

MEDIA LITERACY AND GAMBLING

"The gambling passion lurks at the bottom of every heart."

Honoré de Balzac

"The theory of probabilities is at bottom nothing but common sense reduced to Calculus."

Pierre Simon de Laplace

"Common sense is not so common."

Voltaire



Objectives

■ 3-1 The objectives for this section are (1) to provide students with tools that will help them analyze media messages, particularly in the area of substance use and gambling activities, and (2) to help students develop critical thinking skills that will allow them to objectively evaluate gambling opportunities.

Teacher Background

A study conducted with Massachusetts adolescents (Shaffer, 1994) revealed that of six illicit activities investigated among students in grades 7 through 12, lifetime prevalence of involvement with the lottery is exceeded only by lifetime prevalence of alcohol use. A similar pattern existed for current (i.e., within the past 30 days) involvement with these six activities. Another study with Massachusetts adolescents revealed that for younger students (i.e., 5th through 8th graders), rates of gambling exceeded the rates of involvement with seven other illicit activities, including alcohol and tobacco (Shaffer, Walsh, Hall, Howard, Wellington, & Vander Bilt, 1995a). Despite the fact that middle school students are not legally able to engage in lottery or other organized gambling activity, a climate of harmlessness and excitement has emerged in society, increasing the attractiveness of gambling for adolescents.

Media coverage of gambling increases its attractiveness. Massachusetts students can

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tune in to the “Lottery World” television program on Saturday evenings at 7:00 and get drawn into the excitement of lottery players winning thousands of dollars on supplemental games live in the studio. Newspapers highlight the moment when winners collect their jackpot checks; the chances of winning, the struggles that may ensue from becoming a winner, and the vast number of losers are downplayed or ignored.

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■ 3-2 Research on social learning theory has shown that observing the modeling of a behavior can increase the likelihood of the behavior when no consequences are observed (Wallack, Grube, Madden & Breed, 1990).

Students influenced by the gambling media form expectations that there are no consequences of engaging in gambling activities. In our fast-paced age where students may feel skeptical about the value of a gradual accumulation of experience, wealth, and professional status, the lottery seems to offer instant fame, fortune, and grandeur.

Another media influence regarding gambling issues is *Lotto World*, a small magazine published for people who believe they can improve their chances of winning the lottery. The editor-in-chief of *Lotto World*, Rich Holman, was asked, “Can *Lotto World* really improve your odds or chances of winning?” Holman responded, “I love that question because I can dazzle them with a myriad of statistics, research, studies and an array of facts and figures that would stun even the most statistically oriented ‘doubting Thomas’ lottery player” (Holman, 1995, p. 10). However, no such statistics are presented in the magazine for the reader. In fact, Holman never answers this simple yes-or-no question directly.

The primary objective of this section is to challenge students to investigate the truth of media messages such as Holman’s. Using knowledge of probability that they have gained in the previous sections, students will be able to explain why there is no way to improve your chances of winning the lottery. Our objective throughout this section is to present students with several exercises that allow them to critically analyze claims that defy mathematical reasoning. A second objective is to encourage students to question media messages critically, particularly media that promote substance use and gambling activities.

Social Learning Theory

3-2

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Magical Thinking

Publications like *Lotto World*, and to some degree the gambling industry in general, depend on the existence of magical thinking among consumers. Magical thinking is a form of superstition.

■ 3-3 The American Heritage Dictionary (1992) defines superstition as “an irrational belief that an object, an action, or a circumstance not logically related to a course of events influences its outcome.” In other words, magical thinking is the belief in forms of causality that are not based on reality and rationality. An example of magical thinking is believing that certain events in your life (e.g., wearing your “lucky” socks) can influence the outcome of a lottery drawing.

Magical Thinking

3-3


The belief in forms of causality that are not based on reality and rationality

The irrational belief that one can influence mathematical probabilities and random events

For the purposes of this curriculum, magical thinking can be thought of as the irrational belief that one can influence mathematical probabilities and random events through thoughts or through actions that do not directly involve those probabilities or events. The influences of media messages regarding gambling, combined with a consumer’s magical thinking about random events, result in an ignorant consumer who is unaware of probability and the overwhelming odds that he or she will lose money gambling.

“Through its cumulative effect upon the habitual attitude of the population, even a slight or inconspicuous bias towards accounting for everyday facts by recourse to other grounds than that of quantitative causation may work an appreciable lowering of the collective industrial efficiency of a community”(Veblen, 1899).

