THEORY-BASED DECISION-MAKING STRATEGIES: TEACHING HIGH SCHOOL STUDENTS SKILLS THAT PROMOTE LOGICAL AND SOCIALLY ACCEPTABLE DECISIONS

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Data in this study showed that although high school students (n=42) have basic decision-making skills, they lacked theory-based strategies that promote logical and socially acceptable decisions. The Johnson's (2004) six-step decision-making approach made a significant difference; F(1, 40) = 7, p < .05 between the control (n=17) and experimental group (n=25). A thematic analysis showed that social factors (friends, peers, parents and other adults) heavily influenced adolescents' decisions irrespective of the decision making skills learned. Nonetheless, the experimental group was able to support their decisions with logic, and to make decisions that were potentially socially acceptable. The results suggest that there might be value in teaching to high school students theory-based logical decision-making strategies. Other pertinent findings are reported.

Children of all ages are generally making seemingly illogical decisions that violate established social norms. Consequently, the potential for chaos, anger and frustration in social spaces, schools especially is all too imminent to ignore. Students' inability to make logical and socially acceptable decisions affects the teaching profession in many dramatic ways. Goodland and McMannon (2004) reported that nearly 55 percent of newly hired, highly qualified educators in the United States are leaving the profession in the first five years due to, among other reasons, students who are increasingly displaying anti-social behaviors. In addition to exhibiting limited moral and ethical skills, children are reportedly selfish and disrespectful (Berliner & Biddle, 1997.) Other frustrating behaviors such as cheating, lying, stealing, refusal to comply, screaming, being off-task, throwing things, and daydreaming are all too common (Charles, Senter, & Barr, 1999).

Recent studies show that students are increasingly demonstrating a deficit in the ability to make logical and socially acceptable decisions. Many of the illogical decisions children make present a certain level of danger to other students and educators as well. Ryan and Cooper (2007) reported that many educators are in constant fear of being physically or emotionally attacked by students. They further conceded that the likelihood of teachers getting hurt when they disagreed with students or while intervening in a student dispute is becoming a common phenomenon. Nonetheless, decisions by students to attack violently teachers and other students have not reached epidemic proportions, but data from the 2004 U.S. National Center for Education Statistics show that school children and educators in 64 percent of our public schools were generally afraid of physical attacks.

Although it is not clear why children choose to make decisions that many people perceive to be illogical and socially unacceptable, numerous social changes in America are likely factors. Ryan and Cooper (2007) reported that changes in American family practices are a possible cause. For instance, increased rates of spousal separation and divorce have left many children in single-parent homes (Coleman, Ganong, & Fine, 2000). Additionally, there are a growing number of teenagers becoming single-parents. Roughly 900,000 teenagers in America who become pregnant in one year gave birth to nearly 425,000 children (Sack, 2001).

Single-parenting does not, in and of itself, cause children to make illogical decisions. Data, however, point to the fact that growing up in a single-parent household is likely to expose children to poverty. Furthermore, children living in a female-headed household are five times more likely to experience poverty than their peers living in two-parent households (Moore & Redd, 2002).
Poverty is a condition that could adversely affect children’s moral, social and cognitive development (Brooks & Duncan, 1997). A comprehensive review of ways in which poverty affects children’s development indicated that children of poverty were more likely than children of wealth to develop emotional and behavior problems such as high dependence, anxiety, unhappiness, hyperactivity, and peer conflicts. Additional studies have shown that differences in home environment/styles also affect the development of decision making processes (Joiner, 2003; Korenman, Miller, & Sjaastad, 1995; McLeod & Shanahan, 1993). Other pertinent data show that about 12 to 14 million children in America experience poverty-related conditions such as “inadequate nutrition, fewer learning resources, instability of residence, lower quality of schools, exposure to environmental toxins, family violence, homelessness, dangerous streets, less access to friends, services, and for adolescents, jobs” that have the potential to impair the development of essential decision-making skills (Brooks-Gunn & Duncan 1997, p. 56).

