Vol 8 | Issue 1 (2020) | pp. 104-114

JOURNAL OF
Perspectives in Applied Academic Practice

www.jpaap.napier.ac.uk

A Deaf Academic Leader's Perspective: A Proposed Framework for Decision-Making Process in Higher Education for Deaf Students

Dean J. Laury, Rochester Institute of Technology

ABSTRACT

How do the intersectional relationships between the dual process, heuristic/bias, and decision-making models manifest in an educational leader's decision-making framework when the leader possesses a deaf lens? Perceptions that could have an emotional impact on the decision-making process are shared. Research in the field is discussed and supplemented by the author's own perspectives, experiences, and document analysis to articulate a proposed framework. The goal of implementing the proposed framework is to increase the probability of obtaining better decisions, given that educational leaders with deaf lenses tend to be visually receptive learners who depend on personal and professional philosophy and experience. The selected perceptions and phrases from the intersectional relationship categories forming the proposed framework were based on A) information (sought and processing), B) time (as phase), and C) emotional responses. In this article, the perspective of an educational leader possessing a deaf lens is examined with emphasis on the potential influences that impacts the decision-making processes and validation of a new framework. The result of this was that no single decision model is necessarily the correct model or is responsible for any outcome. More significantly, the work demonstrated that the proposed framework has the potential to help other educational leaders with a deaf lens improve their knowledge, understanding, and perspective on their decisions that impact stakeholders. As a result, this framework and understanding can be seen to benefit prospective educational leaders.

Keywords: deaf lens, decision-making frameworks, dual process, heuristic/bias, perspective

Introduction

Educational leaders are often under scrutiny for the decisions they make. They go through a process of analysis and of decision making that requires knowledge of philosophy (i.e., beliefs, ethics, and values), theory, method and economics, assessing potential alternatives against the objective (Business Dictionary, 2017).

As a deaf person, I serve as the chair of the Department of Engineering Studies at the National Technical Institute for the Deaf (NTID) at Rochester Institute of Technology (RIT) in Rochester, New York, and my role often requires decision making on issues such as annual appraisals, promotion & tenure review, services on search committees, and applications of departmental policies that impact stakeholders. The department includes thirteen members (nine faculty members and four staff members) who provide classroom instruction, tutoring, academic support, and technical and career advising for approximately 175-200 deaf and hard-of-hearing (D/HH) students in the engineering and engineering technology sub-baccalaureate degree programmes. The department members' distribution contains seven deaf, four hearing, one hard-of-hearing, and one late-deafened adult. All the members communicate through sign language regardless of their sign language proficiency, which adds to the diversity found in this population and increases complexity.

Working within this complex environment (i.e. hearing and deaf cultures) I have found it essential to acquaint myself with the concept of Creswell's (2013) interpretive framework and associated philosophy, particularly the disability interpretive lens. Creswell defined a disability interpretive lens as a "focus on disability as a dimension of human difference and not a defect" (Creswell, 2013, p. 34). Mertens (2003) emphasized the dimensional, "as a human difference, its meaning … derived from social construction (i.e. society's responses to individuals)" (as cited in Creswell, 2013, p. 34), which is socially situated and knowledge of it is constructed through interaction with others. My perspective is that deafness is not only not a defect, but it is also not a disability. As Mertens' (2013, p.239) concept of social transformation shows, "members of the Deaf community view themselves as a cultural group who have their own languages, values, and shared behavior patterns. They do not view themselves as having a disability"; therefore, persons who are members of Deaf culture see themselves as a cultural and linguistic minority group (Harris, Holmes, & Mertens, 2009) i.e. capital-D "Deaf" refers to sign language users and members of a cultural group, whereas small-d "deaf" indicates those who may identify as hard of hearing, use English as their first language, and/or may lip-read with the aid of hearing aids. As stated earlier, the complexity involving these cultural and linguistic aspects can challenge educational leaders as decision makers working within this environment. Herein, I discuss significant components that influence my perspective as a decision maker with attention paid to how my unique perspective as a deaf leader plays an important role.

The first component is Kahneman's (2011) dual-process theory, which involves system one (or fast) thinking and system two (or slow) thinking. System 1 thinking reflects intuitive thoughts that are effortless and automatically generated while System 2 reflects deliberate thoughts, that require more effort and control.