This erroneous belief in one’s ability to control situations involving random events is one of the common characteristics of pathological gamblers. Pathological gamblers, who are often highly intelligent, frequently believe that if they use their intellectual capacity, they can control random outcomes. This need to feel control over situations makes gambling very dangerous for pathological gamblers, because their emotional need for control limits their capacity to understand and accept mathematical probability and their ability to deal with reality. Even among non-pathological gamblers, this need for perceived control often exists. A study of non-pathological gamblers by Ladouceur, Gaboury, Dumont & Rochette (1989) revealed that gambling experiences, whether profitable or not, promote irrational thinking and “evoke an illusory



perception of control” (p.409). Veblen (1899) supports these results, stating that the industrialization of society makes people more intelligent and more efficient by replacing superstitions and belief in luck with knowledge of scientific principles and awareness of cause and effect relationships. Through its cumulative effect upon the habitual attitude of the population, even a slight or inconspicuous bias toward accounting for everyday facts by recourse to other grounds than that of quantitative causation may work an appreciable lowering of the collective industrial efficiency of a community” (Veblen, 1889, cited in Eadington, 1996, p. 33). In other words, continued reliance on beliefs such as luck and superstition make people less intelligent and less able to function in society (Eadington, 1996).

Eadington (1996) notes that children are often more susceptible to this erroneous belief system than are adults. He cites Bergler’s (1958) explanation of this phenomenon: “In our culture... the family setup fosters the child’s misconception of his omnipotence. This is the result of the parents’ effort to fulfill the infant’s every demand for food, love, attention. The child misconceives causality; he sees these wish fulfillments, not as a consequence of the mother’s love and kindness, but as a fruit of his own omnipotence. Education is an attempt to adapt the child to a reality far different from the fantasy world in which he can feel omnipotence” (Bergler, 1958, cited in Eadington, 1995, p.2). In psychoanalytic theory, this process of education and maturation is referred to as the transition from the “fantasy principle” to the “reality principle” (Eadington, 1995). Many who have problems with gambling developed these problems partly because they have trouble making this transition. The ubiquitous presence of gambling in society, as well as media messages that make gambling seem attractive, likely make this transition more difficult for many. Our goal here is to reinforce some of the concepts of probability as they apply to gambling and to help students to evaluate media messages and gambling opportunities using mathematics and reality rather than magical thinking and irrationality.



Facing the Odds:

The Mathematics of Gambling and Other Risks



♠ Section 3 Worksheet

- 1.** The Editor in Chief of *Lotto World* claims that the *Lotto World* staff believes that someday they will win “the big one.” “We’re starting to beat the odds and we’re getting closer to a major win,” he says (Holman, 1995, p.11).



- What does he mean by this?
- Is it possible to get closer to a major win?

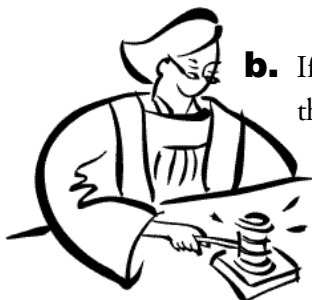
- 2.** Read the “fine print” of the *Lotto World* magazine:



All graphs and charts are published as a service and information guide. Our intent is to inform and not influence. The information has been produced by and for statistical analysis only. *Lotto World* assumes no responsibility for the opinions expressed by columnists in this publication. Although this publication and some of its columnists may offer predictions, *Lotto World* makes no guarantee that any prediction may come true. Readers are reminded that the outcomes of lottery games are based on random selections of winning numbers, which are mathematically unpredictable. Unless specifically stated, *Lotto World*, Inc. makes no endorsement of, or representation concerning any service or product advertised herein, or any statement in such ads, and disclaims liability for use of deliverability and quality of such services or products.

Lotto World, 1995, p.8

a. What responsibility does *Lotto World* take for the claims in their magazine?



b. If you followed their advice, yet failed to win anything for 10 years, could you sue them for misrepresentation?

c. Do you think they believe in their own methods for improving your chances of winning the lottery?

d. What evidence is there that they do or don't?

3. One of the 14 “Fundamentals of Lottery Play” listed by *Lotto World* is the following: “Don’t limit your winning chances! Some techniques can actually limit your chances for a win. Here are some techniques to avoid: playing birthdays; playing duplication combinations; too many consecutive numbers and ‘repeating numbers’.”

• Will this advice improve players’ chances of winning?



- 4.** Read the following advertisement from *Lotto World*:

**WIN THE LOTTERY IN 18 DAYS OR LESS GUARANTEED!!!
WITH STEVE PLAYERS LOTTERY POWER WORKOUT**

There are over 20,000 copies of this book in print, and for a very good reason: THIS SYSTEM WORKS!!! It will only cost you \$5.00 each day to buy the tickets and our guarantee says the rest:

Either you win your States Lottery game in the first 18 days that you use the system or we will gladly refund the full purchase price of the system.

PERIOD — NO FINE PRINT!!!

DON'T WAIT — ORDER TODAY — ONLY \$35. — CATALOG \$2.00

Name: _____ Address: _____

City: _____ St: _____ Zip: _____

- a.** Although the advertisement states that there is “no fine print,” can you think of what the “catch” might be?

- b.** How much will it cost you if you buy the tickets for the full 18 days?

- c.** Do you think Steve Players Inc. is making money from this business?

- d.** Would it be a wise investment of your money to buy this “system”?