Children living in poverty are generally more likely to display emotional and behavior problems such as aggression, acting out, social withdraw and depression that children growing up in wealthier environments (Brook-Gunn & Duncan, 1997). Social scientists believe home environment, among other reasons, is a contributing factor. Studies have consistently indicated that what happens at home, especially the ability to provide enriched learning opportunities and opportunities for positive interactions is positively correlated to children’s development of socially acceptable habits (Garrett, Ng’andu & Ferron, 1994). Due to economic hardships, poor households are less likely than wealthy ones to provide such a home environment. Additionally, while wealthy parents were more likely to solve discipline problems through constructive dialogue, poor parents were more likely to resort to spanking, perhaps unintentionally teaching children the value of physical violence in conflict resolution (Duncan, Brooks-Gunn, & Klebanov, 1994; Duncan, Brooks-Gunn, Klebanovm, & Sealand, 1993). Meanwhile, existing societal stereotypes that associate children of poverty with lack of family values, morality and laziness (Rasool & Curtis, 2000) does not help either. Children who are aware of these stereotypes tend to act accordingly- self-fulfilling prophecy phenomenon.

Students recognize when teachers don’t like them and are, therefore, likely to make reciprocal decisions. Teachers may dislike students for a variety of reasons including societal stereotypes. For example, existing cultural-based stereotypes along with discrimination based on other areas of human differences are likely to cause harmful suspicion between teachers and students (Gayle-Evans & Michael, 2006). To cultivate a trusting learning environment, educators must become good role models (Sizer & Sizer, 1999) and have high expectations for all learners irrespective of learners’ cultural backgrounds (Meier, 1995). To make this happen, educators must first subscribe to an affirming attitude, an attitude that strongly supports the notion that children are naturally good (Kohn, 1996; Osborne, 2002). Keeping an open communication line between school and children’s homes is also essential because children learn many elements of human interaction at home (Kambutu, 2003; King, Chipman, & Cruz-Janzen, 1994). Additionally, educators must promote informed instructional decisions, firstly by becoming aware of their own bias, and secondly by educating themselves about professional practices that promote culturally responsive teaching (Kambutu & Thompson, 2006; Manning, 2000).

Due to cultural and other human differences, educators and students sometime make illogical and socially unacceptable decisions. Smith (1998) reminded us that because children are a product of their culture, the decisions they make are heavily influenced by their home cultures. Accordingly, cultural mismatch between home and school is a persistent problem between schools and children— a problem that greatly influences the decisions that both educators and students make. Every culture has rules and practices including those pertaining to decision-making (Cotton, 2000; Payne, 2003). To the extent that educators either lack, or do not want to apply cultural and pedagogical skills that enhance learning for children
who are culturally different, misinformed decisions will, unfortunately, continue to thrive (Banks, 1999; Cooney & Akintunde, 1999; Cruz-Janzen, 2000; Gallavan, 1998; Kirova, 2001; Mason, 1999).

Educators who fail to teach to human diversity risk a variety of cultural-based decisions that are generally misunderstood. Cultural misunderstanding has quite often facilitated negative labeling of children's decisions (Obiakor, 2002). For example, a teacher who does not fully understand a child's cultural interaction and communication patterns could make culturally unacceptable demands/requests that could easily facilitate decisions that are inconsistent with a teacher's expectation. In some cultures, for example, children do not make direct eye-contact with authority figures, do not contradict older/authority figures, expect explicit communication are accustomed to cooperative social environments, and time is connective and event-related not linear (Nel, 1998).