The second component is heuristics and bias characteristics which influence a decision maker's thinking process based on personal experiences, beliefs, and/or knowledge of the subject in question when selecting a decision-making model. The heuristic is also an exploration of trying to find results or solutions through research experiments, which is why heuristic bias and other characteristics can influence System 1 or System 2 before a decision is reached.

Layered on top of these theories and characteristics are the decision-making models e.g. Simon's (1955) satisficing model, Etzioni's (1967) mixed-scanning, and Hoy and Tarter's (2008) shared decision-making models, that I find to be most useful. Fully understanding System 1 and System 2 thinking requires knowledge of decision theories associated with descriptive, normative, and prescriptive theories. Bell, Raffia, and Tversky (1988, p.16) stated that descriptive theory is "concerned with how and why people think and act the way they do". A normative approach is "how idealized, rational, super-intelligent people should think and should act" (ibid.). As theories become more complicated, the prescriptive method is an approach such as "what should an individual do to make better choices?" (ibid); when providing techniques to aid the decision making process, similar to Hammond, Keeney, and Raiffa's (1999) PrOACT model.

The ultimate goal is to answer the main question of "How do the intersectional relationships between the dual process, heuristic/bias, and decision making models manifest in an educational leader's decision making framework when the leader possesses a deaf lens?" The intersectional relationships between the dual-process theory, heuristic and bias, decision-making models, and my perspective through the lens as a deaf administrator (see figure 1 below) will illustrate a proposed analytical framework for making better decisions and support readers in better understanding how intersectional relationships are associated within the framework for leaders who are deaf.

Synopsis of Composition Theories

To support my analysis, I have followed the recommendation by Wellington, Bathmaker, Hunt, McCulloch, and Sikes (2005, p.82) to use "diagrams to illustrate the possible ways of organizing" information to illustrate intersectional relationships. Doing so helps to identify theories and other research that might influence decision-makers and can be adopted to help them to make better decisions (Ridley, 2012).

To illustrate the intersectional relationships through my deaf lens, a visual representation in the style of Willington et al. (2005) shows a method of organizing and incorporating the intersectional relationships. Such an analysis incorporates internal and external force agents found in higher education and reveals their logical relationships within deaf and hearing cultures. The areas where the categories intersect represent the relationships between the groupings. These are labeled as intersectional relationships *A, B, C*, and *D* in the Venn diagram for this framework as presented in Figure 1:

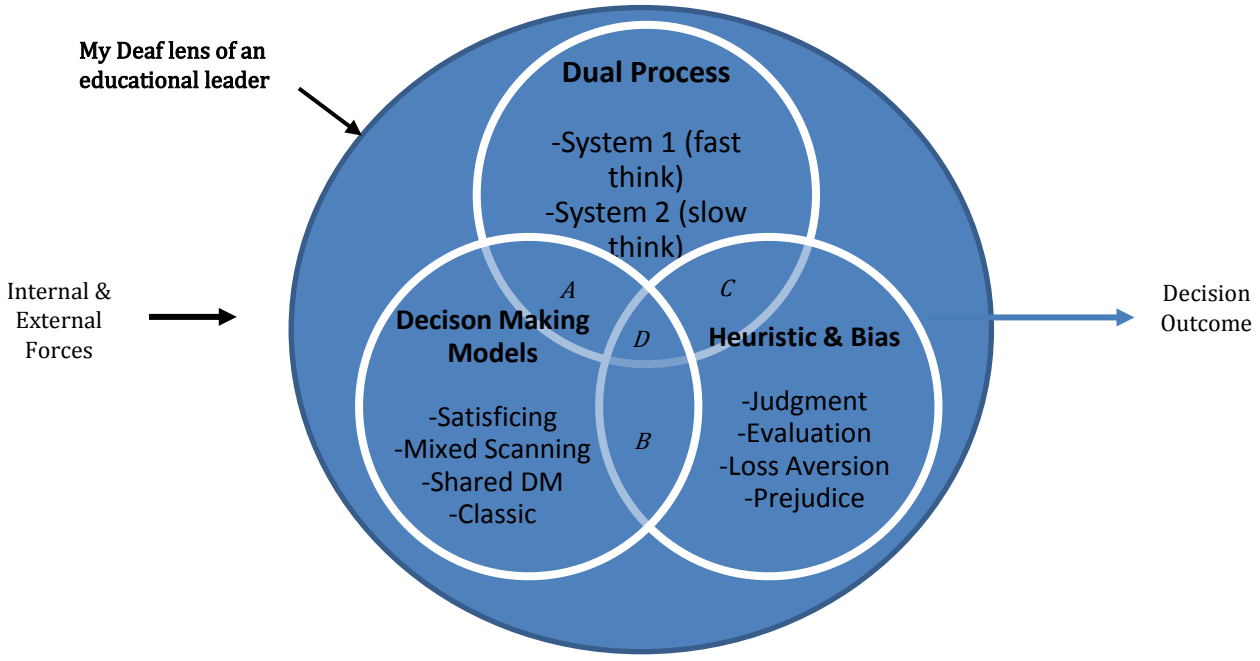

Figure 1. Proposed Personal Deaf Lens Decision-Making Framework

My personal, proposed decision-making framework illustrates the three different components, how they overlap, and how a resulting framework selection is influenced by my perspective, as identified through a deaf lens (Figure 1). The large, blue outermost circle acts as a magnifying glass, hovering above the three different components and their intersectional relationships, and exemplifies my relationship with the Deaf cultural- and linguistic-minority group. The intersectional relationship linkage is associated with (*a*) information seeking and information processing as an impact factor; (*b*) influence and impact depending on current emotions of decision makers; and (*c*) issues that associate with emotional responses through trap effects when making decisions. All three intersectional relationships inform the final selection of a decision-making model, leading to an outcome based on my perspective. The following sub-sections describe, details, and provides examples of dual-process, heuristic and biases, and decision-models components individually.

Dual-process theory

Kahneman (2011) introduced a dual-process theory that represents System 1 and System 2 thinking. System 1 is described as intuitive thoughts, such as "answer to 2+2 =?" (Kahneman, 2011, p. 21) that are effortless to process or complete. System 2 is described as deliberate thoughts, such as "look for a woman with white hair" in the audience (Kahneman 2011, p. 22), all of which require additional conscious processing. The bottom line is that the discrepancy between System 1 and System 2 illustrates the binaries of intuitive/deliberate thoughts, effortless/effort, and/or automatic/controlled modes, respectively.

Heuristics and biases

Kahneman (2011) discusses human judgment, resulting from System 1 or System 2 thinking, and decision-making with all of the associated biases and heuristics. In this case, how people use the knowledge is dependent on whether they are biased or not. The outcome of these experiences is a phenomenon called heuristics that enables one to discover or learn as results become available. The heuristics and biases that can influence the outcome of decision analysis and can act as potential traps include overconfidence bias, confirmation bias, and endowment effect/status quo bias.

Availability

The primary reason for overconfidence is related to availability, also known as "a judgment heuristic" (Tversky & Kahneman, 1974, p. 1127). Tversky and Kahneman (1973) described decision-makers who occasionally "judge the frequency of events by the ease of which examples come to mind" (as cited in Fox, 2006, p. 86). For example, educational leaders make judgments and decisions every day, and a heuristic allows them to make judgments and decisions quickly, using System 1 thinking, without doing much research. If an educational leader who is attempting to go to a conference saw information on social media or the news regarding plane crashes, then when the time arrives for the next business trip, the person might start to worry about flying because of a belief that the probability of crashing is high. However, Tversky and Kahneman (1973, p.207) discovered "the reliance on the availability heuristic leads to systemic biases" because bias comes from human experiences, as a system or an organization like social media demonstrates, since the real chances of crashing are low.

Anchoring-and-adjustment

Tversky and Kahneman (1974) introduced an anchoring-and-adjustment heuristic as a way to make an estimated value based on one known piece of information (i.e. availability or overconfidence bias) and adjusting until the result is acceptable. The anchoring-and-adjusting concept is a process described as "both a phenomenon (final estimates assimilated toward an anchor) and a process (adjusting from an initial value)" (Epley & Gilovich, 2006, p. 311). As an example, Eply and Gilovich (2006) discovered that when asked when George Washington was elected president, people used 1776 as an anchor answer because they knew the start of the Revolutionary War, and the participants thus generated a new estimated year of 1781.5. The actual answer is 1788 (Eply et al., 2006). The consequence of anchoring, as Tversky and Kahneman (1974, p.1129) stated, means "overall probability will be overestimated in conjunctive [connection] problems and underestimated in disjunctive [lacking connection] problems".

