THE USE OF A GAME FOR REVISION IN A WORLD HISTORY COURSE

ROBERT MARVIN CAUL

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BY

© Robert Marvin Caul, B.A., B.Ed.

A thesis submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Education

Department of Curriculum and Instruction
Memorial University of Newfoundland

January, 1985

St. John,s Newfoundland

ABSTRACT

The purposes of the study were to determine if playing a board game produced valid results for reviewing World History 3201 in the Province of Newfoundland and Labrador, and to determine students' attitudes concerning the game in several areas. To do this, the experimenter posed these questions: (1) Does playing the game for the purpose of reviewing lead to an increase in student performance? (2) Will students using this game rate the game enjoyable for reviewing world history? (3) Will students using this game rate the game helpful in reviewing world history?

To investigate these questions, teacher-made tests and an attitudinal test were administered. Of the students enrolled in two classes of World History 3201, students were assigned to treatment or control groups. Both classes were taught by the same teacher and the teacher considered students in both classes to be of the same ability. There was a significant difference between the means of students using this game and the non users. Also students using this game rated the game enjoyable for reviewing world history and rated the game helpful.

ACKNOWLEDGEMENTS

The writer wishes to express his grateful appreciation to the people who provided assistance and cooperation in conducting this study.

Gratitude is expressed to Dr. Gerry Murphy for his advice, criticism and direction in the preparation of the study and the development of the report.

Thanks are expressed to Kay Colbert, Christine Casey, Gary Hollett, and the Gander-Bonavista Connaigre Roman Catholic School Board for their assistance. My thanks are also offered to Michael and Rita Colbert whose home was always a joy to enter.

I dedicate this thesis to my wife, Geraldine, who not only offered her understanding, enthusiasm and support, but also was greatly involved in the technical preparation of this document and my mother, Mary, who has always been influential in my life.

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An important function of any teacher is to select the appropriate learning strategy to bring about desired outcomes. Kachaturoff (1978) suggested that the teacher's most effective tool in fighting learner apathy and indifference in the classroom is using a variety of learning strategies. Also students respond with more energy, interest, and resourcefulness when unique and unusual approaches to learning are used by teachers.

Raser (1969) suggested that disillusionment has been growing with traditional teaching methods. Student apathy, boredom, and dropouts occur because school seems irrelevant to the issues they face. With enormous changes in technology and the social environment, school must be concerned with new ideas in curricula and the efficacy of instructional techniques.

Davies (1971) pointed out that the use of games requires decision making.

> Choosing an appropriate teaching strategy is a matter of teacher effectiveness which could be learnt. This involves managing time, choosing what to contribute, knowing where and how to apply your strength to the best effect, setting up the right priorities and then knitting all these together by making effective decisions. (p. 174)

Davies (1971) also maintained three basic criteria can be used by a teacher in order to choose the appropriate teaching method.

> These include the nature of the learning objectives to be realized, the need to enrich

> the learning experience to harness intrinsic and extrinsic motivation, and the ability of the students involved in the task. The actual decision as to which strategy should be employed is a function of the interaction of these three variables. (p. 175)

The use of games as one instructional technique can supplement a repertoire of teaching strategies. However, it must be realized that games have to be carefully selected and used only when they can meet the objectives of the particular instruction. Games have many benefits for learning but they do have limitations.

Belch (1973) noted that educational games and simulations, explicitly used as a media for learning, have proliferated geometrically since 1960. Avedon and Sutton (1971) claimed that use of games in the teaching of academic subjects is now so embedded in instructional technique that the only issue most teachers are really concerned with is whether they can find a suitable game for their purpose.

Statement of the Problem

Under the new reorganized high school program in the Province of Newfoundland and Labrador, much emphasis has been placed on the social studies. The problem addressed by this study is to develop a board game to be used as an instructional technique in a particular social studies course, History 3201, for senior high school students in the Province of Newfoundland and Labrador.

Abt (1966) gave a rationale for the use of games in social studies.

> If learning is based on experience and drawing analogies to previous experience, it seems clear why the effective teaching of social studies is most difficult when only conventional techniques are used. In English, mathematics, physics, and chemistry, there are frequent situations where the child can learn by doing, such as listening and talking, reading and writing, problem solving, and experimenting. Similar situations are not usually available to the teaching of social studies because there are no opportunities for students to make history, write history,

solve problems of global geography and economics, or experiment with forms of civic organization.

In conventional secondary school social studies, the student may not learn as much or as deeply as in other subjects, because they cannot readily learn to be surprised at things without having some experience of how they ought to be. They cannot learn that they have made mistakes unless they can make mistakes - and making a mistake in history means making a wrong decision, not failing to remember a date.

The relatively greater difficulty of teaching secondary school social studies seems particularly regrettable today when the domestic and international socio-political issues need to be understood by all citizens. Furthermore, the individual high school student needs all the social studies information he can get to help him in his choice of career and higher education. For the many high school students who do not go on to college, social studies offer the only overall view of our society, our culture, and our civilization - an overall understanding that

> is important for the unity of our country and the fullest possible development of the individual. It therefore seems useful to develop improved techniques for teaching social studies in secondary schools. Heuristic games constitute one such technique that improves student understanding of social studies, by means of the well-established devices of conditioning through doing and analogizing to the students' previous experience. (p. 4)

This study examines the use of gaming as a method of revision. The benefits of games can make revision a much more enjoyable task with a strong increase in students' interest. In an examination of revision, Hearn (1980) stated revision is characterized by dullness, anxiety and learning blocks. Revision consists of repetition of past learning of facts and/or theories in preparation for examinations. Revision is associated with dullness and usually anxiety and stress of future outcomes which further complicate it. Conventional revision does not alleviate learning blocks because of lack of creativity and imagination. Games contribute significantly to the development of a

creative educational climate.

> The potential of gaming and simulation in revision is partly a matter of increasing the effectiveness of study at a time of stress, but it is also an issue of more general interest.
>
> Firstly, such methods are one way of breaking down the segmentation of education into 'course', 'revision', 'examination'. Gaming and simulation link together the experience of the segments to the benefit of each.
>
> Secondly, this particular use of gaming and simulation may highlight their wider application to other, similar situations. In particular, the use of gaming and simulation as training for situations involving a high level of both technical proficiency and personal involvement - emergency duties, working under pressure, crisis management and so on - deserves much fuller attention and exploration. (p. 24)

Daves (1983) refers to this type of research as product development research. The researcher is concerned

with new materials producing higher achievement and/or better attitudes than existing methods.

Definitions

Social Studies - An applied field which involves the social education of citizens....It involves applying information to social problems and using responsible, intellectual processes to the resolution of these problems....Social Studies is concerned with citizenship education which should place its focus on the utilization of knowledge from whatever source in meeting the practical problems which confront a citizen. (Engle, 1970, pp. 778-780)

Educational Games - A method of stimulation, learning and growth through the experience of play (Strong, 1975, p. 4).

Games - Voluntary activities or occupations executed within certain fixed limits of time and place, according to rules freely accepted but absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy, and consciousness that it is different from ordinary life. (Huizinga, 1955, p. 28)

Simulation Games - Detailed models intended to reflect a situation found in the real world, a reproduction or imitation of physical or social environment (Strong, 1975, p. 4).

Board Games - Games that are played on a board with the players having to make decisions.

Player - A person who must make a choice among a number of specified alternatives in the playing of a game (Strong, 1975, p. 4).

Revision - Repetition of past learning of facts, and/or theories in preparation for examinations (Hearn, 1980, p. 21).

Rules - A clear statement of objectives and regulations governing the achievement of the objectives (Strong, 1975, p. 4).

CHAPTER II

REVIEW OF LITERATURE

Introduction

Games have been used extensively in the educational environment. This chapter focuses on the nature of games with a brief background, the views of educationalists and other knowledgeable individuals concerning the worth of games, and criticisms of the use of games.

The Nature of Games

Strong (1975) thought that perhaps the classic work on games was done by Johann Huizingo who considered a game as:

> A voluntary activity or occupation executed within certain fixed limits of time and place, according to rules freely accepted but absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy, and consciousness that is different from ordinary life. (p. 40)

Nesbitt (1968) defined gaming "as something enjoyable - however serious - involving competition for specified objectives and observing rules" (p. 14).

Gordon (1970) defined a game "as any simulated contest (play) among adversaries (players) operating under constraints (rules) for an objective (winning)" (p. 8). Abt (1966) has completed much work dealing with games and has developed a view of games.

> A game may be defined as any contest (play) among adversaries (players) operating under constraints (rules) for an objective (winning, victory, or pay-off). Mathematical game theory defines games in terms of the number of independent players, the degree of competition and cooperation among them, the amount of information they have about their adversaries, and whether the game is deterministic or probablistic. Whether games are defined as contests played according to rules with power resources, skill and luck; or as mathematical exercises, they always have the characteristics of reciprocal actions and reactions among at least partly independent entities having different objectives. (p. 5)

Coleman (1967) outlined the properties of a game: The essential properties of a game are

> players, usually a small, fixed number; a goal which each player strives to achieve; and rules which specify the range and nature of legitimate actions by the players and establish the sequence and structure within which the action occurs. A characteristic of games, which has important implications for their use in educational settings is that they are apart from, but at the same time a kind of mirror of functions and activities. (p. 67)

Dunathan (1978) claimed authors have confused games with simulation, role playing, drama and plays. Commercial packages offered as games are often not games at all. Games have three basic principles with each principle having a number of elements.

Competition

Competition is the first principle of games. Without competition, an activity that otherwise appears to be a game is something else. Players compete first with self, second with other participants, and finally with uninvolved others.

In competition with self, players strive to control personal resources, talent, skill, and

discipline for maximum effect in the game. It is competition with self, more than anything else, that creates the desire to play a game repeatedly.

Chance. Chance refers to the fact that players have less than complete control over the outcome. The level of chance decreases as players practice but cannot be reduced to zero. The outcome of a generic game remains in doubt until the last die is cast. Chance, more than anything else, makes a game interesting to spectators. When chance plays only a small part in games, player interest may remain high, but audience interest will be low.

Score. Winners and losers are indispensible elements of competition. The generic game has but one winner; the rest are losers. Any attempt to soften the blow of losing with runner-up, honorable mention, finalist, or other euphemisms reduces the power of the game.

Team victories are possible only when each team member is able to score a personal victory (i.e., goal per hold, hockey per assist, football per tackle, basketball per rebound, and so on).

To assume that an individual player would deliberately subordinate chances for personal score in favor of team score, unless the subordinating behavior is itself scored, is nonsense.

In competition with other players, score enters as a prime objective simply because score is usually expressed in normative terms. Score is compiled for one player against another.

Third person competition pits the player against others who are not taking part in the game. The importance of third person competition is largely overlooked. The fact that a player works against others who do not play provides the only protection the loser has against humiliation and destruction. The lowest scoring player may lose the contest, yet win over others who did not play at all. It is that knowledge that makes losing participation worth enduring and what keeps losers in a game.

Risk. The player makes an investment to

begin the game, recognizing that the investment might not yield dividends and could be lost altogether. Risk differs in kind and quantity but is present in even the most simple games. A player need not risk money for a game to have high stakes. For many players, simply taking a chance on losing is risk enough.

Prizes may be appended to score. Tangibles such as trophies, certification, or merchandise are common. Intangibles such as privileges or status are less commonly used. Prizes are not a requisite for generic games but may increase participation, and when more than one prize is available they may cushion the impact of losing.

Abstraction

To hold that the generic game requires a high level of abstraction is short of the truth; a game is an abstraction. Anything less, and it is not a game. A game requires first that the participant conceptualize the total game package: goals, objectives, constraints, strategies, scores, and so forth. Next, the participant must comprehend what the package

means and decide whether the game has sufficient value to make it worth playing. If the decision is to play, the participant must then internalize the game or it becomes pointless.

At the point where games become more real than abstract, they stop being games. Football, for instance, is a game that has crossed over from abstraction to reality. While one could argue that the game is a lot of symbolic nonsense, every symbol of the game from the misshapen ball to the oval stadium has been institutionalized into reality.

The point where games become real varies with individuals' values. It is for that reason that some can be said to play at life, play at love, play at war, play at politics or anything else. Perhaps the real turning point is that moment when the outcome exceeds the value of the process.

Conceptualization. When participants cannot conceptualize the game, they seldom play willingly. When they play, their success is diminished by misconception. It is at the conception level that intelligence takes its

first advantage and inflicts its first handicap.

Comprehension. Participants must comprehend what the game means in personal terms. The Dating Game, for example, is not difficult for adolescents to conceptualize. But when young adults do not comprehend the fact that they could be cast in an unflattering role, they may find the game painful as it progresses.

Internalization. Participants may play a game without internalizing it, but play will be second-rate. A player may refuse to internalize a game as a defense mechanism against losing. However, it is probably not possible for a participant to avoid internalizing short of not playing at all. Most likely, when players appear not to care about winning or losing, they are shielding themselves against losing while keeping open the possibility of winning.

