test manipulation was applied to this group, they were simply given the chapter tests provided by the textbook publishers. The second group included the remaining forty-five pupils from first, third, and sixth periods. This group became the experimental group, in which essay questions were added to the tests provided by the textbook publishers. Seventy-seven "A" tracked students (1991-92 school year) were divided into similar groups. The non-participating comparison group consisted of all twenty-nine students from the fourth and fifth period classes. The experimental group included the forty eight students from the second and sixth period classes. The only students excluded from the study were those not enrolled during all weeks of class used for data collection.

The study period lasted twenty-four school weeks each year, beginning with the first week of the school year. During the first twelve week period, all students in both groups were given the same chapter tests consisting of multiple choice, matching, and true-false questions. These evaluations were supplied by the textbook publisher (Merrill, 1988 & Merrill, 1989). Test scores were recorded and

averaged for each student. During the second twelve week period, the comparison group continued to take the same chapter test after each unit of instruction, but the students in the experimental group were given the regular test with an additional three essay questions covering similar content material. The essay questions were general in nature and students were instructed to write down any information they could remember that was pertinent to the questions. They were also told that partial credit would be given for incomplete answers. In addition to regular instruction, sample essay questions and possible answers were discussed with the students prior to the evaluations.

Test scores were again averaged for the comparison group, however in the experimental group each average included the essay questions which accounted for thirty percent of their overall grade. Comparisons of tests and test scores were discussed, at regular intervals, with students in groups and in informal individual interviews. Attitudes and general feelings were noted about the evaluative process. This data and researcher observations were included in the results.

Findings

There were three groups of interest emerging from the data, including the non-participating comparison group, the "A" tracked group in which essay questions were added to the textbook supplied chapter tests, and the "B" tracked group in which essay questions were added to the tests. First, the average scores for the non-participating comparison group increased by 0.76% (less than one percent), from 68.97% to 69.73%. Of the seventy-one students in this group (including both "A" and "B" tracked students), twenty-seven increased in average test score, thirty-one

decreased, and thirteen remained about the same (changed less than one percent). Four students moved from failing grades to passing grades and three moved from passing to failing. Second, the average scores for the "A" tracked group of students whose tests included essay questions increased by 9.77 %, from 71.82% to 81.59%. Thirty-seven students increased, four decreased, and seven remained about the same. Eleven students moved from failing grades to passing grades and none moved from passing to failing. Finally, the average test scores for the "B" tracked group whose tests included essay questions decreased by 10.98%, from 66.42% to 55.44%. Forty-five students decreased, nine increased, and one remained about the same. Two students moved from failing grades to passing grades, while sixteen moved from passing to failing.

Results from the "B" tracked group were somewhat surprising, not only because average scores went down, but that they went down over ten percent. It is especially noteworthy that sixteen students (29%) moved out of the passing category (failed the course), and only two (4%) moved into it, a net loss of 25% of the students and a result opposite that desired in study! In contrast, results from the "A" tracked group were also surprising because of the large number of students who were helped (or unaffected) by the addition of essay questions (92%). It should also be noted that eleven students (23%) moved into the passing category (passed the tests only after essay questions were added) while none failed, supporting the basic objective of the study. I was even surprised by the lack of overall change in the average scores for the comparison group. Even with consistent techniques, I was disappointed that those students improving during the

twenty-four week period were offset so completely by the number of students who decreased in average score, even though the chapter tests remained the same.

Interviews, observations, and group discussions helped me to clarify some of the possible reasons for the discrepancies in the results of these groups. First, in the "B" tracked group, many students lacked the writing and language arts skills necessary to properly complete answers to essay questions. When interviewed, typical statements from students were, "I can't explain this stuff in writing" or "I just don't write well" or "I don't know where to begin." Additionally, giving partial credit for partial answers often did not motivate these students to try to answer questions with which they were not familiar. The result was a substantial number of essay questions which were left unanswered. When questioned about unanswered questions, responses included, "I couldn't remember the whole process so I didn't answer it" or "I never can remember all the steps."

It also became apparent that study habits were lacking in most of the "B" tracked students. They would not spend enough time learning facts and concepts pertinent to particular topics even when emphasized during instruction. It was also more difficult for them to "bounce back" after failing a test. Their motivation and interest decreased and they would become convinced that "biology is too hard" or "I can't pass these tests." Finally, this group of students tended to score higher when they could make associations on questions that included possible answers, compared to when they had to supply the entire answers to the questions. Frequent responses in interviews and discussion groups included, "I like it more when I can choose from different answers, I can usually remember something about them" or

"I prefer the regular (objective) tests because I can make connections between the questions and answers" or "at least I can guess on the other (objective) test."

In contrariety, the "A" tracked group had little trouble expressing themselves in writing and almost always attempted answers to the essay questions in order to receive partial credit. In interviews, typical comments included, "I like being able to tell you anything I know about the question" or "I couldn't remember all the steps until I began writing them down, then they just fell into place" or "I always can say something about a question." Additionally, most students said they studied at least before the chapter tests and my observations indicated that they retained more from classwork exercises. Their interest and attitude remained positive even when they had to overcome a poor performance on an individual test. They were much more interested in retaking tests, doing extra credit, and in making good grades in general. These factors probably contributed greatly to the discrepancy in average scores. Finally, it became apparent in the group discussions that a substantial number of "A" tracked students frequently "outsmarted" themselves on the objective portion of the tests, especially the true/false and multiple-choice sections. For instance, after contemplating all the possible reasons why a particular statement might be true or false, they would answer incorrectly based on a fact pertinent to the topic, but irrelevant to the question. On multiple choice questions, they might reason why more than one of the answers could be correct based on all possible situations, but guess wrong about which was most related to the question. Common comments included, "I knew the answer, but I didn't figure out what they wanted" or "I didn't know which one to choose because both could be correct

sometimes." These problems, however, did not come up when answering essay questions since they could describe what they believed to be the correct answer.