Representativeness

A classic example of representativeness provided by Tversky and Kahneman (1974) described a person named Steve, who was an introvert and always helpful, but who had little interest in people or the world of reality. With respect to probability outcome, the representative observation of a "farmer, salesman, airline pilot, librarian, or physician" (Tversky & Kahneman, 1974, p. 1124) led to the probability that Steve was a librarian rather than a farmer as participants assessed Steve's identity using representativeness as to how much he seemed to represent the category of a librarian (i.e. stereotyping). Another judgmental example from Kahneman (2011, p.155) was, "the lawn is well trimmed, the receptionist looks competent, and the furniture is attractive, but this does not mean it is a well-managed company. I hope the board does not go by representativeness". These assumptions can be misleading during a decision-making process when the goal is to get the facts correct or address uncertainties to make a better decision.

Overconfidence bias

Kahneman (2011, p.45) emphasized that overconfidence bias impacts decision-makers because they put "too much faith in their intuitions" based on beliefs and judgments. Russo and Schoemaker (1999) indicated that thinking causes overconfidence; for example, "a loan officer at a major commercial bank felt that his colleagues did not understand their changing competition as well as they thought they did and were refusing to notice signs of coming trouble" (Russo & Schoemaker, 1999, p. 7). Overconfidence bias occurs when decision-makers fail to collect information because they are too sure of their assumptions.

Confirmation bias

Daniel Gilbert, a psychologist, proposed that for confirmation bias, "a statement must begin with an attempt to believe it: you must first know what the idea would mean if it were true. Only then can you decide whether or not to believe it" (Kahneman, 2011, p. 81). In other words, confirmation bias ignores the opportunity to interpret new evidence or results to confirm the decision-makers' outcome or theories. It is recommended to try to find data (or seek other alternatives) that will support the additional assessment (or not) as a way to reduce (or offset) confirmation bias.

Endowment effect

The endowment effect occurs when people place a higher value on something in comparison to the original purchase price. Thaler (1980) introduced an endowment effect problem when:

> Mr. R bought a case of good wine in the late '50s for about $5 a bottle. A few years later, his wine merchant offered to buy the wine back for $100 a bottle. He refused, although he has never paid more than $35 for a bottle of wine (Thaler, 1980, p. 43).

This example illustrates the forces at play when there is a vast difference between the buying and selling prices of any commodity. From my perspective, perhaps Mr. R hates the idea of selling his wine because this may not be the top-bidding price, or maybe loss aversion (i.e. avoiding losses to acquiring gains) because it creates satisfaction and motivates by preventing loss e.g. is it better to save $100 than lose $50?.

In a section summary on the synopsis of composite theories it is indicated that Kahneman (2011) defines System 1 as when an educational leader effortlessly thinks rapidly and makes a quick judgment and System 2 as when the educational leader thinks slowly with more effort to make a decision. In decision-making, heuristic and bias external forces influence both systems. Recalling the representativeness scenario among individuals with a deaf lens, when decision-makers collect and process information after checking out their sources and validation, this increases their confidence which in turn impacts the halo effect; the halo effect is, as described by Kahneman (2011, p.206), "we are prone to [believing] that the firm fails because its CEO is rigid, when the truth is that the CEO appears to be rigid because the firm is failing". In essence, the halo effect is a manner in which deceptions of comprehension are conceived and can affect decision-making.

Administrative Decision-Making Models as an Analytical Framework

Having established the composite theories briefly discussed above; this section will describe the seven decision making models identified by Hoy & Tarter (2008) to sort and evaluate different decision-making models: Classical, Satisficing, Muddling Through, Mixed Scanning, Garbage Can, Political, and Recognized Primed. Added to this is the Shared Decision-Making model as the eighth model. The aim is to enhance the chances of making a right decision using a process that "gets you to the best solution with a minimal loss of time, energy, money, and composure" (Hammond, Keeney, & Raiffa, 1999, p. 3). Then, I will apply my perspective of the deaf lens. There is a summary chart of analytical decision models shown in Table 1 (Laury, 2016).