Unless educators cultivate a deeper understanding of children's home cultural practices, and are willing to recognize and to teach to these cultural differences, children's decisions might unnecessarily continue to be misconstrued as illogical and irresponsible. To remedy this potentially harmful situation, teachers should be prepared to teach to all human differences (Greene, 2005; Ladson-Billings, 2001; Nieto, 2003, Obiakor, 2001; Payne, 2003; Shealey & Lue, 2006; Tatum, 2003) and address their own bias towards other cultures (Mason, 1999). Paying attention to Gayle-Evans and Michael's (2006) words of caution about the existing strong connection between the decisions children make and teacher's attitude towards students is a worthy course.

Peer pressure also appears to influence the decisions most adolescents make. Peer pressure is a reality that affects most teenagers particularly in the realm of decision-making. The need to identify and to be accepted by peers is an important one during adolescence (Forney, Crutsinger, & Forney, 2006). While positive peer association is sometime healthy and desirable, adolescents are also likely to experience negative and risky peer associations. Some adolescents are able to manage effectively peer pressure, but others readily succumb to it, perhaps because of the desire to look "tough" or to be popular. Negative peer pressure is likely to facilitate illogical decisions. Studies have consistently found an association between delinquent behavior and delinquent friends (Patterson, Capaldi, & Bank, 1991). A possible remedy to negative peer pressure is preparing children to freely exercise self-awareness. Being able to choose friends wisely, and the ability to stand firm for what one knows to be right is equally helpful (Parnell, 2001). Adolescents who have acquired the appropriate skills tend to make informed and socially acceptable decisions.

**DECISION-MAKING**

This study was grounded in the Johnson's (2004) six-step decision-making approach. It was designed to explore decision-making approaches that could enable high school students to make logical and socially acceptable decisions. Previous studies exploring decision making abilities found that adolescents lack adequate logical decision making skills (Ryder & Hunter, 2002).

Decision-making connotes the process of making logical or informed choices. A logical approach in decision-making helps one to organize thought, to synthesize information and to critically think about the decisions to be made (Stewart, 1988). A benefit commonly associated with the ability to make informed decisions is the elimination of what R. Harris (1998) labeled as "reaction to external stimuli," also called "crisis management and putting out fires." Making informed decisions necessitates the consideration of all available resources, both human and nonhuman. Additionally, it requires an awareness of the already held values, goals, and standards that could easily influence the acquisition of the necessary knowledge (Ryder & Harter, 2002). To be successful, a logical step-by-step approach to decision-making is necessary. In essence, a logical decision-making approach helps one to organize thought and to critically think about the decisions to be made. Johnson (2004) recommended the following six-steps: 1) identify the decision to make, 2) identify possible alternatives, 3) consider the advantages and disadvantages for each alternative, 4) make the
decision, 5) implement the decision and 6) evaluate the decision.

Many high school students lack skills to help them make logical and therefore, socially acceptable decisions (Baron & Brown, 1991). Given the centrality of decisions in a complex society such as ours, it is critical to intervene and help young adults acquire the appropriate decision-making skills. To that end, high school faculty in a Family and Consumer Science Life Skills course designed this study to examine the decision-making skills possessed by students enrolled in their course. They expected to use the data from this action-research to explore curriculum effectiveness and consequently, modify any identified curriculum gaps. The Johnson’s six-step decision-making model informed this process. An assumption was made that the participating high school students likely will transfer the learned logical decision-making skills to other areas of life.

METHODS

Previous studies exploring adolescents’ decision making abilities found that American youth lacked adequate logical decision making skills. This study, then, examined how content in a high school Life Skill course was helping students acquire the skills necessary to make informed, socially acceptable decisions. The following questions guided the study: a) What decision making skills do high school students enrolling in Life Skill courses already have? b) How does taking a Life Skill course that teaches logical decision-making approaches influence adolescents’ decision-making skills? c) What factors most influence the decisions adolescents make?