Power

Power is the raison d'etre of the generic game. Ultimately, it is power for which players compete and power that determines the winner and losers. The basic objective for all players in the generic

game is to accumulate power. In order to do so, they must manipulate power according to commitment, constraint, and advantage.

Lessons provided by manipulating power may be where the true instructional value of a game resides. While the principles of competition and abstraction provide worthwhile experience for players, similar experience is available in everyday life. But only in the generic game is power available to anyone who wishes to play - and at an affordable price. Power in the real world (real estate, for example) comes too high for most to afford it to begin with, much less to play with it in order to accumulate more.

Power such as talent, skill, physical prowess, intelligence, and other factors are commonly said to be wasted if not risked. In fact, they are often not tendered for fear of loss in competition with others of greater power. Thus, the generic game provides a sheltered arena where power manipulations can be practiced at low cost.

Commitment. Power increases in direct proportion to the size of the commitment. Most

players make less than life-or-death commitment to a game. But it is not unknown for individuals to risk health, wealth, and happiness for a game - and lose. It is the enduring fascination of the generic game that cannot be completely bought by even the heaviest commitment.

Constraint. Rules under which participants play directly affect power. In the generic game, constraints function equally for all players of equivalent power. However, as power in a game accumulates, negative constraints against an adversary increase in power, and negative constraints against the powerful lose potency as power increases. This element, when properly engineered, gives a game lifelike qualities that increase its appeal as well as its teaching value.

Advantage. Advantage must be given equally to all players. This is often accomplished through a system of handicaps; less able players start with an advantage over more able players. When the game begins, players are soon differentiated by their strategies for using advantage. Some strive to score early and rapidly in the hope of accumulating

> unbeatable power. Others seek an early advantage for which they can score while reducing or eliminating the scoring of opponents. Since either basic strategy or combinations of both can win, the generic game provides new or refined learning for participants playing repeated contests of the same game. One of the tests of the generic game is whether it can be played repeatedly without duplicating the outcome. (pp. 14-15)

Serious games are characterized by two basic features according to Gordon (1970). They usually simulate real-life situations and the cooperative aspect of real-life situations is built into games with winning a relative thing.

Abt (1970) felt that games may be played seriously or casually. Abt is concerned with serious games in the sense that these games have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement. (p. 20)

Stolovitch (1978) stressed the importance of the educational purpose of games. Using a game definition put forth by Thiagarajan and Stolovitch, he adds an

instruction game differs from an ordinary game in that a learning objective is deliberately built into the game.

Abt (1966) stated all games have rules, whether informal or formal.

> Informal games have rules that are implicit. Formal games, on the other hand, have at least some explicit rules, although they are usually additional implicit rules involved. Formal games may be classified according to three major types: Showdown games, in which each player exhibits his best physical or mental performance and luck without interference from any other player, and the results are compared. Strategy games, in which opposed players interfere with each other's exhibited performances; and Combination games incorporating strategic exchanges preliminary to showdowns. In each of these categories, the substance of the game may consist of various combinations of skill, chance, realism, and fantasy. (p. 6)

According to Boocock (1976) instructional games consist of three elements, gaming, simulation and role-playing. Gordon (1970) said, "educational games

fall into two basic patterns: board games and role-playing games. The format selected depends on the subject of the game, and the purpose or population for which it is designed" (p. 10).

Board games incorporate a board around which the action takes place. Gordon (1970) stated "that role-playing is used primarily in games that teach processes involving much negotiation, bargaining, compromise, in general, human interaction (p. 11).

Gordon (1970) also felt that simulation was a term used by educators because it was more encompassing than game but games are simulations; however, he felt all simulations cannot be considered games.

> The basic difference is this: In a game, a winner is usually identified; a simulation need not have a winner...This observation suggests a basic difference in the use of an educational simulation and an educational game. A simulation is more likely to be applied to the study of issues rather than processes. The principal purpose of a simulation is for students to express, in their own words, the basic arguments for the different sides of the issue. The principal purpose of a

> game, on the other hand, is to get students to make more and more intelligent decisions as they learn more about the process represented. (pp. 12-13)

Boocock (1971) noted "simulation is an operating model, reproduction or imitation of physical or social phenomena, consisting of a set of interrelated factors which functioned in essentially the manner as the actual system" (p. 107).

Nesbitt (1968) states "that a simulation is a selective representation of reality, containing those elements of reality that the designer deems relevant to his purpose" (p. 4).

Spannaus (1978) in reviewing literature suggested that games include chance variables while simulations operate upon fixed rules, relationships, and models.

> It is necessary at this point to pull together the characteristics of a simulation. First, a simulation must be based on a model of reality. This model can be mathematical, logical, or physical as in the cases, respectively, of management games, international relations simulations, or flight simulators. This model or analog must enbody the salient relationships

abstracted from life that bear on whatever actions the participant takes.

Second, the objectives of a simulation activity must be at the level of application. It is a prerequisite of a simulation that the student has mastered the knowledge items for the topic.

Third, the participants must deal in some way with the consequences of their actions. Decisions in life are not made in a vacuum: They have consequences that the participant cannot ignore with impunity. In a competitive simulation, the consequences of a bad business decision, for example, may be a loss of points in relation to opposing teams, or a loss of capital with which to rebuild or expand. These losses become factors in the next series of decisions.

Implicitly, the student must be a participant. An activity that involves the student only as a spectator cannot claim to be a simulation. In some activities, the participation may be limited to a debriefing of participants after viewing a role-playing scenario. An adequate debriefing will require the participants to describe what they

might have done and what the expected consequences of that action would be.

These criteria, while developed to define simulation activities in training or education, can as well be applied to other uses of simulations. Where simulations are used for testing for aptitudes, ability to apply knowledge, and the like, the only alternation of the activity is that an observer rates the participant according to some criteria. In a simulation used for research, the model of reality and its relationships may be hypothesized and the activity used to confirm or reject the hypothesis. (p. 17)

Joyce and Weil (1980) believed simulation allows students to face realistic conditions and develop realistic solutions inside a classroom. Students must develop concepts and skills necessary for performance in the specified area in order to progress through the tasks. Students learn from the consequences of their actions.

Unlike many other models of teaching, game simulations depend on software; that is, the game has paraphernalia of various kinds. Monopoly, for example, has a game board, pieces that represent

the players, houses, hotels, cards that insert chance events into the situation, and paper money. Without these, the game cannot be played. Similarly, driver simulators, games involving cabinets in crises, human relations games such as Star Power, and many other simulations all require material to represent the real world to the students in a simulated form. Much of the model of teaching that we call simulation involves learning to use this software effectively. Whereas other models of teaching depend on the interpersonal skill of the teacher (understanding concepts, skillful moves that help the students explore important ideas), in the Simulation Model the teacher blends the already prepared game or other simulation into the curriculum, highlighting and reinforcing the learnings inherent in the game. Because many people do not realize the critical role a teacher can play in enhancing the learning from a simulation activity, we believe a model of teaching that describes these activities is especially useful. The game itself is essential, but the teacher's ability to make the activities

truly meaningful is critical. (p. 291)

Games appear to have certain benefits to justify their use as a learning strategy. One of the biggest strengths of games is their ability to motivate. "Games are intrinsically motivating because the form is characterized by several dramatic features that are independent of the subject or issues dealt with" (Gordon, 1970, p. 19). Abt (1970) agreed games are effective teaching and training devices for students of all ages and in many situations because they are highly motivating, and they communicate very efficiently the concepts and facts of many subjects. Nesbitt (1971) pointed out that games are enjoyable and children like to play games, and children also like to role play. To play doctor, nurse, policeman or thief or some other role is a very natural activity for a child.

Also games are liked because they actively involve players. Abt (1966) felt that this was the essential characteristic that made games motivating. By being actively involved, students feel that they are controlling the environment rather than having the environment control them. They learn how the decisions they make affect the environment and the consequence of

their decisions. Boocock (1971) claimed activity was important.

> The simultaneous and continuous participation characteristic of most games makes the students' role an active one. In addition, because games are self-disciplining, in that all must obey the rules if play is to continue, and self-judging in that outcomes decide the winner and a player knows that he has won or lost by his own actions, students are more autonomous with respect to their own learning. (p. 106)

According to Gordon (1970), "the sense of efficacy that games permit and encourage is not only an underlying reason for their motivational power, but an important educational benefit" (p. 20). Students feel that they are controlling their environment which avoids feelings of apathy and general malaise. "They are the causes of events, rather than creatures of the school environment" (p. 20). Nesbitt (1971) claimed "students who actually see the results of game behavior acquire a greater feeling of efficacy" (p. 46).

Boocock (1971) suggested that because a game is a miniature social system, it has special relevance which

allows the student to observe, manipulate and interpret human behavior. Gordon agreed that "games provide, perhaps uniquely, the opportunity to deal with complex problems in extremely concrete ways" (Gordon, 1970, p. 2).

Immediate access to feedback is an advantage of games. Skinner (1968) voiced the view held by many people "the most serious criticism of the current classroom is the relative infrequency of reinforcement" (p. 17). Reinforcement must take place in order for learning to take place. Gordon (1970) argued that the amount and quality of the feedback a student receives is important. He argued "in a game, feedback is not only prompt but natural" (p. 21).

According to Ruben and Lederman (1982) less emphasis has been placed on games as an instructional technique in the late 1970's and early 1980's. Factors for this include re-emphasis on basic skills at all levels of instruction; decreased resources available for developing and experimenting with new instructional methods; more emphasis on verbal-cognitive facets rather than affective and behavioral components of instruction; lack of sufficient evidence documenting

the value of experimental instruction; insufficient training in the use of gaming techniques by many users; much uncritical acceptance of gaming techniques; and some views that games were lacking in rigor and substance.

However, developments in technology have also brought a renewed interest in games. Walker and Graham (1979) stressed using the computer in gaming can have many educational benefits. Games with computers can incorporate a more detailed model of real world situations, handle complex accounting procedures and large sets of data, include reliable feedback, reduce variability introduced by the teacher, and provide an independent learning resource. Besides these, the use of computers capitalizes on enthusiasm and benefits of an exciting new technology.

Becker (1980) claimed microcomputers are creating a revolution in human communication with gaming a new language that fits into the communication of the future.

Views of Concerned Educationalists and Knowledgeable Individuals

Many positive characteristics of games and their benefits are listed. The writers believe that there are many distinct advantages in the use of different types of games.

Alger (1963)

Alger has summarized the advantages claimed for gaming as a teaching technique:

1. Simulation (or gaming) heightens the interest and motivation of students in several ways. It is stimulating, involving, provides a shared experience as a basis for later discussions, and is a catalytic agent, providing students with objectives for sharing background information.

2. Simulation offers an opportunity for applying and testing knowledge gained from reading and other experiences.

3. Participation (as a decision-maker, for example) gives the student insight, empathy, and a greater understanding of the world as seen and experienced by real decision-makers.

4. Most simulations provide a simplified 'world' that is easier for the participant to comprehend as a whole than are the real institutions being represented. (Cited in Raser, 1969, p. 115)

Abt (1965)

Educational games use the student's way of viewing things. They present concrete problems in a simplified but dramatic form that mediates between abstraction and confusion, between dry theory and multi-variable reality. For elementary school children, educational games translate the child's primarily concrete, intuitive thinking into a sequence of dramatized possibilities that expands his awareness of hypothetical alternatives and fundamental relations. The child deeply involved in the concrete activity of educational gaming becomes aware of formal relationships by direct experimental manipulation. Pleasurable rewards for manipulating formal relationships effectively are fed back immediately in the form of game success. Elementary school children tend to focus on only one aspect of a phenomenon at a time,

> greatly limiting their ability to comprehend phenomena with even a few interactions among elements. Games present simultaneously progressing multiple interactions that can be examined one at a time, and then gradually together with increasing comprehensibility.... The student player gains a growing sense of structure among the game variables, with a correspondingly growing sense of structure of the subject simulated by the game. This can expand the student's attention span and intellectual confidence. The more densely packed a game is with such structure (up to a surprisingly high degree of apparent confusion), the longer the learning episode that can be tolerated by the student without fatigue or loss of interest. The longer and more concentrated the learning episode, the greater the student's understanding and confidence in the intellectual satisfactions of subsequent episodes. (Cited in Carlson, 1969, pp. 167-168)

Bruner (1966)

Bruner stressed that children must be made aware that there is a structure in society and one part of society can not be changed without changing other parts with it. Social organization consists of reciprocity and exchange, and roles have limitations. Games can present these elements to children.

> Games go a long way toward getting children involved in understanding language, social organization, and the rest. We do not know to what extent these games will be successful, but we should give them a careful try. They provide a superb means of getting children to participate actively in the process of learning as players rather than spectators. (p. 95)

Coleman (1966)

> A game - nearly any game, not merely those termed 'simulation games' - constitutes a kind of caricature of social life. It is a magnification of some aspect of social interaction, excluding all else, tearing this aspect of social interaction from its social context and giving it a special context of its own....A boxing or wrestling match

abstracts from its context the direct physical violence that resides in social life and recreates this violence under a set of explicit rules. When I was a boy in the midwest cornhusking contests abstracted one activity from the life of farmers, established a set of rules, and gave this activity a temporary but central position for the participants. This unique relation of games to life can be seen even better in other ways. The informal games of young children appear to be crucial means for learning about life and experimenting with life.