Table 1: *Juxtaposing Decision-Analysis Models* [a]

Models	Author	Objectives	Alternatives	Outcomes	Decision Theory	Types of DM Models
Classical	Savage (1954)	Are set	Search and evaluate all alternatives	Best alternative by Decision-Maker (DM)	Normative	Rational
Muddling Through	Lindblom (1959)	Are set	Limit search of few alternatives proximity to the problem	Alternative that DM see that fits the direction	Descriptive	Incremental
Mixed Scanning	Etzioni (1967)	Are set	Search all alternatives proximity to the problem with broad and detail information	Satisfactory organization end	Descriptive, sometimes Normative	Incremental

Garbage Can	Cohen, March, & Olsen (1972)	Are set freely with alternatives	Are associate with objective simultaneous	DM sees when objectives and alternative collaborative	Descriptive	Irrationality
Political	Lindblom (1955), Tarter & Hoy (1998)	Set at personal level	Range of alternatives varies due to different stakeholders	Personal ends are met	Descriptive	Rationality
Recognition-Primed	Klein (1998)	Are set	Considered one alternative at a time based on experience and knowledge	Satisfactory organization end	Descriptive, sometimes Normative	Singular evaluation
Satisficing	Simon (1955)	Are set	Search and evaluate one alternative at a time	Satisfactory organization end	Descriptive and Normative	Rational, Singular evaluation
Shared DM	Hoy & Tarter (2008)	Are set	Search all alternatives proximity to the problem with broad and detail information	Best alternative by DM with aided tool	Prescriptive	Varies of consensus, including sole justification

[a] Chart adapted from Laury (2016) with addition of Hoy & Tarter (2008) shared decision model and types of decision-making models.

Classical/Optimizing

Optimizing is a classical decision-making model that incorporates steps structurally by identifying the problem, establishing goals and objectives, producing and exploring all alternatives, considering the consequences of all alternatives, appraising all alternatives in relationships with the stakeholder's aims and objectives, and selecting and recommending the best option (Hoy & Miskel, 2001). Thus, the rationality of optimizing is a classical approach of means-to-end outcomes and applies more of a descriptive theory than a normative theory in an ideal situation. The means-to-end analysis is defined as a problem-solving strategy: "one solves a problem by considering the obstacles that stand between the initial problem state and the goal state" (Newell & Simon, 1972).

Muddling through

Lindblom (1959, p.80) introduced a concept of "by root or by branch". The differing approaches were to deconstruct the problem objective as "rational-comprehensive (root)" and "successive limited comparisons (branch)" (ibid., p. 81). The branch approach, or the muddling through model, occurs when failure and success happen as a decision maker tries to make a decision on budget or strategy planning within higher education.

Mixed scanning

Etzioni (1967) introduced the mixed-scanning approach as a strategy, using a metaphor:

> Elements of both [rationalistic and incrementalist] approach by employing two cameras: a broad-angle camera that would cover all parts of the sky but not in great detail, the second one which would zero in on those areas revealed by the first camera to require a more in-depth examination (p. 389).

Etzoini's adaptive model "is a pragmatic approach to complexity and uncertainty" (Etzoini, 1967, as cited in Hoy & Miskel, 2001, p. 332). It fuses satisficing and incremental models that associate with the decision maker's approaches. Both models provide stronger normative (or perhaps prescriptive) theories because the process explains how decision makers should make decisions.

The paragraphs above related to muddling through and mixed-scanning models, are considered incremental decision making models. The approach is to work by adding incremental changes instead of one significant change because many administrative challenges are complicated so rational methods may fail (Hoy & Tarter, 2008). The decision-maker's perspective regarding incremental decision models is unexcited by, in particular, muddling through because it does not require outside-of-the-box thinking. For example, the annual department budget for the last 10 years has been the same based on historical information because it achieves a degree of success without much planning or effort.