This action-research was quasi-experimental. Data were collected from adolescents (n=42) enrolled in a high school Life Skill course that taught topics in life management (family life, nutrition and human development, personal health, group/community health, relationships, and personal finance). Two classes, randomly selected from five Life Skills courses participated. Participants were already pre-assigned to tenth, eleventh and twelfth grades. Many of the participants’ demographic variables were identical to the school’s general demographics. For example, 40 percent of the participants lived in poor households that qualified for the federal free and reduced lunch program based on family income. However, participants in both the control and experimental groups were overwhelmingly White and female (95 percent). Since only one Chicana student was in the control group, 2 males (one in each group participated), gender and ethnicity variables were not factored in this study. Written parental consent to participate in the study was required. Investigators randomly assigned the two participating classes to the control (n= 17), and experimental groups (n= 25). Nonetheless, internal validity (M.B. Harris, 1998), age and grade-level differences were possible limitations in this study.

Two survey instruments were administered. The first survey (pre-teaching only) was completed by both groups (n=42). This 12 item survey measured the existing decision making skills. Survey items were contrastingly constructed to reduce the tendency for socially acceptable responses (Harter, 1982). A scale of 1-5, (1= never true and 5= always true) was used. A rating of 5 (always true) was rated the highest on items whose responses were in agreement with a survey item as is the case in the following example: “I always think of advantages and disadvantages before I make a decision.” A one (1= never true) rating was scored highest for responses that disagreed with a statement. For example, “I am afraid to say what I believe in because my friends might laugh at me.” The second survey (pre/post teaching) contained 30 true/false items (see appendix) that examined existing decision making skills in areas of family, personal health and goal setting. Both groups completed the second survey. Conforming to Ary, Jacobs, and Razavieh’s (1996) views that the best way to ensure validity and reliability of psychometric tests is through “the evidence of content-related validity which may be gathered by having some competent colleagues who are familiar with the purpose of the survey examine the items to judge whether they are appropriate for measuring what they are supposed to measure” (p. 462), a colleague examined the survey items for content validity. In addition, survey items were constructed using relevant course materials. To enhance reliability, participants responded to survey
items in multiple ways including essay questions. The control group (n=17) continued to receive regular instruction without modification (modified instruction received after completing post-instruction survey). The experimental group (n=25) received modified instruction that explored various aspects of decision making following the Johnson’s six-step approach. After experiencing instruction for two months both groups completed a post-instruction survey containing the initial pre-instruction 30 true/false items. Additionally, both groups responded in writing to the following hypothetical vignette.

Paula is the youngest student in 11th grade. At a Friday back-to-school dance, she feels uncomfortable and younger than the rest. One of the girls that she knows from her Life Skills class offers her a cigarette and says, “Com’ on give it a shot. It won’t hurt. Everybody is doing it.” Other boys and girls are watching. Paula feels like the whole group is watching what she decides.” Question: What’s the best decision for Paula? What are the possible future outcomes for Paula’s decision?

The researchers graded responses to the vignette using a rubric based on the Johnson’s (2004) six-step decision-making approach mentioned above. A mixed-method data analysis approach was used. Qualitative data analysis followed an emergent, grounded research approach (Strauss & Corbin, 1998). The researchers looked at this data with initial theoretical assertions anchored to the data. Qualitative data provided several themes that were coded as recommended by Bogdan and Biklen (1992). Statistical analysis provided additional data.

**FINDINGS**

Pre-instruction data showed that participants entered Life Skill courses with some basic decision making skills (Table 1. Decision-Making Factors). In particular, the concept of right and wrong appeared to heavily influence participants’ decisions. Although 27 percent of the students always considered advantages and disadvantages before making decisions, friendship played a crucial role. In cases where a friend/s did not agree with a decision, 50 percent of the students reported a willingness to look for other ways to resolve an issue. Another 45 percent were willing to compromise, but the fear of losing friends (49 percent) was apparent. Qualitative data appeared to equally suggest the centrality of friendship in decision making. While exploring the possible implications

