

DOCUMENT RESUME

ED 102 145

SP 008 929

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TITLE Approaches to an Interdisciplinary Course in the  
Social Sciences for Secondary School Teachers.  
PUB DATE [72]  
NOTE 21p.  
EDRS PRICE MF-\$0.76 HC-\$1.58 PLUS POSTAGE  
DESCRIPTORS \*Course Organization; Educational Games;  
\*Interdisciplinary Approach; \*Secondary School  
Teachers; \*Social Sciences; Teacher Education; Team  
Teaching

ABSTRACT

Many problems are involved in interdisciplinary teaching. Below are some proposals for an interdisciplinary course in the social sciences for secondary school teachers. This type of teaching can be done with either one instructor or a team. If one instructor is used, care must be taken not to build the course solely around that person, so that if s/he leaves, the course disappears. The instructor must have a strong interest in developing interdisciplinary courses, and be willing to spend a substantial amount of time reading material from other fields. There are at least two ways to deal with subject matter: (a) use specific problem areas as case studies, where emphasis is on methods used to arrive at answers, and (b) include games with a strong interdisciplinary flavor. If a team of instructors is used, new problems arise. The team must be closely coordinated and each member must have a fundamental appreciation of the other disciplines. One way of organizing the team is in a panel which meets with every class. Another way is for instructors to teach individually, but to work together on a selected topic for a given period of time. If commitment is made, any of these proposals is workable. It is felt, however, that one is more likely to find a single individual strongly committed to the interdisciplinary movement. Although flexibility is lost, commitment may be more important. (PB)

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APPROACHES TO AN INTERDISCIPLINARY COURSE IN THE  
SOCIAL SCIENCES FOR SECONDARY SCHOOL TEACHERS

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Interdisciplinary teaching is a bandwagon, and like most handwagons, it can be approached in a helter-skelter or in a systematic and well-thought out fashion. There are gains as well as losses inherent in interdisciplinary work. These should be recognized with proposals designed to take full advantage of the strengths and to minimize the effects of the weaknesses.

For example, one of the weaknesses of a single interdisciplinary course is that subject matter detail is sacrificed in favor of broadly based generalities. Even when the course is taught with an orientation to a specific problem area, such as urban transportation, the rigor of analysis that is possible in a disciplinary setting becomes impossible under the time constraints of a single quarter.

A related loss in this regard is the inability to teach "categorization" on an interdisciplinary basis. The student is not taught what is one of the more important facets of any scientific enquiry; the ability to ferret out the essential elements of a given problem. Thus, the student does not see that a problem might be primarily economic, social, or political in form.

These types of problems become even more acute if the person offering the course is not trained himself on an interdisciplinary basis. Since the educational system has traditionally been conducted along discipline lines, the chances of finding such a person would be very slim.

In order to overcome this additional weakness, one person is usually asked to undertake a "self-instructed" training program or some type of a team approach is suggested. Both of these have their own set of problems.

The purpose of this report is to suggest some alternatives that will relate to the question formed above. Course proposals will be prepared as a

part of the report with a discussion of that proposal's weaknesses and strengths attached. Finally, the author's impression as to which proposal is most workable will be presented along with some explanation as to why that proposal might be singled out.

The proposals will relate to a single, four credit course to be taught for a one quarter duration. The course will be for secondary teachers that are currently trained in specific subject areas in an attempt to broaden their perspective with respect to problems in the social sciences. It is, by necessity, a survey type of course; covering a wide range of methodologies dealing with social problem areas. It is doubtful that the successful completion of this course will prepare the student to teach interdisciplinary material upon return to the high school; but at least an awareness should be achieved allowing for discussion on a broad range of topics.

#### COURSE PROPOSALS INVOLVING ONE UNIVERSITY INSTRUCTOR: BACKGROUND

The central premise of this section is that there is no one instructor currently on a faculty that has a background that is sufficient to teach a truly interdisciplinary course. This assumption is undoubtedly harsh, since most faculty members have had training, at least on the undergraduate level, in many diverse fields.