The preferred incremental model is the mixed-scanning framework where the evaluator gets the opportunity to scan with broad and in-depth views of the problem. A decision-analysis framework model allowed me to examine with broad and in-depth lenses an issue within a curriculum development effort associated with cost modeling (Laury, 2016)). If the goal is to

use an incremental approach for budgetary matters, one should use mixed-scanning because both past budget and current needs will be evaluated, which will enhance and innovative, even unconventional, thinking for budget managers.

Garbage can

Cohen, March, and Olsen (1972, p.1) introduced the Garbage Can model as a concept of decision situations with organization traits such as "problematic preferences," "unclear technology," and "fluid participation". First, fluid participation refers to time, effort, and domains of the decision situations. Second, unclear technology operates on "trial-and-error procedures, the residue of learning from accidents of past experiences". Lastly, problem preferences refer to a "collection of choices looking for problems, issues and feelings for decision situation …" (Cohen et al., 1972, p. 2). This model seems to fit organizations with higher uncertainties caused by the three traits and appears not to resolve the problem. The model's process intends to create commotion between stakeholders, or move matters from one point to another, and the proximate challenge is with respect to the timing between stakeholders and organizations. The Garbage Can model illustrates the decision maker's scanning for a match between the problem statement, objectives, and alternatives that perceive a solution, making this a descriptive theory and serving as a buffer zone. However, a decision could not be determined "until a problem matches an existing solution that they find attractive" (Hall, 1987, as cited in Hoy and Tarter, 2008, p. 59). Hoy & Tarter (2008) indicated that garbage can representation is a description of how things can happen and not a suggestion for action.

Political

Personal rationality is a descriptive theory that describes how decision-makers make decisions based on their goals or objectives. This replaced organization goals that lean to a possible controversy or to collegiality issues. Birnbaum (1988) discussed political activities among a body of individuals that make up an organization called "political characteristics" (p. 129) or "social processes" (p. 130). Birnbaum (1988) indicated that individuals or organizations with different interests often interact by forming coalitions (i.e. partnership, alliance, or unions) to reach agreements. Also, the social process could lead to faculty and administrators to like, interact, and positively engage with each other. Birnbaum (1988) acknowledges that this process does increase the difference in the other audience that does not utilize political or social processes, which increases the political status, "a central characteristic of most political communities is indifference," between two or more stakeholders or organizations (p. 137). The major advantage of political systems or organizations, regardless if the process is consensus or not, is "they permit decisions to be made even in the absence of clear goals" (p. 138), such as a chairperson's budget decision without faculty's input. The major disadvantage is an attempt "to control information as a source of power to achieve their own ends" (p. 139) that could potentially weaken other functions of the organization that are required to negotiate.

Recognition-primed

Klein (1998) introduced the concept of a Recognition-primed decision-making model associated with experiences as a singular evaluation. For example, in conducting phenomenological interviews with firefighters, Klein learned "what a spongy roof is"; the sergeant explained that is when the "heat weakens the supports, so the surface feels softer just before it collapses". However, Klein discovered that many unskilled firefighters, dealing with a time-sensitive and dangerous situation, experienced that "all roofs feel spongy" (ibid., p. 15). This illustrates their lack of knowledge that would enable them to recognize and make a System 1 decision. The recognition-primed decision model is to discover a practical resolution "entirely dependent on knowledge, expertise, and prior knowledge" of the individual (Brent, personal communication, Fall 2012).

The paragraphs above relating to three models, Garbage Can, Political, and Recognized Prime, are examples of irrationality, rationality, and singular evaluation, respectively. My experience indicated that garbage can and political decision-making are not recommended for everyday use; however, depending on the circumstances they may be tolerable. Garbage can functions in loosely coupled environments where problems and solutions are dumped as they are generated simultaneously—illogically. The political model is similar to solving a personal issue that might cause an organizational problem. This is not an ethical decision-making model unless it has a positive impact on the organization itself. Lastly, the recognized-prime presents a compelling case because it is dependent on knowledge, experience, or expertise—thus is associated with very experienced stakeholders who recognize the course of action that likely will succeed. The goal is to find a workable resolution with time-sensitive decisions (recall the fireman's story as a unique evaluation approach). These last three decision models may not be in the best interests of an educational leader because they do not utilize consensus building with stakeholders and Noppe, Yager, Webb, and Sheng's (2013) survey indicated that Political and Garbage Can models ranked last.