<table>
<thead>
<tr>
<th>How I make decisions</th>
<th>Never 1</th>
<th>Seldom 2</th>
<th>Sometimes 3</th>
<th>Often 4</th>
<th>Always 5</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If my friends want to do something that I think is wrong, I will do it so I do not seem the odd one out</td>
<td>47.6</td>
<td>40.5</td>
<td>11.9</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>2. I always think about the advantages and disadvantages before I make a decision</td>
<td>0.0</td>
<td>19.0</td>
<td>52.4</td>
<td>16.7</td>
<td>11.9</td>
<td>100</td>
</tr>
<tr>
<td>3. I do not mind losing friends for standing for what is right</td>
<td>4.8</td>
<td>9.5</td>
<td>35.7</td>
<td>28.6</td>
<td>12.4</td>
<td>100</td>
</tr>
<tr>
<td>4. I do not think about advantages and disadvantages when I am making a decision</td>
<td>7.1</td>
<td>42.9</td>
<td>45.2</td>
<td>4.8</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>5. I always gather information before I make a decision</td>
<td>2.4</td>
<td>23.8</td>
<td>45.2</td>
<td>21.4</td>
<td>7.1</td>
<td>100</td>
</tr>
<tr>
<td>6. If I disagree with my friends I usually walk away from the conflict and hope the conflict will resolve itself or go away</td>
<td>23.3</td>
<td>16.7</td>
<td>38.1</td>
<td>16.7</td>
<td>4.8</td>
<td>100</td>
</tr>
<tr>
<td>7. I am not afraid of saying what I believe in even if my friends laughed at me</td>
<td>38.1</td>
<td>31.0</td>
<td>14.3</td>
<td>14.3</td>
<td>2.4</td>
<td>100</td>
</tr>
<tr>
<td>8. If I disagree with friends I always seek ways to resolve the conflict</td>
<td>2.4</td>
<td>4.8</td>
<td>42.9</td>
<td>38.1</td>
<td>11.9</td>
<td>100</td>
</tr>
<tr>
<td>9. It does not matter what my friends think or if they laugh at something I said</td>
<td>0.0</td>
<td>11.9</td>
<td>31.0</td>
<td>33.3</td>
<td>23.8</td>
<td>100</td>
</tr>
<tr>
<td>10. I frequently get my way with my friends even when I am the one on the wrong</td>
<td>23.8</td>
<td>38.1</td>
<td>28.6</td>
<td>9.5</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>11. I usually make reasonable compromises and present my position to my friends and others</td>
<td>0.0</td>
<td>7.1</td>
<td>47.6</td>
<td>31.0</td>
<td>14.3</td>
<td>100</td>
</tr>
<tr>
<td>12. I normally set realistic goals</td>
<td>16.7</td>
<td>33.3</td>
<td>31.0</td>
<td>11.9</td>
<td>7.1</td>
<td>100</td>
</tr>
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for Paula’s best decision in the vignette’s problem, participants identified overwhelmingly the need to be approved by friends as crucial. This is evident in the following selected excerpts.

**Question: What’s the best decision and what are the possible future outcomes?**

**Responses:** “Stay and not smoke, she would meet new friends,” “If she walks away, others will say, who wants to be friends with a trouble maker,” “If she says no, she will have her former friends and only they will be true friends,” “Say no to her friends and just walk away. She has to be willing to stand up to them even though she is uncomfortable,” “Smoke. This could lead to acceptance for that night or for a while because she’s trying to fit in,” “She might lose friends,” people might say she is a snitch or rip off, and “She might be made fun of and they might refuse to accept her.”

A one-way analysis of variance showed no significant differences between the experimental and control groups in the 30 pre-instruction survey scores, F (1, 40 = 2.69, p > .05). The control group had a mean score, M = 82, SD = 12 in contrast to experimental mean, M = 87, SD = 7.2.