The key is to avoid building a course around any one person and his particular fields of interest. Since there is a specific audience to which this course is to be directed, and since the need that created a demand for this course is probably a long term need, the course must be organized in a general enough way so that one person's leaving the campus does not terminate the course for lack of an instructor or require a complete course redesign.

### 3.

The course must therefore be general in scope and be capable of being taught by a variety of instructors.

Turning to the instructor and his requirements: he should first and foremost have a strong interest in developing courses along these lines. No matter how the specific course is organized, it will represent a new preparation of a great enough magnitude to require a deep commitment in time and energy. He will need to be willing to read vast amounts of material in fields outside of his competence and to trace through these materials in an attempt to learn the various disciplines' language and methodological approaches to understanding social problems. He must be able to ferret out the essential characteristics of a given social phenomenon so that at least rudimentary categorization can remain as a part of the course. This is no small set of tasks for the one individual, but to do any less would doom the course to the fate of being another hodgepodge of misunderstood generalities.

The university has a role to play in this individual's preparation. If the commitment to interdisciplinary work is serious, the university should find some means of providing release time that is adequate for course preparation. Personnel within the various disciplines should be identified for individual consultation with the course's instructor and these people should make themselves available for these consultations. Ideally, meetings should be held between members of these disciplines on an irregular basis to council one another and to discuss problems areas with the course instructor. If the university commitment to the course and to that instructor is anything less than this, the course should be abandoned in favor of the safer discipline break-down.

These statements are meant to be harsh. An interdisciplinary approach

to problem solving has much to say for it; but such a course mistaught by a partially prepared instructor with weak support will send teachers into the high school with more misunderstanding than understanding. This is surely worse than a full understanding of the subject matter of a single discipline.

Finally, the instructor of the course should keep a formal written record of the background material that he utilized in preparing for the course. This should greatly reduce the work load of any future faculty member in preparing for such a course should the current instructor leave. This is especially important during the earliest phase of course development. It would also be extremely helpful if a diary of successes and failures were kept during the first year of the course so that future teachers could avoid the pitfalls of such an undertaking.

Taking steps such as these permits a course of this type to be taught on a regular and consistent basis over the long term. Courses taught within a discipline setting have some level of consistency built into them due to the thread of methodology that ties the discipline together. Building a consistent base for interdisciplinary work must be one of the first orders of business if this work is to be meaningful.

#### COURSE PROPOSALS INVOLVING ONE UNIVERSITY INSTRUCTOR: SUBJECT MATTER

There have been many subject matter combinations that have been suggested in the literature over the past few years. This section of the paper will avoid a discussion of these since any combination of disciplines in a specific sense would require an extensive knowledge of these disciplines by the instructor. Since it is this reliance on an individual's specific background that is to be avoided, combinations should also be ruled out.

This means that the course should be taught on as general a basis as is

possible. It should be a course that reflects the teaching of the "social sciences" as a broad unit. This limits the type of subject matters to be covered greatly. Two of these will be presented in this report: (1) A course based on methodological approaches to social analysis and (2) a course based on a single social phenomena using games as teaching aids.

#### PROPOSAL I: APPROACHES TO SOCIAL UNDERSTANDING.

Most social science disciplines adhere to some form of the scientific method in terms of their research approach to social problem solving. Most utilize the tools of mathematics or statistics in conjunction with this scientific method. This is true, to a very large extent, with the fields of Sociology, Economics, Geography and Psychology. It is true to a lesser extent, but also to a growing extent, for the fields of History and Political Science. At any rate, most social scientists have some background in these tools and virtually all social scientists have an acquaintance with the scientific method.

The first course suggested utilizes this "communality" of understanding. The formal proposal is presented as Appendix I to this report.

High school teachers dealing with topics that have interdisciplinary implications will be required to analyze these topics as they arise. There is little chance that they will have the time to study each topic fully as it comes along.