One of the most perceptive students of the social and intellectual development of young children, Jean Piaget, has observed this development in the simple games children play, such as the games of marbles. It appears that for children, games are more than a caricature of life; they are an introduction to life - an introduction to the idea of rules, which are imposed on all alike, an introduction to the idea of playing under different sets of rules, that is, the idea of different roles, an introduction to the idea of

aiding another person and of knowing that one can expect aid from another, an introduction to the idea of working toward a collective goal and investing one's self in a collectivity larger than himself. It appears that games serve, for the young child, all these functions as an introduction to life...

But beyond this there are certain special characteristics to the games described in this issue, and to the games that sociologists find of particular interest. Some games involve the interaction of a player with his physical environment, for example a maze or a jig-saw puzzle, or block puzzles, or a cornhusking contest, or a pole vault. These games abstract from life either certain physical skills or certain intellectual skills of inference from physical evidence. Other games such as number puzzles or crossword puzzles involve interaction with a symbolic environment, in these two instances an environment of numbers and an environment of language.

Such abstractions of activities from life hold some interest for the sociologist, but much

less interest than another class of games which abstract from life some elements of social relations or social organization. Many games incorporate some aspects of such relations but a few games incorporate enough such relations that a special term has been used to describe them: social simulation games. Such games pluck out of social life generally (including economic, political and business life) a circumscribed arena, and attempt to reconstruct the principle rules by which behavior in this arena is governed and the principle rewards that it holds for the participants. Such a game both in its construction and in its playing then becomes of extreme interest to the student of social organization. For from it he may learn about those problems of social relations that are his central concern. The game may provide for him that degree of abstraction from life and simplification of life that allows him to understand better certain fundamentals of social organization.

It is this, then, that makes the sociologist fascinated with a certain kind of game - the possibility of learning from this caricature of

social relations about those social relations themselves. (Cited in Raser, 1969, pp. 117-118)

Coleman and Boocock (1966)

According to Coleman and Boocock, the values of such games arise from several sources:

> First, and perhaps most important, they bring the future into the present, allowing the child to play roles in a large differentiated society of which he otherwise gets hardly a glimpse. Thus they surround a child with an environment which is artificial for the present, but realistic for the future. His academic task is not to carry out assignments, but to 'survive' in this complex environment. In playing a management game, a child is forced to turn to economic texts not to get a grade, but for economic survival in this complex environment. In a consumer game (involving allocation of income in the face of credit financing, advertising pressures, and unpredictable events), a boy or girl must learn both economics and mathematics, as well as the necessity to defer gratifications. More generally, a boy or girl will be able to play at those roles that he must play in

earnest once he becomes an adult, and enters the complex modern society of adults. In so doing, he learns both the intellectual skills relevant for those roles, and the moral traits - that is the traits which schools presently attempt to inculcate under the general label of 'citizenship education'.

Secondly, games are considered valuable because of their strange ability to motivate, and finally, because they are self-judging. That is, the outcome of the game decides the winner, and a player knows that he has won or lost by his own actions. This, at least in theory, enables the teacher to escape from the role of judge, and return to his original function, that of teacher or helper for the student. (pp. 218-219)

Coleman (1967)

Games constitute an approach to learning that starts from fundamentally different premises than does the usual approach to learning in schools. The first premise is that persons do not learn by being taught; they learn by experiencing the consequences of their actions. Games which

simulate some aspects of reality are one way a young person can begin to see such consequences before he faces the real actions and the real consequences as an adult.

A second premise underlying the development of these games is that schools find it difficult to teach about the complexity that characterizes modern society, with the result that students have had little or no experience to prepare them for facing a multitude of decisions and problems in adult life. The games we and others have created present the student with an approximation of certain facets of modern society that he will have to face later.

Learning through games has a number of intrinsic virtues. One of these is its attention-focusing quality. Games tend to focus attention more effectively than most other teaching devices, partly because they involve the student actively rather than passively. The depth of involvement in a game, whether it is basketball, Life Career, or bridge, is often so great that the players are totally absorbed in this artificial world.

Another virtue of academic games as a learning device is that using them diminishes the teacher's role as judge and jury. Such a role often elicits students' fear, resentment, or anger and gives rise to discipline problems. It may also generate equally unpleasant servility and apple-polishing. Games enable the student to see the consequences of his actions in his winning or losing. He cannot blame the teacher for his grades; instead he is able to understand the way in which his own activity is related to the outcome. The teacher's role reverts to a more natural one of helper and coach.

In developing an appropriate sense of consequences contingent upon action, the amount of chance in a game is quite important. If a game has the appropriate mixture of chance and skill, persons of somewhat different abilities can play together, and success will depend in part, but not entirely, upon their relative skill.

A special value of academic simulation games appears to be the capacity to develop in the player a sense that he can affect his own future. A massive study conducted by the U.S. Office of Education

shows that one attribute strongly related to performance on standard achievement tests is a child's belief that his future depends on his own efforts rather than on a capricious environment. Many disadvantaged pupils appear to lack this belief.

Seeing the consequences of one's actions in a game develops the sense of predictable and controllable environment. When a game simulates aspects of a student's present or future life, the student begins to see how his future depends very directly upon present actions, and thus gives meaning to these actions.

Still another virtue of academic games is the range of skills a game can encompass. A teacher's class presentation has a fairly narrow range: Some students fail to understand unless it is very simple, others are bored when it is that simple. Games, however, can encompass a much larger range of skills. One example indicating the wide range of simulation games is the successful use of the Representative Democracy Game with high school classes of slow learners

and, in identical form, with a group of faculty and graduate students in political science and sociology.

Games of this sort hold the attention of bright students in part because they continue to think of new variations in strategy and in the rules. When the rules are not merely accepted but examined and perhaps modified, possibilities for creativity are opened up that the classroom situation often inhibits. The same game may be played successfully--usually at a less sophisticated level, but not always--by children who perform poorly in school. Several groups in a classroom may be playing the same game at different levels of skill.

When a game is designed to illustrate a general principle, some students understand the principle, while others will not do so without guided discussion after play. Thus games are clearly not a self-sufficient panacea for education, although they are more than simply another educational device. They can be used in many ways ranging from merely inserting them into an existing

curriculum to transforming the curriculum by using games and tournaments to replace quizzes and tests.

In the broadest sense, the development of academic simulation games is a response to two challenges: that posed by a complex, difficult to understand society and that posed by children uninterested in or unprepared for abstract intellectual learning. These challenges may be blessings in disguise if they force the development of approaches to learning in school that more nearly approximate the natural processes through which learning occurs outside school. (pp. 69-70)

Clayton and Rosenbloom (1968)

Educational games have evident advantages. For the curriculum developer, the very process of formulating the game model, if done well, forces attention to the inherent structure and the fundamental themes of the subject at hand. As with programmed instruction, the requisite analysis of a subject matter in terms of behavioral goals and presentation sequence

benefits pedagogy. For children, games could impart information in a meaningful way because they present problem-solving situations which, when well designed, require immediate application of new facts. Games should be conducive to discovery and intuitive thinking because they provide a laboratory-type setting where independent variables can be freely manipulated to test consequences of guesses and hypotheses. The player is free not only from fact-bound reality, but also from a teacher's affectively charged feedback. Games could prove to be a powerful way to reach the child low in verbal skills. Games should aid empathetic understanding because of the opportunity they offer for role-playing. And as for motivation, children at all ages take readily to games and find them stimulating in themselves. (p. 88)

Raser (1969)

A fascinating aspect of using games in a school system is that often the same game can be played profitably by students of almost any age--from third graders to graduate students! Many games

> that operate on a very simple level and are appropriate for ten year olds also incorporate enough richness and diversity to challenge professionals....This quality gives the games greater flexibility in use--that is, they are less sensitive to problems of 'grading', as compared to conventional materials, and therefore need not be geared as carefully to a particular grade, age, or intelligence level. The extent of the detail, complexity, and richness that can be mined from a game depends on the student himself, not on the success of a curricular specialist in finding a common denominator for a particular group. (p. 119)

Abt (1970)

> Games are effective teaching and training devices for students of all ages and in many situations because they are highly motivating, and because they communicate very efficiently the concepts and facts of many subjects. They create dramatic representations of the real problem being studied. The players assume realistic roles, face problems, formulate strategies, make decisions, and get fast

feedback on the consequences of their action. Also with games one can evaluate the students' performances without risking the costs of having errors made in 'real-world' tryouts and without some distortions inherent in direct examination. In short, serious games offer us a rich field for risk-free, active exploration of serious intellectual and social problems. In games man can once again play the exciting and dynamic roles he always enjoyed before society became so compartmentalized. The role-playing that students undertake in games that simulate life is excellent preparation for the real roles they will play in society in later life. (pp. 13-14)

Gordon (1970)

Educational games are essentially a method of packaging concepts. Games are intrinsically motivating because the form is characterized by several dramatic features that are independent of the subject or issues dealt with. When a student listens to a lecture, participates in a discussion, or reads a textbook chapter, we assume his interest in the subject or at least his

motivation to perform well in class. This premise has not proven notably valid for successful teaching and learning. When a student participates in and learns from a game, we merely assume that he shares certain basic human traits. No particular interest in the subject of a game is necessary for involvement in it. For the player, the object of a game is winning. Learning is a by-product, but motivation for further study of the topic frequently results.

Games require active participation. Players manipulate colorful tokens, negotiate, bargain, debate, and make decisions. In short, they make things happen. They are the causes of events, rather than creatures of the school environment. This is perhaps the essential characteristic that makes games motivating. The events caused by players in a game are not less real because they occur in a hypothetical world. Students gain a feeling of control over their environment. Again, the feeling of control is no less real because it is exercised over a hypothetical world. Nor does the presence of chance occurrences in a game or

even unfair rules (rules that give greater advantage to one team of players over another) weaken a feeling of control over the outcome of the game. Effectiveness and control are not synonymous with success and winning. A player who makes a poor decision in a game nevertheless perceives his impact on the game environment. (pp. 19-20)

Educational games provide fresh opportunities for 'the others'. In a game, there is no guarantee that the 'best' students will win. There is no monopolizing of activity by the 'best', since everybody participates at the same time. While the system behind the conventional operation of a classroom has been successfully internalized by the leaders, no such system operates in a game. A combination of good decisions and good luck is required to win a game. The rewards do not depend on conformity to a teacher's rule of procedure, nor is there one right way of arriving at one right answer. Unorthodox, imaginative solutions are just as good and sometimes better than conventional activities, are often subordinate in game

> situations; social skills are sometimes more important in games than they are in the more usual classroom activities. Also, games are not graded in the way that other activities are; while this may present problems for the teacher, it removes inhibitions for the students. Games also offer more leadership roles than are normally available in other classroom activities. Students quickly perceive these differences, and can devote their attention to the activity at hand without worrying about the cues and signals, the penalties and rewards that usually demand attention. It is only a game, and they cannot lose much. (pp. 25–26)

Noel (1971)

> Our experience thus far encourages us to believe that network gaming and simulation has great potential in several aspects of instruction: the opportunity for an instructor to incorporate into a course complex exercises without having to assume the heavy administrative burden such exercises entail; the ability to focus on international relations and foreign policies of a

particular nation or subset of nations, without having to form locally the number of nation-teams necessary for an entire game; high student motivation and involvement produced by the inter-campus aspect of the games; and a cost-per-student that promises to decline as our experience increases and as hardware and communications costs continue to decrease. (Cited in Greenblat & Duke, 1975, p. 181)

Adams (1973)

Meaningful learning can come about by participating in an instructional environment (usually role-playing various kinds of possible events). The learning that takes place in such a situation might be called 'active' learning. In this context the student learns from an experience by hooking it onto structures that he has participated in rather than simply read, discussed, or listened to. When information is assimilated in this way, it can be recalled more vividly and applied in similar situations or used to support already existing ideas....The assimilation of ideas in an actual

> learning way is highly effective....Simulation games, which are a kind of structured play, seem to be a very effective way for a child to come to terms with reality. In part, this is because gaming itself came into existence to fill a child's and sometimes an adult's need to deal with, to make some sense out of, and to synthesize his experiences--that is, to discover ideas, definitions and relationships. (pp. 6-7)

Livingston and Stoll (1973)

> What do students learn by playing simulation games? What educational objectives can you reasonably expect a simulation game to accomplish? Many extravagant claims have been made in answer to these questions, but in our opinion, there are some important types of educational objectives that simulation games actually achieve. Simulation games can increase the student's knowledge of terms and concepts, of specific facts, and of structures and relationships. They can help the student develop certain intellectual and social skills. And they can change the student's attitudes toward the things which are simulated in the game. (p. 8)

Cassel (1974)