Pearson product moment correlations were conducted to see if there were any relationships between decision making factors. The items in table two below represent only those factors with significant correlations. A positive correlation, for example, existed between, “always gathering information and thinking about advantages and disadvantages before making a decision,” r (40) = .40, p < .05. A negative correlation was noted between “always gathering information before making a decision and not thinking about advantages and disadvantages before making a decision,” r (40) = -.466, p < .05. Likewise, the ability “to make reasonable compromises with friends and not thinking about advantages and disadvantages before making a decision” were negatively correlated, r (40) = -.475, p < .05. Other results are shown in Table 2. Correlations for Decision Making Factors.

The ANOVA was significant F (1, 40), = 7, p < .05. Descriptive data showed a gain in the means for both the control and experimental groups. The experimental group had a mean M = 91 (slightly higher than the control group), SD = 5.2, the control group had a mean M = 85.52, SD = 7.4.

Descriptive analysis also was conducted to determine if there were significant differences in the participants’ abilities to comprehend the problems presented. The overall performance in terms of the strategies used to make decisions between the experimental and the control groups was examined. Responses to the vignette showed that the experimental group did better than the control group at identifying other (alternate) decisions and also at providing the advantages for their decisions as is evident in Table 3. Decision-Making.

| Table 2. Correlations for Decision-Making Factors |
|----------------------------------|-------------------------------|-----------------|------------------|------------------|-----------------|-----------------|
| Get my way with friends | Think advantages & disadvantages | Not mind losing friends | Walk away from conflict | Do like friends | Make reasonable compromises | Does not matter |
| Do like friends even when I know its wrong | .362 * | -.345* | | | | |
| Gather information Before making a decision | | | .541** | .400* | | |
| Not mind losing friends | | | | .332* | .363* | |
| Think advantages & disadvantages | | | | | | |
| Make reasonable compromises | | | | .331* | | |
| Afraid to be laughed at | | | | | .379* | -.553** |

*p<.05, **p<.01
When asked to provide a rationale for, or to evaluate their decisions, how one is perceived by others and social acceptance appeared central. On perception by others, adolescents were generally worried about how others, friends especially, perceived them pursuant to a decision. Parents and other adults in adolescents’ lives appeared to also influence the decision-making process as is evident in the following responses concerning the problem presented in the vignette:

"Not smoke but go tell her parent," "Not smoke and go tell an adult," If she does not smoke her parents would not be mad at her," "If she smokes, she might get caught by teachers and get suspended," and "Parents will trust her when she goes out and not fear that she’ll copy friends."

The need for social acceptance also appeared to influence children’s decisions in each of the six steps in the Johnson’s decision-making model. Apparently, participants were afraid to make unpopular decisions because of inherent social consequences such as losing friends and their respect, being made fun of, isolated, misperceived as a coward and trouble maker, unpopularity, and being constantly embarrassed by peers. The risk of developing low self-esteem due to social isolation also influenced adolescents’ decisions.

### CONCLUSIONS AND IMPLICATIONS

This study has particular relevance to programs that work with adolescents. Data from this study are especially relevant to high school educators in Life Skill courses. As a starting point, educators need to know that high school students en-
right and socially acceptable. Thus, a decision making curriculum should address the ways in which peers and friends influence adolescents’ decisions. Students are likely to transfer and apply learned decision making strategies to new and unfamiliar situations.

- Parents and other adults (social factors) affect adolescents’ decisions. To a large extent, the desire to be trusted or to please an adult affects the decisions adolescents make. To that end, the adults in a teenager’s life are capable of enhancing the learning of appropriate decision making strategies. While in contact with such adults, adolescents are likely to learn the necessary decision-making skills just by watching.

- Due to the small nature of the sample, a larger study is necessary. A study that examines other factors such as children’s age, gender, cultural differences and issues of poverty especially, that affect decision making could provide valuable data. Although 40 percent of the participants came from poor homes, this study did not explore ways in which poverty influenced their decision-making strategies. Additionally, a longitudinal study that follows adolescents into the real world could document the effectiveness of learned decision making skills.

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