This is not unique to interdisciplinary topics. Many questions come up within a discipline related subject that were not specifically dealt with in any university class. The difference is that the discipline training included a background in the thinking of that discipline. This background could be applied on a question by question basis permitting diverse answers of an educated nature. No similar background is available in the area of interdisciplinary enquiry.

The course being proposed here would use specific problem areas as case studies. Alternative methods of approaching these problems would then be used to try to arrive at explanations or problem solutions as the case may require. The emphasis would be on the methods used to arrive at these answers rather than on the answers themselves. The tools of the discipline would be taught by their employment in analyzing the case study problems.

This is far from a complete course in the social sciences. In fact, very few specifics of any one subject matter would be incorporated into the course. The secondary teacher, having taken this course, would still find it necessary to develop an approach that is unique to his or her understanding of a given academic problem. The most that this course could offer would be a frame of reference from which a high school program could begin.

#### PROPOSAL II: GAMING TECHNIQUES APPLIED TO HIGH SCHOOL SOCIAL SCIENCE CURRICULUM

Games have played an increasing role as teaching aids at both the secondary and the undergraduate level. Many of these games have a strong interdisciplinary flavor. The second proposal is contained in Appendix II to this report and it deals with the teaching of games and their uses to secondary teachers. The expectation is that these games will, in turn, be applied to the high school classes in the Social Sciences.

Secondary level games have been developed by the Center for the Study of Social Organization of Schools, John Hopkins University, Baltimore. Representative titles for such games include: "Democracy", "Consumer", "Trade and Development", "Life Career", "Disaster", "Economic Systems", "Ghetto", "Take", and "The Drug Debate." Some of the games involve role playing on the part of the participants while others are played by teams of students.

The effort that would be required on the part of the instructor can not



be overemphasized at this point. Many of the games listed above, as well as others that might be added to the list, are complicated in their rules and they definitely require the individual organizing them to understand the forces that the games are trying to bring out. In addition, the instructor must review many games in order to effectively choose the "best" four or five to be used in the classroom. Ideally, the course instructor would have a period of time given to him for the purpose of locating and securing many alternative games. Clerical help in this task would be required.

After the various games are secured, the instructor would be expected to review them in detail; developing not only gaming technique, but also developing a background in the various disciplines that relate to the game and to the issues being presented. Following this period, it would be helpful if personnel from the companion disciplines involved would consent to play the games with the instructor in an attempt to lend their particular insights to the process.

This again reflects a strong commitment to the course, both on the part of the instructor and on the part of the university. The principal advantage of this possibility as opposed to the others that are presented in this paper is that there is a medium, the games, through which the course instructor can direct his teachings. This same medium is then available to the secondary teachers as they return to their own teaching responsibilities.

#### COURSE PROPOSALS INVOLVING A UNIVERSITY TEAM: BACKGROUND

"...In fact, when scholars are brought together on some common enterprise they frequently exhibit the characteristics of bailiffs protecting their preserves rather than of philosophers enlarging...horizons...A dozen scholars from different fields who are working under the same roof do not produce a

super-scholar who understands what none of them individually understands."<sup>1</sup>  
It is naive to think that such a super-scholar emerges in this fashion.

Team teaching has the appealing benefit of removing the requirement of one man knowing everything. In achieving this benefit, care must be taken so that more problems are not created than are solved. Two such problems present themselves immediately: (1) Teams of teachers may not integrate sufficiently to get a strong program going; and (2) team teaching imposes an added responsibility on the various faculty members to cooperate and organize an effective class. Neither of these problems should be taken lightly in deciding whether to organize a class on this basis or not. Neither of these problems are mutually exclusive.