> Instructional gaming and simulation may be used effectively in many different aspects of academic pursuit in the traditional classroom situation. Often the employment of such a procedure imposes structuring involving sound management procedures not typically present in the traditional classroom, i.e., opportunity for participants to employ modes of their own particular choosing for goal attainment; as opposed to assigned modes by the teacher (the most usual mode being listening to a lecture). (p. 103)

Shears and Bowen (1974)

> Games fit the life style of children, and they engage children in learning experiences. These learning experiences differ from those usually required of them at school, since ordinarily children are free to engage in games for their own private reasons. Furthermore, games can absorb the participants for extended periods without their seeming to be aware of the passage of time. All these observations point to the fact that for children games are fun....We do

> not suggest that games should be used exclusively as the teaching method, but games offer variety for the classroom and allow children to gain perspective on their real world events....Games and children playing games constitute potentially powerful educational tools. (p. IX-X)

Cohen and Bradley (1978)

In a study of 183 pupils from fifth and sixth-grade classes using a simulation game, the following conclusion was made:

> In sum, this research indicates that the type of simulation used in the study is valuable for classroom instruction, especially in social studies map skills and concepts. Simulation provides an enjoyable change of pace from traditional methods of instruction and is effective in promoting retention of basic knowledge. Simulation should not be the only method of instruction, but it should be incorporated into the total curriculum. (p. 252)

Stolovitch (1978)

> Minigames and microgames are powerful instructional tools in the educator's repertoire. Learners enjoy them, participate easily, and--wonder of wonders--learn from them as well. Mini- and microgames are nonthreatening. They are short and require virtually no materials. Their rules can easily be assimilated. Minigames and microgames are no panacea. They are simply good, useful instructional devices. After all, this article began with a tiny microgame. If you have read this far, it must have had some effect! (p. 20)

Orlick (1979)

> Play and games have great potential for helping children to learn about themselves, about others, and about how to cope constructively with the world. The play world is the child's natural medium for personal growth and positive learning. The littlest people are the most playful players. They are the masters of this magic realm. They play the most and are most influenced by play. Their play is both real and unreal, serious business and sheer fun. It is everything and

nothing. In the final analysis, it signifies nothing less than how they will be in this world.

Play is a place of being and doing rather than a place of seeing and viewing. Long before there were schools, there was play. Long after schools cease to exist, there will still be play. As a medium for positive social learning, play is ideal because it is natural, active, and highly motivating for most children. Players are continuously in the process of acting, reacting, feeling, and experiencing. Play, when approached in a sensitive and thoughtful way, is a beautiful medium for bringing people together. (p. 157)

Becker (1980)

Educational research has shown that inductive approaches are superior, although only slightly, to deductive approaches. Gaming is excellently suited for inductive teaching and training, allowing for a deductive input in the later stages of the communication process. (p. 19)

Cowan (1983)

> The longer I teach, the more convinced I become that those who really learn and who develop in ability are aware of what they are doing. I don't know which comes first--awareness of process or improved ability in that process; indeed I suspect that they are related other than as cause and effect. But I have seen many students improve rapidly following a period spent by them in thinking about how they think. And so I presume to ask you, as I ask myself, why reflection on process, as a learning experience, should be restricted to undergraduates. Why do we not exploit that route to deeper understanding and improved ability--as designers of games and simulations? (p. 47)

Criticisms of Games

In a review of claims and evidence concerning the value of games, Greenblat (1973) stated there is a lack of evidence to determine whether games meet their pedagogical promise. Studies of cognitive learning show no difference over traditional methods or differences in favor of games that are not statistically significant. Others agreed with this conclusion (Thorelli and Graves, 1964; Cherryholmes, 1966; Wentworth, 1970; Boocock, 1971; Greenblat, 1982).

Pierfy (1977) agreed with Boocock and Schild (1968) that the credibility of many studies were lessened because the research in the field was carried out by game designers. Several researchers felt there were deficiencies in the instrumentation used to measure independent variables in games (Fletcher, 1971; Boocock, 1971; Wentworth and Lewis, 1973). Another problem was very little information was known concerning the genesis of tests used to measure the dependent variables (Pierfy, 1977).

In reviewing twenty-two studies which compared simulation games with other types of classroom instruction, Pierfy (1977) made several observations.

Most games research has been done in school settings using intact classroom groups which leads to the possibility of many biases. Possibility of pretest biases often existed and often classes were not taught by the same teachers. Research studies have also suffered because the same instrument was used for the pretest and post-test. Problems also arose because of the Hawthorne effect, and many debriefing exercises (postgame discussions) were included before testing in some designs and after testing in other studies, thus not giving consistent results. Descriptions of teaching techniques received by the control classes were often inadequate.

Games have definite limitations. They can be time consuming, and sometimes too difficult for the students using them which discourages players (Beals, 1971). High noise levels and physical movement may interfere with a high degree of learning (Newhouse, 1974).

Carlson (1967) stressed the nature of games makes them vulnerable to abuse, particularly by inexperienced or lazy teachers.

CHAPTER III

DEVELOPMENT OF A GAME FOR WORLD HISTORY 3201

Introduction

This chapter describes the course World History 3201, the design of the board, equipment used, the object of the game, start of play, continuation of play, and winning the game.

World History 3201

The general aim of World History 3201 is to have students understand the modern world against the background of the 19th century when such ideological forces as imperialism, nationalism, industrialism, democracy, and socialism became prominent. The text, Twentieth Century World, is divided into four units consisting of the world and western dominance, national rivalries and World War I, challenges to democracy and World War II, and the contemporary world.

The course description for this course states the aims of this course help fulfill the following aims of education:

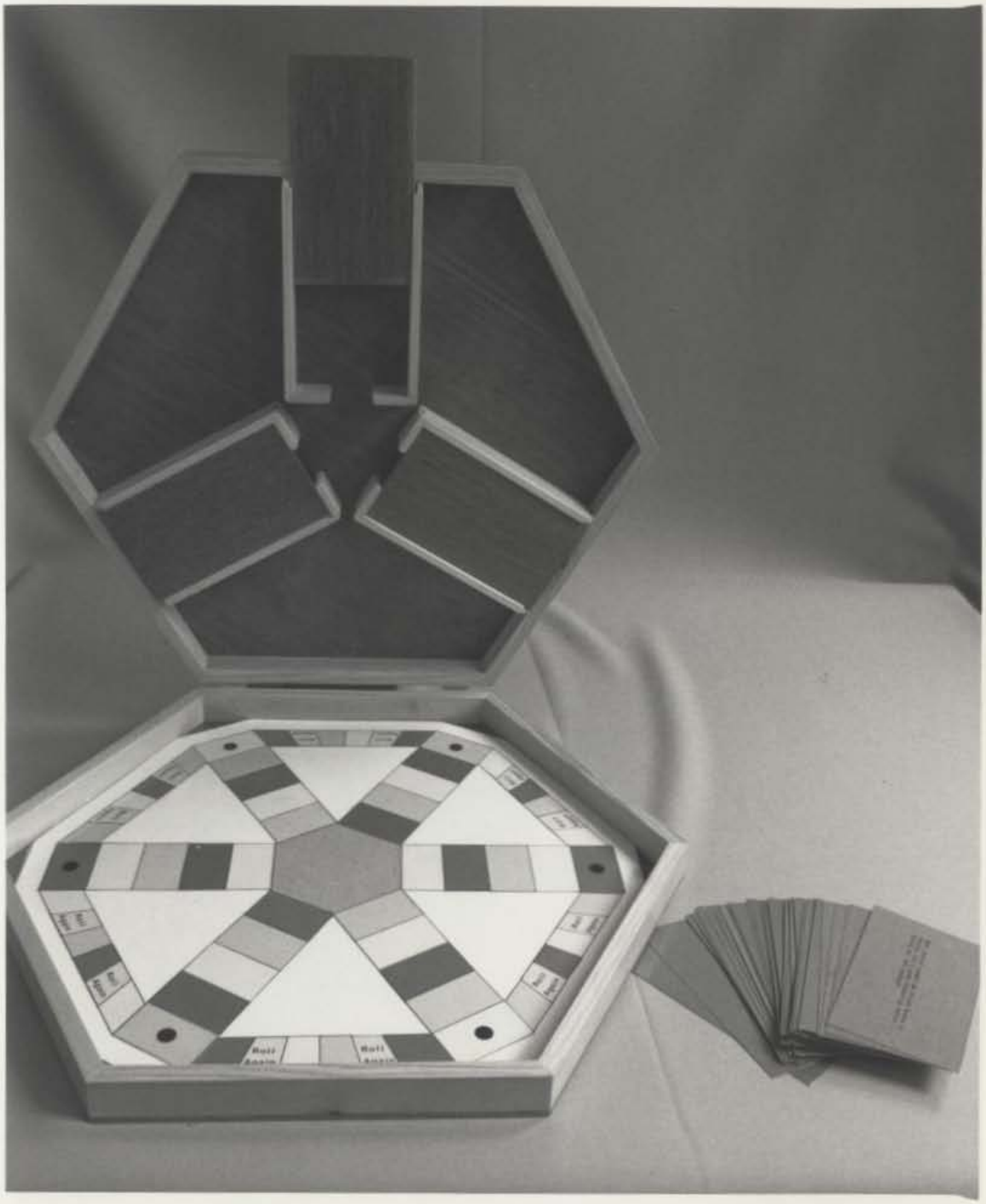
To acquaint pupils with the principles of democracy

> and to provide opportunities for the practice of these principles; to help pupils mature mentally and emotionally; to ensure that all pupils master the fundamental skills of learning, to the limit of their abilities; to provide opportunities for the development of pupils' abilities to think critically; to help pupils understand, appreciate, and benefit from what is good and valuable in history, literature, science, and the arts; to help pupils appreciate their privileges and responsibilities as members of families and the wider community, and so live in harmony with others. (Department of Education, Government of Newfoundland and Labrador, 1982, pp. 4-5)

Design of the Board

The game is named Your Knowledge. This game attempts to capitalize on the renewed popularity of games brought about by Trivial Pursuit, Super Quiz, and Monopoly. The board is hexagonally shaped. The board does not have any markings to specifically identify world history. This will enable teachers of any subject to use the board if they desire to develop questions and possible answers.

The board consists of three different colors for the three categories of questions, plus some blocks will be designated as ROLL AGAIN. Each of these colored blocks is sealed to a foundation board, and then laminated to create the game board. The hexagon centre is also a different color.



Equipment

Your Knowledge consists of one playing board, one die, question and answer cards, six player tokens and 36 scoring circles.

Object of the Game

The winner is the player who first returns to the hexagonal hub and correctly answers a question in a category chosen by the other players. Before attempting a game winning question, a player must land in each of the three category headquarters twice and correctly answer a question thus collecting six scoring circles.

Start of Play

Every player selects a token. Players roll the die, with the player rolling the highest number moving first. If two or more players tie, they roll again.

The player with first turn rolls the die again and, starting from the hub, moves the token the indicated number of spaces in any direction. The first move for each player ends either in a category headquarters at the end of a spoke, if the die roll is 5, or in the category space, if the die roll is 1 through 4.

When a token lands in a category space or headquarters, the player is asked a question in that color coded category.

The question, next to the appropriate color dot, is taken from the first card in the box and is read by another player. Answers are on the opposite side of each card.

If the player correctly answers the question, the turn continues with another roll of the die. If the player answers incorrectly, the turn passes to the left.

A move may include a change of direction with each die roll or at an intersection, but backtracking - making a 180 degree change of direction within a move - is not allowed. A player must always move the number of spaces shown on the die.

Continuation of Play

Play continues, with cards placed in the rear of the box from which they are drawn after each question.

When a category headquarters requirement is met, the appropriate scoring circle is given to the player. If the player answers incorrectly, the token must leave the headquarters on the next turn and later re-enter it for the player to attempt another question for credit.

A player landing in one of the 12 ROLL AGAIN spaces continues the turn by rolling the die again.

When a token lands in the hub before the player has met the six headquarters requirements to be able to win the game, the hub is treated as a wild-card space and the player chooses the category for the subsequent question.

Any number of tokens may occupy the same space.

Winning the Game

After a player has correctly answered a question in all category headquarters, the player's token must make its way to the hub to attempt to win the game.

When the token lands in the hub, opposing players select the category for a final question, by simple agreement or a vote, and the next card then is drawn.

If the question is answered correctly, the game is won. If it is answered incorrectly, the player must leave the hub on the next turn and re-enter it for another question.

Because a correct answer always means another roll of the die, a player may meet the game-winning requirements on the first turn. If this happens, any player who has not yet had a turn is permitted a chance to

answer his/her question correctly and create a tie.

The rules contain no provisions about how long a player may take to answer a question or about how precise an answer must be. Players decide what constitutes a reasonable time in which to produce an answer. Similarly, they decide how exact an answer must be--whether, for example, all or a portion of the components of an answer must be provided.

CHAPTER IV

RESEARCH METHODOLOGY

Introduction

This chapter presents an overview of the procedures used in this study. These include: (1) Population (2) Sample (3) Procedure (4) Instrumentation (5) Validity (6) Analysis Procedure (7) Hypotheses (8) Limitations of the study.