Discussion and Implications

The study suggests that adding essay questions to objective tests supplied by textbook publishers is recommended for biology students who are "A" tracked, or interested in post-secondary study. Other advantages I gleaned from the study and from the process of action research should also be noted. When the new test format was used (adding three essay questions) and the action research initiated, I noted an increased amount of feedback received from the students. The feedback and an increase in interactions resulting from the process allowed me to better understand the areas in which students were having problems. I was able to better assess when I needed to re-teach material and where to place more emphasis in future years. I also got to know my students better through the interactions and through their writing.

The main disadvantage of adding essay questions to the objective tests was the increased time necessary in grading the tests. For the "A" tracked students I felt that the relatively small increase in time needed to grade the tests was outweighed by the advantages just mentioned and the number of students whose scores improved, especially the number passing the course as a result. I should also mention that I did not reduce the length of the objective tests or alter them in any way. I thought that they were well prepared, well written, and adequately covered the material. My goal was to enhance the evaluative process, not replace it.

The study also suggests that adding essay questions to textbook supplied objective tests in not recommended for "B" tracked, vocational, or biology students not interested in post-secondary studies. The disadvantages of writing essay questions for these students far outweigh the advantages of this test format. I see these findings easy to implement in cases where tracking is still used and I challenge practitioners and university researchers to continue to explore evaluation formats in all tracks. However, current trends are moving away from tracking and our attention should now turn toward the problem of what to do in classes where both types of students are present. If essay questions are not used, the typical college-bound student is disadvantaged, and if essay questions are included, the typical vocational student is disadvantaged. Solutions are possible, and areas for possible exploration might include alternation evaluation formats or having different formats available from which students may choose. It is my belief that the area of tracked and non-tracked evaluation formats needs continued attention. Action research is a good process to use in this quest, essay questions are probably part of the solution, and the advantages of a comprehensive solution for our students are too important to ignore.

References

- Becker, H. S. (1968). Social observation and social case studies. In International encyclopedia of the social sciences, Vol. 11. New York: Crowell.
- Blumer, H. (1980). Comment, Mead, and Blumer: The convergent methodological perspectives of social behaviorism and symbolic interaction. American Sociological Review, 45, 409-419.
- Bogdan, R., & Biklen, S. (1992). Qualitative research for education: An introduction to theory and methods (2nd Ed.). Boston, MA: Allyn & Bacon.
- Charon, J. M. (1989). Symbolic interactionism. Englewood Cliffs, NJ: Prentice Hall.
- Cronbach, L. J. (1975). Beyond the two disciplines of scientific psychology. American Psychologist, 30, 116-127.
- Faules, D. F., & Alexander, D. C. (1978). Communication and social behavior: A symbolic interaction perspective. Reading, MA: Addison-Wesley.
- Goffman, E. (1969). Where the action is. London: Allen Lane The Penguin Press.
- Gronlund, N. E. (1976). Measurement and evaluation in teaching (3rd ed.). New York: Macmillan.
- Guba, E. G., & Lincoln, Y. S. (1981). Effective evaluation. San Francisco, CA: Jossey-Bass Publishers.
- Manis, J. G. (Ed.). (1967). Symbolic interaction. Boston, MA: Allyn and Bacon.
- Mead, G. H. (1934). Mind, self, and society. Chicago, IL: University of Chicago Press.

- Merriam, S. B. (1988). Case study research in education: A qualitative approach. San Francisco, CA: Jossey-Bass Publishers.
- Patton, M. Q. (1990). Qualitative evaluation and research methods. Newbury Park, CA: Sage.
- Ritzer, G. (1975). Sociology: A multiple paradigm science. Boston, MA: Allyn and Bacon.
- Shaw, K. E. (1978). Understanding the curriculum: The approach through case studies. Journal of Curriculum Studies, 10(1), 1-17.
- Smith, L. M. (1978). An evolving logic of participant observation, educational ethnography and other case studies. In L. Shulman (Ed.), Review of research in education. Chicago, IL: Peacock.
- Stake, R. E. (1981). Case study methodology: An epistemological advocacy. In W. W. Welsh (Ed.), Case study methodology in educational evaluation. Proceedings of the 1981 Minnesota Evaluation Conference. Minneapolis: Minnesota Research and Evaluation Center.
- Stone, G. P., & Farberman, H. A. (1981). Social psychology through symbolic interaction. New York: John Wiley & Sons.
- Thorndike, R. L. (1982). Applied psychometrics. Boston: Houghton-Mifflin.
- Thorndike, R. L. & Hagen, E. (1969). Measurement and evaluation in psychology and education (3rd ed.). New York: John Wiley & Sons.
- Users of biology: An everyday experience. (1988). Columbus, OH: Merrill.
- Users of biology: Living systems. (1989). Columbus, OH: Merrill.

Wilson, S. (1979). Explorations of the usefulness of case study evaluations.

Evaluation Quarterly, 3, 446-459.

Yin, R. K. (1984). Case study: Design and method. Newbury Park, CA: Sage.

Zeidner, M. (1985, February). Psychological testing: The examinee's perspective.

Proceedings of the Symposium conducted at the Annual Meeting of the Israeli Psychological Association. Ramat-Gan, Israel.

Zeidner, M. (1987). Sociocultural differences in test attitudes and motivations. In

R. Schwarzer, H. M. Van der Ploeg, & C. D. Spielberger (Eds.), Advances in test anxiety research (pp. 241-250). Lisse-Berwyn, PA: Swets & Zeitlinger.



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