With respect to an integrated course, it must again be emphasized that the various disciplines approach problems with differing methodologies, differing schemes for classification, and differing terminology. The differences must somehow be reconciled if the course is to be anything but a series of isolated and uncoordinated lectures. The secondary teacher taking the course would gain little in the way of an approach to social problems that would be of benefit to him or her in the high school classroom. If the differing approaches to a phenomenon are to be clearly understood and appreciated by the student, each member of the team will need to have at least a fundamental appreciation for the viewpoint of his sister disciplines. This leads to the second problem listed above.

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1. E. E. Hoyt, "Choice as an Interdisciplinary Area", Quarterly Journal of Economics, 79 (Fall 1965), p. 111.

Teaching in a team situation is not an alternative to the rigors of teaching a course as an individual. It cannot be viewed as a way to avoid the responsibilities of: (1) working with students as individuals and not as a "class", (2) effectively choosing the materials to be utilized in the course, (3) effectively organizing the course as a portion of an on-going curriculum in the university, and (4) preparing the lectures, demonstrations, etc. in such a way as to be interesting and informative to the students taking the class.

These are problems that any teacher must address himself to if he is to teach an effective course, but the problems are compounded when a team is trying to achieve the same result. The members of the team will have to meet on a regular basis well in advance of the actual teaching of the course to work on the materials to be used, the topics to be discussed, and the methods to be used. During the conduct of the course, further meetings will need to be held to evaluate the progress of the course on an on-going basis. After the course has been taught, further evaluation should take place and preparation for the next time the course is to be taught should begin.

During these meetings, methods should be established and assignments made so that the students will be clear as to who they can contact for individual help. The members of the team should fully recognize that they do not eliminate this portion of their teaching responsibilities simply by joining a team.

This close coordination can be expected to be very taxing on the time and energies of the team members. It is therefore of the utmost importance that the team be chosen carefully. Any chance of achieving the goal of a well taught, meaningful course will be lost if members of the team are not compatible in terms of temperaments and even teaching styles. This is not to say that

temperaments and style must be identical, but they must be close enough so that the many meetings that are required can proceed effectively, and what may be more important, efficiently. A team leader should be chosen for his leadership capabilities rather than at random. Finally, the membership should not be reluctant to teach courses of this type. Enthusiasm may be one of the most important assets that a member can bring to a team of this type.

COURSE PROPOSALS INVOLVING A UNIVERSITY TEAM: SUBJECT MATTER

A team approach to teaching an interdisciplinary course does offer some flexibility in terms of the subject matter covered over the single instructor courses. This is due primarily to the fact that there is a wider range of expertise available in a teaching team.

There are two very broad directions that can be taken in regard to the chosen subject matter. The first is to combine specific disciplines to cover a range of topics; the second is to choose a single topic and relate several disciplines to that topic. The difference between the two is obviously one of emphasis. Since the audience for the type of course being discussed in this paper is secondary teachers, the first option seems to make more sense. The goal is to prepare these teachers to handle questions arising in the social sphere on as broad a basis as is possible. This implies that several disciplines should probably relate to several topics.

Once the course content is decided on, alternative approaches concerning the method of presenting the material can be discerned. The course proposals presented in Appendices III and IV assure that the course will be of the many disciplines/many topics variety discussed above. The difference will be found in the method of presenting the material.

Since many topics are going to be discussed, the size of the teaching team and the disciplines chosen can vary somewhat. This adds to the important

degree of flexibility that should enable the course to be taught on a long term basis; even with faculty members leaving and joining the team.

### PROPOSAL III: PROBLEMS IN THE SOCIAL SCIENCES

The formal proposal for this course is presented in Appendix III to this report. The content is left in a vague form since the specific topics to be discussed will vary with both the times and with the particular interests of the team members. The real feature of the course is in the method of instruction.

The teacher in the course actually becomes a panel of instructors, i.e., every member of the teaching team will meet every class. Topics that were chosen for discussion during the preparatory meetings discussed above will be presented with each panel member contributing whatever insights that he and his discipline might have to offer.