Population

The population for the purpose of this study consisted of two classes of students enrolled in World History 3201 in one school under the Gander-Bonavista Connaigre Roman Catholic School Board during the 1983-1984 school year. Students were males and females averaging sixteen years of age.

Sample

The sample consisted of two classes (60 students) taught by the same teacher and receiving the same instruction. The teacher considered students in each class to be of the same academic ability. Students in one class were assigned to the treatment group and the other class was assigned to the control group.

The particular school used for this study was in

the Gander area. This school was chosen because of the willingness of the world history teacher to cooperate. Originally, it was hoped the study could take place in the St. John's area. However, because of the lateness of the school year, this was not possible. This year Government of Newfoundland and Labrador Public Examinations were moved ahead and this lessened instruction time.

Students selected had finished the world history course in terms of teachers having taught it, but had not yet started review for the final exams.

Procedure

All students were given a teacher-made pretest. One class received the treatment while the other served as a non-treatment group. Both groups were post-tested and the treatment group also received an attitudinal test concerning the game.

Instrumentation

In order to measure academic achievement, teacher-made tests were used. Both the pretest and post-test consisted of four essay questions and questions were taken from Public Examinations as administered by the

Department of Education. Questions were selected and assigned to either pretest or post-test groups from a pool of public exam items determined by examining Public Examinations questions used over seven years.

Both game items and test questions were determined on the basis of Bloom's taxonomy. The first three questions of the pretest and post-test were taken from Section A of the Department of Education Public Examinations. These included questions on the lower levels of Bloom's taxonomy. The fourth question on the pretest and post-test was a higher level question, coming from the evaluation level of the Cognitive Domain.

The test items were taken from Section A and Section B of the Department of Education Public Examinations in World History. For the seven year period being examined, all questions in these sections were given numbers. Three numbers were drawn from the pool of Section A questions with the corresponding questions being assigned to the pretest. Post-test questions were selected in the same manner. The fourth question of the pretest and post-test was drawn from Section B of Public Examinations. The reason

three questions were assigned from Section A and one question from Section B is because of the nature of mark allocation in Public Examinations. Section C of the Public Examinations were concerned with current events and not included in the pretest and post-test or the game. Section A in Public Examinations was usually valued at 52% of the total examination, Section B was valued at 28% and Section C was valued at 20%. In the pretest and post-test each of the four questions were equal value of 25%. The first three questions in the pretest and post-test have a total value of 75% which is the approximate value of questions on World History Public Examinations which are on the lower levels of Bloom's taxonomy.

The breakdown of pretest and post-test questions into levels of Bloom's taxonomy follows:

Table 1

Pretest Items Categorized According to Bloom's Taxonomy

1. What role did Commodore Perry play in opening up relations for Japan? (Knowledge level)

2. Explain the significance of the Nazi-Soviet Non-Aggression Pact. (Comprehension level)

3. The Communist Revolution of 1949 greatly changed the old institutions and ways of life of the Chinese people. Briefly describe the changes that took place under the new Communist Government in the 1950's and 1960's. (Knowledge level)

4. Briefly evaluate the United Nations from the point of view of its successes and failures. (Evaluation level)

Table 2

Post-test Items Categorized According to Bloom's Taxonomy

1. Explain why the Opium War broke out in 1839. (Knowledge level)

2. Explain the significance of Hitler's invasion of Russia in 1941. (Comprehension level)

3. The Balkans have been described as "The Powder Keg of Europe". Discuss the statement, briefly explaining how this led to a World War. (Comprehension level)

4. Following World War II, the wartime allies became peacetime rivals. Why? Support your answer with examples. (Evaluation level)

The tests were marked by the researcher. The criteria for determining the acceptable answers were established and the student's responses were compared to this criteria and given appropriate marks. The criteria of acceptability were discussed with the students' teacher who agreed that these criteria were acceptable. The criteria used for questions in the pretest and post-test follow:

Table 3

Criteria For Marking the Pretest

1. In 1853 the American Government sent Commodore Matthew Perry and a squadron of four ships to ask the Japanese to open their ports and trade with the outside world. He left and returned in February 1854 with many presents for the Japanese. The Japanese were impressed by the gifts and by Perry's dignity and show of force. They agreed to the Treaty of Kanagawa in 1854 and later in 1858 signed another treaty.

2. The Nazi-Soviet Non-Aggression Pact was significant to Russia and Germany. Stalin distrusted Hitler and this pact gave the Soviet Union time to build up its military strength. Hitler's motive was to secure his eastern flank from Russian attack when Germany would be at war with Poland.

3. Mao reformed land ownership, lowered rents, and established schools for peasants. Communist leaders established agricultural collectives of several hundred farm families. The Communists also set out to destroy Chinese family unity and ancestor ties in order to promote a communist identity.

4. The United Nations has succeeded in helping stop some wars such as the one between India and Pakistan and has prevented others from spreading. It has provided a forum where countries can release tensions peacefully, helped settle disputes like the Indonesians and the Dutch and provided facilities for disarmament and nuclear control talks. United Nations' agencies have also met some success in economics, health, and education.

In March, 1964 the United Nations sent a peace-keeping force to stop fighting between Greek and Turkish factions in Cyprus. A cease-fire agreement was reached in August, 1964.

In the war between North and South Korea, the South was supported by the United Nations. Both the Communist world and Western nations claimed victories. In the 1970's, tensions continued between Israel and Arab states although the United Nations sponsored a cease-fire in the 1969-1970 conflict. The United Nations was not able to bring the war between North and South Vietnam to a speedy end.

Table 4

Criteria For Marking the Post-test

1. The Manchu refused to allow the British to establish regular commerce with China. The English East India Company had been importing opium in exchange for Chinese tea and silk. This practise was illegal but not enforced. The war started after negotiations failed when a Cantonest official seized quantities of the drug and destroyed it.

2. Hitler had underestimated the severity of the Russian winter which brought the German army to a standstill. Also Russian troops burned everything that the Germans could use as the Russians retreated. Hitler could not force the Russians to surrender.

3. Rivalries of European nations complicated by strong nationalistic tendencies made the Balkans ready for an explosion.

   By 1914 Serbian-Austrian relations were approaching a breaking point. These relations involved Austria and Russia who were members of rival alliances. The interaction of these opposing systems led to a world war.

4. The "Cold War" described the hostile relations between the Soviets and Western nations. This arose after the end of World War II as wartime collaboration broke down.

   Both the Soviets and Western nations reacted by forming different organizations and hostility toward each other.

The North American Treaty Organization was an alliance of Western nations who agreed to defend one another if attacked. Between 1947 and 1953 the Cold War reached its frigid extreme. The formation of the Cominform by the U.S.S.R., the division of Germany, the Berlin blockade, and the coup d'état in Czechslovakia led to increased tension.

An attitudinal test was used to examine what students said about how helpful the game was, how enjoyable students said it was, and whether they said they would recommend the game to students reviewing for World History 3201.

Validity

In order to establish the content validity of the pretest and post-test, the tests were constructed from Public Examinations as administered by the Department of Education. Each test item had appeared on Public Examinations in the past, with several items occurring on more than one occasion. The pretest and post-test were representative of Public Examinations in World History 3201

Analysis Procedure

The analysis of students' responses to the tests was conducted with respect to the test's scores and an analysis of an attitudinal test for the group receiving the treatment. The test data is analyzed by computing raw scores, means, standard deviations, percentage scores and estimates of standard errors, and an analysis of covariance.

Hypotheses

The following research hypotheses were used in this study:

1. There will be a significant difference between the means of the scores of students using the game, "Your Knowledge", and the means of scores of non-user students.

2. A significant number of students using the game, "Your Knowledge", will find it enjoyable for reviewing world history.

3. A significant number of students using the game, "Your Knowledge", will find it helpful in reviewing world history.

Limitations

This study dealt with only a small sample of students enrolled in World History 3201 in only one school. The results, therefore, will not be generalizable beyond this school.

It must be noted a difference existed in the degree of difficulty between the pretest and post-test as seen by students. Although every effort was used to make the two tests parallel with regard to the degree of difficulty, the drop in the post-test scores by the non-treatment group may indicate the tests were not parallel in difficulty. The pretest and post-test consisted of four items. Because of the small number of items, the chance of variation in students' scores was increased. A larger degree of chance of variation in scores is associated with each item.

CHAPTER V

DESCRIPTION OF PROCEDURES FOLLOWED

Introduction

This chapter describes the conditions under which students played the game, "Your Knowledge", the testing conditions and the evaluation of pretests and post-tests.

Playing the Game

All students were enthusiastic about playing after they were introduced to the game and became familiar with the rules. Thirty-five students played in five groups of six and one group of five. In one group, the students played as teams of two students with three teams playing each other. Although students were competing, great cooperation was observed with students helping each other by offering hints, clues, and advice. The atmosphere was positive with students taking risks and receiving immediate feedback. The teacher remarked on the high level of student enthusiasm, and involvement revealed much stimulation by students.

Testing

The testing and game-playing took place over five class periods. One period was assigned to both pretest and post-test, while actual game-playing occupied approximately three class periods. After playing the game students completed the questionnaire. During the following class period they attempted the post-test. The control group did the pretest and in the following class completed the post-test.

Evaluation

Pretests for the control group and treatment groups were coded for identification and then mixed together to avoid any bias in correcting. After all tests were corrected, they were then sorted and designated to the appropriate group.

CHAPTER VI

ANALYSIS OF RESULTS

Introduction

The study was undertaken to determine if playing the game "Your Knowledge" produced valid results for the sample in question and to determine students' attitudes concerning the game in several areas. In order to facilitate full treatment of the data available, an analysis of covariance was used and an analysis of the test to determine attitudes. In the analysis of covariance the level of significance was stated a priori at $P < .05$.

Because of the losses due to mortality, the total number of subjects included in the analysis of data was reduced from sixty to forty-two.

The treatment group lost ten students and the non-treatment group lost seven students due to mortality. For test marks to be considered in the non-treatment group, students had to have written both the pretest and post-test. The non-treatment group consisted of two class periods on different days while the treatment group consisted of five class periods of forty-five

minutes each over a three day period. Three consecutive periods were used on one day for game playing. For test marks to be considered in the treatment group, students had to have written both the pretest and post-test. An analysis of the attitudinal test which was administered after three consecutive periods of game playing included thirty-five students.

Hypothesis 1

This hypothesis stated that there would be significant difference between the means of students using the game "Your Knowledge" and the non-users. This hypothesis was accepted. Significant differences were found showing there was a .000 chance of obtaining a F statistic of 21.839 by chance assuming the means were equals. With the means being not equal, the chance factor became higher.

The means of the treatment group were 33% in the pretest and 42% in the post-test while the non-treatment group had a pretest score of 29.38 and a post-test score of 20.63. The following tables give information concerning the pretest and post-test.

Table 5

Treatment Group Results - Pretest

	Absolute Freq	Relative Freq (PCT)	Adjusted Freq (PCT)	Cum Freq (PCT)
3.	1	3.8	3.8	3.8
5.	1	3.8	3.8	7.7
8.	1	3.8	3.8	11.5
10.	1	3.8	3.8	15.4
13.	2	7.7	7.7	23.1
20.	3	11.5	11.5	34.6
25.	2	7.7	7.7	42.3
28.	1	3.8	3.8	46.2
33.	4	15.4	15.4	61.5
35.	1	3.8	3.8	65.4
40.	1	3.8	3.8	69.2
50.	1	3.8	3.8	73.1
53.	1	3.8	3.8	76.9
58.	1	3.8	3.8	80.8
60.	1	3.8	3.8	84.6
63.	1	3.8	3.8	88.5
65.	2	7.7	7.7	96.2
68.	1	3.8	3.8	100.0
TOTAL	26	100.0	100.0	

Mean	33.808	STD ERR	4.029	Median	32.500
Mode	33.000	STD DEV	20.543	Variance	422.002
Kurtosis	-1.152	Skewness	0.290	Range	65.000
Minimum	3.000	Maximum	68.000		
Valid Cases	26	Missing Cases	0		

Table 6

Treatment Group Results - Post-test

%	Absolute Freq	Relative Freq (PCT)	Adjusted Freq (PCT)	Cum Freq (PCT)
10.	2	7.7	7.7	7.7
13.	1	3.8	3.8	11.5
15.	1	3.8	3.8	15.4
18.	1	3.8	3.8	19.2
20.	2	7.7	7.7	26.9
23.	2	7.7	7.7	34.6
25.	1	3.8	3.8	38.5
28.	1	3.8	3.8	42.3
33.	3	11.5	11.5	53.8
43.	2	7.7	7.7	61.5
60.	1	3.8	3.8	65.4
62.	2	7.7	7.7	73.1
68.	1	3.8	3.8	76.9
70.	4	15.4	15.4	92.3
85.	2	7.7	7.7	100.0
TOTAL	26	100.0	100.0	