- 5.** The “**Lottery Zone**” is allegedly a state that “makes winners out of losers and occurs randomly for no apparent rhyme or reason” (Miller, 1995, p. 32). The article in *Lotto World* about the “**Lottery Zone**” lets readers know “how to tell if you’re in the zone” and “what to play when you are in the zone.” One way to tell if you’re in the zone is “first and foremost, you must feel great and just KNOW you will win” (Miller, 1995, p. 35). Recommendations for what to play when you are in the zone include the following: “play birthday numbers, addresses, dry cleaning ticket numbers, and any other lucky number. When you’re in the “**Lottery Zone**” you can do no wrong” (Miller, 1995, p. 35).

a. What evidence indicates that a “**Lottery Zone**” exists?




b. How does “knowing you will win” increase your chances of winning?

c. What would the writer of this article want readers to believe? Why?




Section 3 Worksheet Answers

1. The editor seems to mistakenly believe that if you keep playing the lottery long enough, your chances of winning become greater and greater. In fact, there is absolutely nothing you can do to “get closer to a major win.” Each time you play the lottery is an independent event, so your chances of winning are the same each and every time.
- 2a. *Lotto World* takes no responsibility for the claims in their magazine. They state explicitly that they assume no responsibility for the opinions of their writers. They make no guarantee that any predictions made in *Lotto World* will come true.
- 2b. You would not win a lawsuit against *Lotto World* in which you sued them for attempting to convince you that you could better your chances of winning the lottery. Because of this disclaimer in small print in the front of the magazine, they are not legally liable.
- 2c. It is hard to tell if the editor or the staff believe in their own methods for improving chances of winning the lottery. Even when you are thoroughly versed in mathematics and know all about probability, it seems to be human nature to want to believe there are ways to improve your luck and better your chances.
- 2d. However, *Lotto World* states: “Readers are reminded that the outcomes of lottery games are based on random selections of winning numbers, which are mathematically unpredictable.” It is therefore clear that at least some of the staff of *Lotto World* know that their methods are grounded in fantasy and magical thinking, which fail to have any effect on probability.
3. When choosing numbers to play for the lottery, there are no ways to limit or increase your chances of winning. Of all the possible methods of choosing numbers, no one method is better or worse than any other. Since lottery numbers are drawn randomly, all possible combinations are equally probable. As a result, using birthdays or consecutive numbers is equivalent to any other number picking system. (See Section 2 for more detail on this topic).
- 4a. Some people who see this advertisement may believe that Steven Players, Inc. is simply trying to trick customers out of their money through false statements and deceit, and that there is no truth to the claims made by the advertisement. Others may believe that the



system actually works, and that they will win the lottery if they buy the system and use it. Most likely, though, both of these interpretations are incorrect. There is likely some degree of truth to the advertisers' claim. The book that you would receive if you sent in your money most likely states that you are guaranteed to win some lottery prize (for example, a \$1 scratch ticket prize or matching 1 out of 4 on the daily numbers), not necessarily the lottery jackpot (for example, Megabucks or Powerball). When the advertisers guarantee that you will "win your state's lottery game," they probably are not referring to the lottery jackpot, but they probably intend readers to assume that they are referring to the lottery jackpot.

- 4b.** If you buy the tickets for the full 18 days, you will spend $\$5 \times 18 = \90 . In addition, the book costs \$35, so your total expenses would be $\$90 + \$35 = \$125$.
- 4c.** Steven Players, Inc. is most likely making money from this business. Many of those who buy the system would probably win some small prize from all of the lottery tickets they had to buy. For example, as of this writing, the chances of winning a \$1 prize in the Massachusetts "Aces High" instant game are 1 in 12. However, the large majority of these "winners" will be losing money with this system, since the chances of winning a \$1 prize or a \$5 prize are far greater than the chances of winning a prize of \$125, in which case the subscriber would break even, or a prize of more than \$125, in which case the subscriber would earn a profit. Most likely, anyone who won any prize, no matter how small, would be ineligible to get a refund. In addition, the majority of those who won nothing probably would not demand a refund due to embarrassment over being duped.
- 4d.** This system would not be a wise investment of your money, since the large majority of people who use this system probably lose money.
- 5a.** While many people believe that "luck" and related mystical concepts such as "the lottery zone" exist, there is no evidence that lottery winnings and other "lucky" outcomes are due to anything but chance and random events.
- 5b.** "Knowing" you will win will have absolutely no impact on your mathematical chances of winning.
- 5c.** The writer of this article wants readers to believe in the "Lotto Zone." He also wants readers to believe they can maintain some control over the chances of winning the lottery, (for example, by playing birthday numbers). He might want readers to believe in the "Lotto



Zone” because if they do, they may buy more *Lotto World* magazines, and the writer will keep his job and possibly be asked to write more articles. It is also possible that the writer actually believes in the “**Lottery Zone**” and entertains delusions about improving his chances of winning the lottery.