Panel discussions are not new to the world in terms of their contributions to various subject matter of concern to a broad audience. This would be a bit of a different approach in formal classroom teaching. The discussions that would come out of such a group would allow for questions and answers of any disciplines represented. In other words, the students would have the opportunity to integrate the disciplines through both the formal presentation and through the important informal phase of class discussions.

Unlike a typical panel discussion, however, the close coordination and integration of ideas will have already taken place during the previous and on-going meetings between team members. In addition, the team members should find that, over the years, they themselves would be gaining a broader understanding of the range of approaches that could be taken to a social problem and that their ability to carry on interdisciplinary work in other areas, such as social research, would be enhanced. The more enthusiastic and diligent the team, the greater the probability of these side benefits accruing to the

faculty members that make up that team.

#### PROPOSAL IV: PROBLEMS IN THE SOCIAL SCIENCES.

The formal proposal for this final course is contained in Appendix IV. The multiple topic notion remains and the team teaching approach remains. The primary difference is that the team now teaches as individuals rather than as a panel.

Probably the strongest point that can be raised for a course of this type over the panel approach is that it is less taxing on the team members' time since each member is only responsible for a section of the course.

The course would be taught in weekly segments on a selected topic by topic basis. Again, the emphasis would be on the approach to the topic rather than emphasizing the topic itself. If a given topic is too broad to cover in four class sessions (one week), additional time could be allocated.

Even though this type of a class would be less taxing on actual teaching time, it should not be less taxing in preparation time. The factor of close coordination that has been harped on at great lengths above is as important, and maybe it is even more important, than is the case with any of the other proposed forms of organization.

The sociologist that is discussing his disciplines' approach to the analysis of the ghetto should be well aware of the economist's approach the day before, and so on. Each should be prepared to discuss the others insights on both a critical and an analytical basis. Each should have the capacity to point out the differences and similarities to be found in their analysis of a social phenomenon.

Finally, each must be prepared to meet with the students as individuals for consultation and other forms of help. This preparation goes beyond a

simple "willingness" on the part of the instructor. It also required that he be well versed as to the total "goings-on" during the conduct of the course.

#### SUMMARY AND CONCLUSION

The amount of work that is required if a workable interdisciplinary program of any type is to be a success cannot be overemphasized. Strong commitment must be made in this instance, as in all instances where new and innovative programs are being developed. If this commitment is made, then any one of the proposals that are outlined above and in the Appendices would be workable.

It was promised at the beginning of this paper that the author's opinion as to the "best" proposals would be presented with reasons for the selection. The commitment factor lays the basis for this attempt.

To get coordination and cooperation from a team is a risky proposition at best, although success along these lines greatly enhances the "flexibility" of the course. Therefore, if a team could be developed under the conditions outlined above, it would have the strongest input into the high school teacher's frame of thinking. The panel approach would be preferred over the individual due to its ability to handle diverse questions on a daily basis.

It is much more likely that a single individual could be found that is truly excited about the interdisciplinary movement, if it can be termed as a movement. Flexibility is lost, but the commitment may be more important.

In looking at the proposals that involve an individual and that would truly give the secondary teacher something to take back to the high school, Proposal 2 seems the most likely to succeed. Both the teacher and the students have a physical medium, the game, that they can relate to in analyzing social phenomenon. The secondary school teacher has the added bonus of a tool for

teaching his or her own classes.

The dependence on published games for subject matter weakens the proposal somewhat, but as more and more of such games are developed, a certain degree of flexibility in choice will be developed.

In summary, the greater the possibility for close team work in a university, the stronger the team approach. The less this possibility presents itself, the more the university is forced to rely on the individual approach. If the course is to be something other than the background of a single individual, the dependence of some medium may be required. Games and gaming technique may provide that needed medium.