Mean	42.000	STD ERR	4.843	Median	33.333
Mode	70.000	STD DEV	24.697	Variance	609.920
Kurtosis	-1.384	Skewness	0.339	Range	75.000
Minimum	10.000	Maximum	85.000		
Valid Cases	26	Missing Cases	0		

Table 7

Non-Treatment Group Results - Pretest

#	Absolute Freq	Relative Freq (PCT)	Adjusted Freq (PCT)	Cum Freq (PCT)
0.	3	18.8	18.8	18.8
10.	2	12.5	12.5	31.3
20.	1	6.3	6.3	37.5
23.	1	6.3	6.3	43.8
25.	1	6.3	6.3	50.0
28.	1	6.3	6.3	56.3
30.	2	12.5	12.5	68.8
33.	1	6.3	6.3	75.0
55.	1	6.3	6.3	81.3
63.	1	6.3	6.3	87.5
68.	1	6.3	6.3	93.8
75.	1	6.3	6.3	100.0
TOTAL	16	100.0	100.0	

Mean	29.375	STD ERR	6.077	Median	26.000
Mode	0.000	STD DEV	24.309	Variance	590.917
Kurtosis	-0.629	Skewness	0.614	Range	75.000
Minimum	0.000	Maximum	75.000		

Valid Cases 16 Missing Cases 0

Table 8

Non-Treatment Group Results - Post-test

%	Absolute Freq	Relative Freq (PCT)	Adjusted Freq (PCT)	Cum Freq (PCT)
0.	1	6.3	6.3	6.3
7.	2	12.5	12.5	18.8
8.	2	12.5	12.5	31.3
10.	2	12.5	12.5	43.8
13.	2	12.5	12.5	56.3
20.	1	6.3	6.3	62.5
25.	2	12.5	12.5	75.0
30.	1	6.3	6.3	81.3
48.	2	12.5	12.5	93.8
58.	1	6.3	6.3	100.0
TOTAL	16	100.0	100.0	

Mean	20.625	STD ERR	4.320	Median	13.000
Mode	7.000	STD DEV	17.281	Variance	298.650
Kurtosis	0.107	Skewness	1.079	Range	58.000
Minimum	0.000	Maximum	58.000		
Valid Cases	16	Missing Cases	0		

Students in the non-treatment group received lower mean score in the post-test than they did in the pretest. In a discussion with the students' teacher, the teacher said the students in the non-treatment group found the post-test more difficult than the pretest. The teacher also mentioned the treatment group said the post-test was less difficult than the pretest. Students in the treatment group encountered the post-test questions and answers while playing the game. This review by playing the game explains the increase of the mean of the treatment group in the post-test.

Table 9

Analysis of Covariance of Performed Results in Pretests and Post-tests

Source	df	MS	F	Significance of Level F
Covariates	1	15821.933	114.169	0.00
Pretest	1	15821.933	114.169	0.00
Main Effects	1	3026.470	21.839	0.00
Group	1	3026.470	21.839	0.00
Explained	2	9424.201	68,004	0.00
Residual	39	138.583		
Total	41	591.540		

Hypothesis 2

This hypothesis stated a significant number of students using the game "Your Knowledge" would find it enjoyable for reviewing world history. The significance level was set a priori at 80% of students responding favourably who used the game. This hypothesis was accepted. The overall reaction from students was that this game was enjoyable. Twenty-three percent of students found this game was very enjoyable and 77% of students said it was enjoyable. No respondents said it was either dull or not enjoyable. Table 10 presents attitudinal test results.

Table 10

Student Questionnaire

Please place an X near the most appropriate answer.

1. Did you find the game:

   very enjoyable 23% enjoyable 77%

   not enjoyable ___ dull ___

2. As an approach to reviewing history, was the game:

   very helpful 77% helpful 23%

   not helpful ___ useless ___

3. If this game were available for students, would you:

   use it for reviewing 100%

   not use it for reviewing ____

4. Would you recommend this game to friends for reviewing world history?

   Yes 100% No ____

Hypothesis 3

This hypothesis stated a significant number of students using the game "Your Knowledge" would find it helpful in reviewing world history. This hypothesis was accepted. Three items on the Attitudinal Test were used to assess this hypothesis with significance levels stated as eighty percent of students responding favorably. When asked if they found this game helpful as an approach to reviewing world history, seventy-seven percent said the game was very helpful and twenty-three found the game helpful. No respondents said the game was not helpful or useless. One hundred percent of students said if the game were available for students that they would use it for reviewing. One hundred percent said that they would recommend this game to friends for reviewing world history.

CHAPTER VII

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter presents a summary, a discussion of the results in light of the major questions stated, the conclusions drawn from the results of the study, the implications for educators and some recommendations for future research.

Summary

The purposes of the study were to determine if playing the game "Your Knowledge" produced valid results for the sample in question and to determine students' attitudes concerning the game in several areas. To do this, the experimenter posed these questions: Does playing the game for the purpose of reviewing lead to an increase in student performance? Will students using the game "Your Knowledge" find it enjoyable for reviewing world history? Will students using the game "Your Knowledge" find it helpful in reviewing world history? To investigate these questions, teacher-made tests and an attitudinal test were administered to 60

students enrolled in World History 3201. One group of these students played the game "Your Knowledge" while the other group did not. Students were assigned to treatment or control groups on the basis of which class they were in. Both classes were taught by the same teacher and students in both classes were considered to be the same ability level. The data were collected and analyzed using a one factor analysis of covariance and an attitudinal test. The results were reported in Chapter Six.

Discussion of Results

The analysis indicated that there was a significant difference between the means of students using the game and the non-users. Using this game for reviewing helped students acquire knowledge which was previously encountered and forgotten or was new for some individuals. This finding is consistent with the views of many educators. (Abt, 1966; Coleman, 1967; Coleman and Boocock, 1966; Clayton and Rosenbloom, 1968; Abt, 1970; Shears and Bowen, 1974; Cohen and Bradley, 1978; Stolovitch, 1978; Becker, 1980; Cowan, 1983)

The analysis also indicated that a significant number of students using the game "Your Knowledge"

found it enjoyable for reviewing world history. In fact, all students who played the game enjoyed doing so. Although some of these students did not increase their performance score, the process itself was considered worthwhile. This also is consistent with the views of many people involved with games. (Abt, 1966; Bruner, 1966; Coleman, 1966; Coleman and Boocock, 1966; Gordon, 1970; Cohen and Bradley, 1978; Stolovitch, 1978)

The analysis also indicated that students using the game found it helpful in reviewing world history. All students said the game was helpful, would use it if the game was available for reviewing, and would recommend this game to friends for reviewing. Students' attitudes toward the game and an increase in mean scores indicated that the game was helpful.

Conclusions

The conclusions reached in this study are limited to the performance of World History 3201 students within one school in the Gander area. Generalization beyond this is inappropriate.

The conclusions of this investigation are as follows:

1. The game "Your Knowledge" helped students increase their performance scores on tests. Overall, the means of students using this game were significantly higher.

2. Students who use this game find it an enjoyable approach to studying world history. Increased motivation occurs and social interaction encourages communication among students.

3. Students who use this game consider it helpful in reviewing world history. Students rate this game as helpful and mean-score increases substantially by using this game.

Recommendations

As a result of this study, the following recommendations are made for further research and application.

1. A similar study should be conducted with a larger sample consisting of schools from all across the province.

2. Future studies should randomly assign students to treatment or control groups.

3. Teachers should be made aware that games such as "Your Knowledge" are only one of many learning strategies.

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APPENDICES

Appendix A

The Pretest

This test consists of four questions. Students are required to do all questions. Your answer should be brief and time should be budgeted to ensure all questions are attempted. (40 minutes)

1. What role did Commodore Perry play in opening up relations for Japan?

2. Explain the significance of the Nazi-Soviet-non-aggression pact.

3. The Communist Revolution of 1949 greatly changed the old institutions and ways of life of the Chinese people. Briefly describe the changes that took place under the new Communist Government in the 1950's and 1960's.

4. Briefly evaluate the United Nations from the point of view of its successes and failures.

Appendix B

The Post-test

This test consists of four questions. Students are required to do all questions. Your answer should be brief and time should be budgeted to ensure all questions are attempted. (40 minutes)

1. Explain why the Opium War broke out in 1839.

2. Explain the significance of Hitler's invasion of Russia in 1941.

3. The Balkans have been described as "The Powder Keg of Europe". Discuss the statement, briefly explaining how this led to a World War.

4. Following World War II, the wartime allies became peacetime rivals. Why? Support your answer with examples.

Appendix C

Student Questionnaire

Name _____

Please place an X near the most appropriate answer.

1. Did you find the game:

   very enjoyable ____ enjoyable ____

   not enjoyable ____ dull ____

2. As an approach to reviewing history, was the game:

   very helpful ____ helpful ____

   not helpful ____ useless ____

3. If this game were available for students, would you:

   use it for reviewing ____

   not use it for reviewing ____

4. Would you recommend this game to friends for reviewing world history?

   Yes ____ No ____

Appendix D

T-test for Post-tests for Treatment and Control Groups

Variable	No. of Cases	Mean	Standard Deviation	Standard Error	F Value	2-Tail Prob.
Treatment Group	26	42.0000	24.697	4.843	2.04	0.153
Control Group	16	20.6250	17.281	4.320		

Pooled Variance Estimate			Separate Variance Estimate		
T Value	Degrees of Freedom	2-Tail Prob.	T Value	Degrees of Freedom	2-Tail Prob.
3.03	40	0.004	3.29	39.22	0.002

Appendix E

Analysis of Variance for Post-tests for Treatment and Control Groups

Source	df	MS	F	Significance of Level F
Main Effects	1	4525.393	9.176	0.004
Group	1	4525.393	9.176	0.004
Explained	1	4525.393	9.176	0.004
Residual	40	493.194		
Total	41	591.540		

Appendix F

Questions and Answers for the Game

The game consists of three groups of different colored questions; red, blue, and green. Each of the same color questions represents material presented in one-third of the student's text.

Red Color-Coded Questions and Answers

1. Explain three social reforms that were enacted in Britain after 1870.

   Answer: In the 1870's laws were enacted governing housing and public health; in the 1890's infants' welfare centers were set up to provide free milk to poor mothers; in 1802 the Education Act provided a system of primary and secondary education; in 1905 sweatshops were outlawed; and in 1911 the National Insurance Act was passed.

2. What were the results of the British administration in India?

   Answer: British administration had mixed results: the subcontinent came under one authority; improvements occurred in safety for individuals, medical facilities, miles of railroad, telegraph lines, plus irrigation. However, the population increased with living standards declining with a dependency on agriculture for subsistence, and also problems with education and identity.

3. How did the advance of democracy bring about changes in the laissez-faire attitude of the 19th century?

Answer: The laissez-faire attitude was replaced by a welfare state attitude. Politicians became more sensitive to social needs and economic reform. The state came to be thought of as having a responsibility for the welfare of its citizens.

4. During the 19th and early 20th centuries, Asia became a target for Western imperialism. Compare the effects this had on China and Japan.

Answer: China became completely carved up and divided into spheres of influence by Western nations. It was reduced to a helpless nation. Japan undertook a modernization program after contact with the West and turned itself into a prosperous nation following Western models.

5. How did "dollar diplomacy" characterize the early 20th century?

Answer: The coordinated efforts of government and business is called dollar diplomacy. Governments worked closely with business interests to obtain favorable terms for investors. An example would be the Roosevelt Corollary in 1904 which justified the U.S.'s intervention in Central America and the Caribbean.

6. With an example, explain the term arbitration.

Answer: Arbitration is the settlement of a dispute between parties by the decision of a judge. Disputes between countries concerning questions of international law among League of Nations members were to be settled through arbitration.

7. Many scientific advances were made in 19th century Europe. Discuss the contribution of three eminent scientists of that period.

Answer: Justus von Liebig discovered that the chemical composition of the soil had a direct bearing on plant life. Heinrich Hertz in 1855 proved the existence of radio waves. Wilhelm Roentgen in 1895 discovered X rays. Pierre and Marie Curie in 1898 isolated the element radium.

8. What was the purpose of the United States proposal in 1899 of an "Open Door" policy in China?

Answer: The Open Door Policy in 1899 proposed that nations having exclusive spheres of influence should permit businessmen of all nations to compete on equal terms. The U.S. was worried that exclusive spheres would shut out American trade.

9. Describe the actions of Europeans in Africa during their vigorous 19th century imperialism that might justify a strong resentment by African nations toward the Western White World.

Answer: Although imperialism brought benefits, it also brought problems. Many Africans were uprooted from their tribal and village societies, taxed heavily, and compelled into forced labor. In places like the Congo Free State, brutal punishment such as execution, whipping, and torture were common.

10. Western Civilization dominated all other civilizations of the world in the fifty years before 1914. Explain five factors which contributed to Western Dominance.

Answer: The strength of the West was based on a long period of general peace, the growth of population, a system of effective government, rapid advance in industrialization, the creation of a world market, advances in science and medicine, and political and social advances.

11. Why was the Opium War fought between Britain and China?

Answer: The Manchu refused to allow the British to establish regular commerce with China. The English East India Company had been importing opium in exchange for Chinese tea and silk. This practice was illegal but not enforced. The war started after negotiations failed when a Cantonese official seized quantities of the drug and destroyed it.

12. Was the Treaty of Versailles just?

Answer: Consider the causes of World War I and the countries involved. Germany and her allies had to assume full responsibility for the war. However, several other countries were responsible for the war starting.

13. Why was World War I different from any previous war?

Answer: World War I was fought on land, on and under water and in the air. It was fought by huge mechanized armies with the use of new technology in many different areas. The scale of the war, amount of destruction, and loss of lives were enormous.

14. Why was the formation of alliances a threat to the peace of Europe before World War I?

Answer: Alliances made a small dispute turn into large disputes by drawing in more countries. A small dispute between Austria and Serbia expanded into a world war.

15. How did Roosevelt's New Deal try to solve problems of the depression in the United States?

Answer: This consisted of relief for the needy, recovery for business, and basic reforms for the nation's economic system. The New Deal helped improve business and reduce unemployment by creating jobs and putting people back to work.

16. What were the basic ideas of Classical Liberalism?

Answer: These were beliefs that each individual is a free human being; that government should be limited in power and based on majority rule and that government had no right to interfere in the natural operation of the economic and social systems.

17. Describe the specific incident which led to the outbreak of World War I.

Answer: Archduke Francis Ferdinand, heir to the Hapsburg throne, was assassinated at Sarajevo by a young Bosnian. Austria sent an ultimatum to Serbia. Not satisfied with the Serbian response, Austria-Hungary declared war on Serbia on July 28, 1914.

18. Describe two important developments made in medicine in the 19th and early 20th century.

Answer: W.T.G. Mouton used ether as an anesthetic. Sir James Simpson discovered chloroform. Pasteur developed a vaccine to prevent anthrax and later successfully innoculated for rabies. Joseph Lister used a mild carbolic acid for sterilizing.

19. What is a sphere of influence? Give an example.

Answer: A sphere of influence is a specific area where a foreign nation has special economic interests. Sections of controlled China were divided by European nations in the 1890's.

20. Describe the type of social legislation that was introduced into Germany during the 1870's.

Answer: German legislation aimed at the problems of sickness, accident, and incapacity in old age. Laws dealing with these were passed in 1883, 1884, and 1889. Eventually free medical and hospital care were provided.

21. Explain the four factors which contributed to the lack of progress of the Latin American Republics in the 19th century.

Answer: Factors which hindered progress in Latin America were political instability, social unrest, illiteracy, poverty, and class and racial divisions.

22. How did the Meiji Restoration affect Japan?

Answer: This transformed Japan into a powerful modern state. Feudalism was abolished, a new constitution was adopted, and an intensive program of industrialization began. Japan changed from a rural to industrial economy with reforms in education and law.

23. What factors caused the United States to develop into a great industrial nation during the 19th century?

Answer: These were: rich natural resources, coupled with inventions and techniques for converting them into finished products; networks for transportation; huge markets; tariff protection and low taxes; a large labor supply provided by immigrants; and its geographical isolation.

24. Why were the Balkans called "the powder keg of Europe"?

Answer: Rivalries of European nations complicated by strong nationalistic tendencies made the Balkans ready for an explosion.

25. Explain the events that brought on the Sepoy Rebellion.

Answer: This was a mutiny of native Indians against the British. In 1857 a rumor spread among the Sepoys that the new rifle cartridges were greased with beef and pork fat. Both Hindus and Moslems were outraged and rose in mutiny.

26. What was the Pan-Slavism movement?

Answer: In the mid-1800's the desire of the Slavs for freedom found expression in Pan-Slavism, a nationalistic movement to unify the Slavic people.

27. Why did the powers of Europe call the Congress of Berlin in 1878?

Answer: They hoped to resist Russian expansion. Great Britain was alarmed at the Russian gains which brought Russia close to the Suez Canal. The Austrian emperor, Francis Joseph, was concerned with Russian encroachments in the Balkans.

28. What brought on the Russo-Japanese War (1904-1905)?

Answer: Negotiations between Japan and Russia over Korea and Manchuria broke down in 1904. Fighting began when Japan, without a formal declaration of war, attacked the Russian fleet at Port Arthur.

29. Describe two important developments made in communication in the 19th and early 20th centuries.

Answer: In 1832 Samuel Morse made the first electric telegraph. Alexander Graham Bell patented the telephone in 1876 and Guglielmo Marconi developed a wireless telegraph in 1898.

30. How did the Sarajevo Incident contribute to the outbreak of World War I?

Answer: This started a war between Serbia and Austria which led to World War I because of alliances.

31. Name three explorers and state how each contributed to the opening up of Africa.

Answer: These explorers were: David Livingstone whose reports on the slave trade speeded up its abolition in East Africa; Henry Stanley who with Leopold II of Belgium founded the International Congo Association which led to the Creation of the Belgian Congo; and Cecil Rhodes who was instrumental in acquiring Rhodesia for Britain.

32. How did Britain acquire controlling interest in the Suez Canal?

Answer: In 1869, a French company under Ferdinand de Lessups finished building the Suez Canal. In 1875 the Turkish Governor of Egypt sold his stock in the canal company to the British government. Britain made Egypt a protectorate in 1882 when internal disorders occurred.

33. Explain the three main ideas which were the basis for Darwin's theory of evolution.

Answer: These were the struggle for existence, the survival of the fittest, and natural selection.

34. Describe briefly four forces at work in Europe in the late 19th and early 20th centuries that contributed to the outbreak of World War I.

Answer: These were nationalism, imperialism, militarism, alliances, extremists glorified war, fear and suspicion, and the Balkan Crisis.

35. Explain the consequences that the Opium War had on China.

Answer: The Opium War ended with the Treaty of Nanking by which the Chinese ceded Hong Kong to the British, and paid damages for the opium cargoes they had destroyed. The Chinese were forced to open five port cities to trade which signalled the real opening of China to Western nations.

36. What are two contributions made by Europeans to African society?

Answer: Europeans brought about the abolition of slavery and tribal warfare. European help was invaluable in fighting disease and illiteracy and in building cities, railroads, and industries.

37. What was the purpose of Wilson's Fourteen Points?

Answer: These were a statement of the war aims and peace terms of the United States. Some were open covenants of peace, openly arrived at; absolute freedom of navigation upon the seas; reduction of national armaments; evacuation and restoration of Belgium; and creation of a League of Nations.

38. Explain the Greater Serbia movement.

Answer: Slavs who had previously been controlled by Turkish rule and received their freedom wanted to free other Slavs under foreign control to create a Greater Serbia.

39. How did nationalism contribute to the outbreak of World War I?

Answer: Nationalism helped cause World War I by arousing the patriotic feelings of those who for years had been ruled by others. Also in the Balkans many people demanded the right to belong to their own nations.

40. What do we mean when we say that Europe was split into two armed camps?

Answer: The major powers of Europe were divided into rival alliances. One was the Triple Entente consisting of France, Great Britain, and Russia. The other was the Triple Alliance consisting of Germany, Austria, and Italy.

41. How did militarism contribute to the outbreak of World War I?

Answer: Militarism encouraged countries to build their fighting forces. Countries often acted braver when possessing a strong military force and their people were not as tactful as they would have been if they were unarmed.

Blue Color-Coded Questions and Answers

42. What effect did the Russian Revolution of November, 1917 have on Russia?

Answer: The revolution brought the Bolsheviks to power who hoped to establish a dictatorship of the proletariat. Lenin introduced a strict Marxist Program. All private property was abolished and strategic industries, the banking system, railroads, and shipping were placed under government ownership. In March 1918 Lenin made peace with the Central Powers.

43. Explain briefly two failures encountered by the League of Nations after World War I.

Answer: League mediation was fruitless in a dispute between Poland and Lithuania. The League was powerless in the Corfu incident, a dispute between Italy and Greece.

44. Explain the "New Economic Policy" introduced in 1921 by the Communists in Russia.

Answer: To ease the strain of long years of hardship and privation and to restore the Russian economy to its prewar levels, the New Economic Policy (NEP) was introduced in 1921. Small business was encouraged with the state retaining ownership of basic industries. Except for a tax on surplus grain, peasants could cultivate their farms and dispose of grain as they saw fit.

45. Comment on the significance of Hitler invading Russia in 1941.

Answer: Hitler had underestimated the severity of the Russian winter which brought the German army to a standstill. Also Russian troops burned everything that the Germans could use as the Russians retreated. Hitler could not force the Russians to surrender.

46. What steps did the United States take to aid the allies prior to the Pearl Harbor attack?

Answer: In exchange for fifty destroyers, the British gave the United States military bases in Newfoundland and the West Indies. In the United States, the draft was instituted and the Lend-Lease Act was passed. United States sea and air patrols were established for both North and South Atlantic.

47. Why did the United States pursue a policy of isolation after World War I?

Answer: The United States did not want to get caught in any entangling alliances.

48. Why did France fall to the Nazis so easily during World War II?

Answer: France placed its defensive effort in the Maginot Line. They were otherwise militarily unprepared to defend their country.

49. List the terms of the Treaty of Versailles that ended World War I.

Answer: Some were: Germany was to give up a considerable part of her land and overseas colonies; Germany's army and navy were to be limited in size and the air force was to cease to exist; Alsace and Lorraine were to be given back to France; a League of Nations was to be established, Germany and her allies were to accept responsibility for the war; the Rhineland area was to be demilitarized.

50. List four factors which led to the overthrow of the Government of Czar Nicholas II of Russia in 1917.

Answer: Several factors were: Russia lost a war with Japan; the Czarist system grew more reactionary with more persecutions and terror; there was peasant unrest because of low wages, long hours, and poor working conditions; plus there were food and consumer good shortages; and Russia became involved in World War I.

51. Name three things done by Lenin to make Russia more Communistic after he took control in 1917.

Answer: Lenin abolished all private property and placed strategic industries, railroads, and shipping under government ownership. He attacked the Orthodox Church, and allowed the peasants to farm the land they had already confiscated.

52. What were Hitler's ideas regarding race?

Answer: According to the Fuhrer, Germans were Aryans and were the master race, or super race; all other people, but particularly Jews and Slavs, were inferior. Jews were to be eliminated and Slavs were to be made into slaves.

53. How did the aims of the countries represented by "The Big Three" differ after World War I?

Answer: David Lloyd George (England) was determined Great Britain should take over the German colonies, that the German navy be destroyed, and Germany pay the cost of the war; Clemenceau (France) wanted to prevent a resurgence of German strength; Wilson (U.S.A.) wanted to be guided by his Fourteen Points.

54. What factors caused the United States to join World War I on the side of the allies?

Answer: British propaganda for the allied cause helped turn sentiment in the United States toward the allied cause. The immediate causes were the German submarine campaign and the Zimmermann telegram.

55. How was "blitzkrieg" used successfully by Hitler in the early stages of World War II?

Answer: Blitzkrieg depended upon the speed of mechanized armies following the infiltration of fifth columnists. German panzer divisions destroyed everything in their paths and planes bombed civilians and military alike.

56. What measures were taken by Hitler to make Germany ready for war?

Answer: Strict food-rationing laws were put into effect to make Germany self-sufficient. Imports had to be paid for chiefly in products not needed for warfare. The highway system of Autobahnen was constructed to permit rapid movement of troops, and an enormous stockpile of munitions was accumulated.

57. What were fifth columnists?

Answer: These were German undercover agents, who created fear and dissention among intended victims as part of Hitler's blitzkrieg.

58. What factors led to the failure of the League of Nations?

Answer: The rule of unanimity on important decisions tended to block action; the League had no standing military force of its own; the League could recommend the use of military force, but members were not obligated to supply arms.

59. What is the significance of the Maginot Line during World War II?

Answer: The French felt the Maginot Line, the entrenched fortifications, should have protected France against Germany. The French were easily defeated because they had so much confidence in the Maginot Line that they were otherwise militarily unprepared to defend their country.

60. Describe the three main parts of the League of Nations.

Answer: The Assembly consisted of representatives of all member nations of the League. The Council consisted of representatives of the principal powers plus representatives of four other member nations. The permanent Secretariat was to do the secretarial daily duties of the League.

61. Explain the term, "Provisional Government" as applied to Russia.

Answer: The Provisional Government was set up after the abdicating of Czar Nicholas. It removed all restrictions on civil liberties, but planned to continue the war. It also postponed a program to distribute land to peasants. This Provisional Government was overthrown by the Bolsheviks.

62. Explain the difference between the occupied and unoccupied zones in France after France fell to the Nazis in 1940.

Answer: Occupied France included northern France and the Atlantic coastline and was governed by Germany. Unoccupied France was administered by Marchal Pétain at Vichy. The Nazis, however, actually controlled Pétain's Vichy government.