## APPENDIX I

### COURSE PROPOSAL INVOLVING A SINGLE INSTRUCTOR ORIENTED TOWARDS PROBLEM-SOLVING METHODOLOGIES

#### I. Catalog Description:

- A. Course Title: Approaches To Social Understanding
- B. Catalog Description: The analysis of social problems on a case study basis, such as: the ghetto, crime, the environment, and the developing country. Emphasis will be placed on teaching approaches to problem solution taken from the methodologies of several disciplines within the Social Sciences. The course is oriented to the secondary teacher of Social Studies.

#### II. Content and Method:

- A. Content: The course being proposed would use specific problem areas as case studies. Alternative methods of approaching these problems would then be used to try to arrive at explanations or problem solutions as the case may require. The emphasis would be on the methods used to arrive at these answers rather than on the answers themselves. The tools of the discipline would be taught by their employment in analyzing the case study problems.
- B. Method: Class lectures, assigned readings, and short papers. Meets four quarter hours per week.

APPENDIX II

COURSE PROPOSAL INVOLVING A SINGLE INSTRUCTOR ORIENTED  
TOWARDS INTERDISCIPLINARY GAMES RELATING TO THE SECONDARY CLASSROOM

I. Catalog Description:

- A. Course Title: Gaming Techniques Applied to High School Social Science Curriculum.
- B. Catalog Description: A review of selected interdisciplinary, Social Science related games for the purpose of: (1) learning the techniques of game playing, (2) establishing an appreciation for the benefits and limitations of such games, and (3) creating an understanding of the particular social phenomenon to which the games relate.

II. Content and Method:

- A. Content: Secondary level games have been developed by such organizations as the Center for the Study of Social Organization of Schools, John Hopkins University. Representative titles of such games include: "Democracy", "Ghetto", "Life Career", and "The Drug Debate." These games, or similar games, will be reviewed and a few selected for formal presentation in class. Outside readings will be assigned when applicable to a better understanding of the social issue being highlighted by the games.
- B. Method: Class activities (game playing), lecture, and assigned readings. Meets four quarter hours per week.

## APPENDIX III

### COURSE PROPOSAL INVOLVING A PANEL OF INSTRUCTORS ORIENTED TOWARDS PROBLEM-SOLVING METHODOLOGIES

#### I. Catalog Description:

- A. Course Title: Problems in the Social Sciences
- B. Catalog Description: Selected topics and issues in the social sciences discussed formally on an interdisciplinary basis. The course will be taught by a team of social scientists with disciplines and team members rotating on a selected basis. Issues such as war and peace, the ghetto, urban transportation, and pollution are likely topics for course discussion.

#### II. Content and Method:

- A. Content: The specific content will vary, depending on the current issues confronting society and the interests of the teaching team. Content will always deal with the social implications of a given phenomenon.
- B. Method: The course instructor actually becomes a panel of instructors. Every member of a teaching team will meet every class. A minimum of three disciplines in the social sciences will be represented every time that the course is offered. Topics, as well as assigned readings, will be chosen for discussion during preparatory meetings of the research team.

## APPENDIX IV

### COURSE PROPOSAL INVOLVING A TEAM OF INSTRUCTORS; EACH TEACHING SEPARATELY, WITH COURSE ORIENTATION TOWARDS PROBLEM-SOLVING METHODOLOGIES

#### I. Catalog Description:

- A. Course Title: Problems in the Social Sciences.
- B. Catalog Description: Selected topics and issues in the social sciences discussed formally on an interdisciplinary basis. The course will be taught by a team of social scientists with disciplines and team members rotating on a selected basis. Issues such as war and peace, the ghetto, urban transportation, and pollution are likely topics for course discussion.

#### II. Content and Method:

- A. Content: The specific content will vary, depending on the current issues confronting society and the interests of the teaching team. Content will always deal with the social implications of a given phenomenon.
- B. Method: The course will be taught in weekly segments on a selected topic by topic basis. Different instructors, representing alternative disciplines in the social sciences will be responsible on an individual basis for the conduct of each session. Topics, assigned readings and testing will be handled by the teaching team during preparatory meetings. The class will meet four quarter classes per week.

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