63. Explain the three purposes of the League of Nations.

Answer: The League had three chief functions: to prevent war; to carry out the provisions of the peace treaties; and to assist in the improvement of social and economic conditions.

64. How did the Treaty of Versailles contribute to the rise of the Nazis in Germany?

Answer: The Treaty of Versailles did not solve the problems of World War I. By its treatment of Germany it created bad feelings and fostered resentment. This complicated with economic and social conditions set the stage for the Nazis.

65. Why was Russia treated like a defeated nation after World War I?

Answer: After the Bolsheviks took power, they ended Russia's involvement in the war. The remaining members of the allies wanted to punish Russia for this.

66. Why did Stalin propose a policy of collective security during the 1930's?

Answer: A fear of Germany and Japan convinced Stalin he must seek the good will of the democracies of western Europe. Therefore, he tried to cooperate with them against the militaristic dictatorships.

67. What caused Italy to declare war on Germany during World War II?

Answer: After the allies invaded Sicily, Mussolini was forced out of office and a new government signed an armistice surrendering unconditionally. On October 13 the new government under Marshal Pietro Badoglio declared war on Germany.

68. Explain the significance of the Japanese bombing of Pearl Harbor in 1941.

Answer: This brought the United States into the war. By December 11, 1941, the United States had declared war upon all of the Axis Powers.

69. Explain how Stalin gained control of the Russian Government.

Answer: Stalin used his post as party secretary to place his supporters in key positions. Stalin's policy of building socialism in a single country was accepted by the Fourteenth Party Congress over Trotsky's policy of a simultaneous world revolution.

70. Explain four conditions that favoured peace in Europe before World War I.

Answer: These were economic interdependence among nations, philanthropist urged peace, international organizations promoted understanding, peace movements were organized, and the use of arbitration in international disputes.

71. Explain the term, "Bloody Sunday" in Russian history.

Answer: On January 22, 1905 a large procession of workers bearing a petition to the Czar was fired on by troops in St. Petersburg. Several hundred unarmed workers were killed. This aroused fierce hostility against the government.

72. What was the purpose for introducing a Five-Year Plan in Russia?

Answer: The objectives were to eliminate the capitalist elements that existed during the New Economic Policy and expand nationalized industry; increase industrialization and agricultural production; and increase the number of peasants working on collective farms.

73. From 1938 to 1942, Germany, under Hitler, acquired control of practically all of Europe. How was this accomplished?

Answer: The policy of appeasement gave Hitler Czechoslovakia, and Germany seized Austria. German blitzkrieg brought early surrender from Poland, Norway, Denmark, Belgium and France.

74. Explain the policy of appeasement toward Hitler as it was followed by the allies during the years immediately before the outbreak of World War II.

Answer: Appeasement was the policy of temporarily avoiding war by giving in to Hitler. As a result of the pact drawn up at Munich, the major powers (Great Britain, France, and Italy) agreed to cede the Sudetenland to Germany.

75. Once in power, how did the Nazis apply their race policy?

Answer: The Nazis began a program to eliminate Jews from German national life. In 1935, the Nuremberg Laws deprived Jews of citizenship rights. Intermarriage of Jews and gentiles was prohibited. Jewish businesses and professional services were boycotted, and Jews were put in concentration camps.

76. What was Hitler's real purpose in initiating the Nazi-Soviet pact in 1939?

Answer: Hitler's real motive was to secure his eastern flank from Russian attack when Germany would be at war with Poland.

77. Why were the Polish Corridor and the Danzig trouble spots prior to World War II?

Answer: On March 23, 1939, Hitler demanded that Danzig be ceded to Germany. Danzig, the port city of the Polish Corridor, was an independent city under the protection of the League of Nations. England and France warned Hitler they would come to the aid of Poland if necessary.

78. How did Fascism differ from Communism?

Answer: Both suppressed opposing political parties, practiced rigorous censorship, denied civil liberties, and assumed absolute control of the people. Fascism permitted private ownership of property and capital; communism advocated state ownership.

Green Color-Coded Questions and Answers

79. How does the term apartheid apply to Africa?

Answer: Apartheid was a policy of strict separation of races. In practice, apartheid placed the black majority in virtual bondage to the white minority. Blacks were denied all political rights.

80. Explain the term "non-violent resistance" as it applied to India's effort to obtain independence.

Answer: Advocating non-violence disobedience, Ghandi launched several campaigns against British authority. He advocated an economic boycott of British-made goods, and claimed the only way to get freedom was through a peaceful approach.

81. What factors led to a thaw in the Cold War in the early 1960's?

Answer: One was the massive stockpile of nuclear weapons and the realization that their use would mean destruction. The second was the loosening of the alliance systems in Eastern and Western Europe. The third was the rift between the U.S.S.R. and China.

82. Why did the wartime allies of World War II become peacetime rivals?

Answer: Fear, mistrust and imperialism led to the Cold War. Relations between the Soviet Union on one side and Britain and the United States on the other side came into headlong collision. Democratic nations were threatened by the communist practices and communists felt threatened by the democratic nations.

83. How did the programs of Dr. Salvador Allende affect Chile in the 1970's?

Answer: Programs of nationalizing industry and confiscating land had a disruptive effect on Chile. Chile was beset with food shortages, runaway inflation, strikes, and mounting disorders. In 1973 the military seized power.

84. After World War II, the United States embarked upon a period of economic expansion and prosperity never known in its history. What were some big issues in the United States during this period?

Answer: At the close of World War II, the public demanded that the United States convert to a peace-time basis as quickly as possible. The G.I. Bill granted funds to servicemen for education, business enterprises, and specified needs. Unions resorted to large scale strikes because of wage controls. Also, many investigations were made to remove communists or their sympathizers from government jobs.

85. Mao Tse-tung was determined to transform China into a strict Marxist nation. Explain how he achieved his goal.

Answer: Mao reformed land ownership, lowered rents, and established schools for peasants. Communist leaders established agricultural collectives of several hundred farm families. The Communists also set out to destroy Chinese family unity and ancestor ties in order to promote a communist identity.

86. Explain how the creation of the European Economic Community (Common Market) in 1958 contributed to the economic well-being of Europe.

Answer: The Common Market was an organization of Western European nations organized to eliminate tariffs among its members. This created prosperity by increasing trade.

87. Give an account of India's division into three countries between the years of 1947 and 1971.

Answer: On August 15, 1947, India was divided into two sovereign dominions, India and Pakistan. In 1949 India became a Federal Republic consisting of mostly Hindus. Pakistan, mostly Moslem, became a Republic in 1956. Later during a civil war in 1971, the eastern wing of Pakistan proclaimed itself the independent state of Bangladesh.

88. Explain the meaning of the term "Cold War".

Answer: This term described the hostile relations between the Soviets and Western nations. This arose after the end of World War II as wartime collaboration broke down.

89. Explain the purpose of the Great Proletarian Cultural Revolution in China.

Answer: Mao Tse-tung feared China was moving away from the revolutionary spirit of true Leninist Communism. He instituted a purge of intellectuals who had supposedly become lukewarm in their devotion to Communist ideology.

90. Why were the Communists successful in gaining control of the government of China in 1949?

Answer: Mao Tse-tung had won the support of the peasant masses, and received weapons from the U.S.S.R.. Many Nationalist leaders were corrupt selling weapons which ended up in Communist hands. The Communists defeated the Nationalists.

91. How successful was the United Nations in dealing with the conflict in Cyprus?

Answer: In late 1963 Turkey became involved in a dispute with Greece over the rights of the Turkish minority on the Greek-dominated independent island of Cyprus. In March 1964, the United Nations sent a peace-keeping force to stop fighting between Greek and Turkish factions. A cease-fire agreement was reached in August, 1964.

92. How has being a next door neighbor of the United States caused concerns for Canada in the post-World II era?

Answer: There is a danger of Canadian culture being Americanized and Canada's economy becoming too dependent on the United States.

93. The United Nations was established in 1945 "to save succeeding generations from the scourge of war". How successful has the United Nations been as a peace keeper in three trouble spots in the world since World War II?

Answer: It has succeeded in helping stop some wars such as the one between India and Pakistan and has prevented others from spreading. It has provided a forum where countries can release tensions peacefully, helped settle disputes like the Indonesians and the Dutch and provided facilities for disarmament and nuclear control talks. United Nations' agencies have also met some success in economics, health, and education.

94. Why did relations between the United States and Communist China begin to improve in the early 1970's?

Answer? China was worried about a possible attack by the Soviet Union. The Chinese felt friendlier relations with Western nations would strengthen their position.

95. What events in the late 1940's led Western nations to establish NATO?

Answer: The North American Treaty Organization was an alliance of Western nations who agreed to defend one another if attacked. Between 1947 and 1953 the Cold War reach its frigid extreme. The formation of the Cominform by the U.S.S.R., the division of Germany, the Berlin blockade, and the coup d'état in Czechoslovakia led to the formation of NATO.

96. Explain the Truman Doctrine.

Answer: This became the basis of an American policy to contain Communism. It was a policy of supplying military aid to Greece and Turkey.

97. How successful was the United Nations in dealing with the Korean Conflict?

Answer: On July 27, 1953, an armistice was signed with Korea remaining divided into two parts. North Korea was under the domination of the Communists, and the Republic of Korea in South Korea was supported by the United Nations. Both the Communist world and Western nations claimed victories.

98. How did the seven-year occupation of Japan by the Allied Powers change the history of that nation?

Answer: The occupation authorities dissolved the Japanese imperial army and navy, banned ultranationalist organizations, and purged education of its military elements. They adopted a new constitution and instituted land reforms.

99. Briefly describe the events which led to the Korean Conflict.

Answer: At the conclusion of World War II, Russian troops occupied North Korea and American troops occupied South Korea supervising the surrender of Japanese troops. All of Korea was supposed to become independent but North Korea remained under Russian domination. On June 25, 1950, Russian-trained North Korean troops invaded South Korea and troops from the United Nations came to help the South.

100. How were Arab-Israeli tensions made more dangerous in the 1960's by the presence of the United States and the Soviet Union?

Answer: The United States supported Israel and the Soviet Union supported the Arab countries. By supplying and supporting these countries, the possibility of war became a threat.

101. Why were racial tensions severe in the Union of South Africa in the 1960's?

Answer: Of the 14½ million people there, the key positions were controlled by whites although they only consisted of 3 million people. The non-whites were held down through apartheid.

102. How successful was the United Nations in dealing with the Middle East?

Answer: The United Nations sent an Emergency Force to patrol the borders between Israel and Egypt in 1956. By 1969-1970 an undeclared war was raging between Israel and Arab states. The United Nations sponsored a cease-fire. However, in the 1970's tensions continued between Arab states and Israel.

103. Science and technology changed people's environment in the 20th century. What were some of the areas in which changes took place?

Answer: New theories revolutionized physics. (The Law of Photoelectric Effect, The Theory of Relativity, application of nuclear energy). Scientists made breakthrough in chemistry and biology. (Developments in bacteriology, micro-biology, biochemistry, curative medicines, vaccines, transplants). Technology advanced rapidly. (Automobiles, instantaneous communication, automation). The Space Age began.

104. Explain several factors which contributed to the collapse of colonialism after World War II.

Answer: Imperial powers felt that colonies were as much a burden as a benefit; pressure of colonial people for independence; imperial powers thought of themselves as tutors and trustees rather than conquerors and rulers, and World War II emphasized freedom and nationalism.

105. In China, why was Mao Tse-tung so easily able to defeat the Nationalist Government of Chiang Kai-shek?

Answer: The Nationalist leaders were corrupt. Mao Tse-tung had the support of the peasant masses, and had received former Japanese weapons from the Soviet Union.

106. How did nationalism affect Indonesia in the 1960's?

Answer: After getting independence from the Dutch in 1949, Indonesia experienced many difficulties. The population grew, the economy stagnated, exports declined, inflation increased and there were food shortages. Revolts broke out. Sukarno kept his people in a continuous state of emotional nationalism, haranguing huge audiences with a torrent of slogans and epithets. This enabled him to keep power until a military regime took over in 1967.

107. Why did a quarrel develop between the U.S.S.R. and China in the 1960's?

Answer: China denounced Russia for betraying real communism and thought the Soviets should be more anti-American. Also China wanted more military and economic aid from Russia which Russia refused and the Soviets recalled all their technical advisors from China in the early 1960's.

108. Explain the purpose of the Marshall Plan.

Answer: The Marshall Plan was a program of economic aid given to European countries by the United States to help them rebuild their economies after World War II. It was an attempt to contain communism.

109. How did Chiang Kai-shek try to develop China after he succeeded Sun Yat-sen as leader?

Answer: In 1928, Chiang Kai-shek captured the government at Peking and united China. Chiang built factories, railroads, and new highways. A vigorous educational program was set in motion to teach millions to read.

110. How did Red Guards aid the cause of Mao Tse-tung in the Great Proletarian Cultural Revolution?

Answer: Red Guards were teenagers organized into vigilante groups to help purge lukewarm communists from Chinese society. They attacked teachers and professors, party officials, elderly people and anyone who held old customs, and old ideas.