Satisficing—the administrative preferred model

Hoy and Miskel (2001) identified that the optimizing/classical model has limitations based on the human mind due to the complexity of many organizations. The research shows that the optimizing model is "found not to be useful to administrators because it assumes perfect information, rationality, and human capacity not found in the actual world of administration" (Hoy & Miskel, 2001, p. 352). The challenge with satisficing when alternatives or consequences are vague or volatile is that "incremental strategy may seem more appropriate" (ibid.).

Satisficing is a strategy that allows decision-makers to choose a satisfactory option (i.e. not optimizing) while sacrificing the better option simultaneously. "The basic approach is satisficing—that is, finding a satisfactory solution rather than the best one" (Hoy & Miskel, 2001, p. 319) like in optimizing/classic models. The word "satisficing" comes from Simon (1955) and "is a combination of satisfying and sacrificing" (Decision Making Confidence, 2013). Satisficing is the preferred strategy for education administrators (Hoy & Miskel, 2001). For this reason, it is possible that not all alternatives and consequences are explored, but the decision maker will still arrive at a satisfactory end. In addition, Hoy and Tarter (2008, p.12) stated that "[decision makers] seek to satisfice because they do not have the knowledge, ability, or capacity to maximize".

The paragraphs regarding optimizing and satisficing models are considered rational decision-making models. For example, Hammond, Keeney, and Raiffa's (1999) PrOACT model, is a potential example of prescriptive theory (i.e. a decision theory that uses as a tool to aid decision making) that utilizes a mechanism to evaluate problem, objective, alternatives, consequences, and tradeoffs (PrOACT) to make a final decision. The prescriptive approach provides techniques to aid the decision-making process. The PrOACT model benefitted deaf lenses because it illustrates the scenario and addresses the problem by evaluating the alternatives with an objective, broad view. Research indicated that both models rely on theory and are comprehensive strategies associated with means-ends analysis, "establishing objectives and then determining logical means to attain them" (Hoy & Tarter, 2008, p. 41).

Shared decision-making model

Hoy and Tarter (2008) advocated for a simplified model known as a shared decision-making model since it includes subordinates in the problem-solving process. Hoy and Tarter (2008) applied theoretical concepts from "Chester Barnard (1938), Herbert Simon (1947), Edwin Bridges (1964, 1967), and Wayne Hoy and Cecil Miskel (2001)" (p. 142) that encouraged subordinates, like administrators, faculty, and staff, to be involved with decision-making processes when appropriate. As briefly discussed above, I discovered Hoy and Tarter (2008) shared decision-making model more applied regardless of any individual's experience or perspective because Hoy and Tarter (2008) indicated that they used a decision-model selection mechanism called the "contingency model" (p. 88). Hoy and Tarter's (2008) contingency approach outlines the best strategies or conditions for selecting decision models. In addition, they outlined three criteria to be used in a contingency approach. The criteria are (a) whether there is sufficient information to make a rational decision; (b) the amount of time available to explore all alternatives and solutions; and (c) the level of importance of the decision (Hoy & Tarter, 2008). Moreover, Hoy & Tarter (2008) presented arrangements of stakeholders in a shared-decision model. A group consists of administrators, faculty, and staff. The structuring has five different categories: (a) "group consensus," (b) "group majority," (c) "group advisory," (d) "individual advisory," and (e) "unilateral" (p. 148), which are dependent on the degree of participation among stakeholders. Group consensus is when the administrator involved all stakeholders and total consensus is required before the group makes a decision. The nature of involvement evolves throughout the categories from (a) total consensus before the group makes a decision, (b) decision made by majority of stakeholders, (c) administrator solicits information and recommendation from the group, (d) administrator seeks consultation from stakeholders and makes their final decision, and (e) administrator makes their decision without stakeholders' input respectively (Hoy & Tarter, 2008). Depending on the situation, this is an example of a shared-decision model, and, depending on the situation, the ultimate goal is to have a collaborative effort to increase cooperation and include stakeholders' ownership.

Hoy and Tarter (2008) juxtaposed eight different decision models that are available as tools to make decisions depending on the approach in use, i.e normative, descriptive or prescriptive decision models. As a decision-maker, there is no right or wrong model to pursue but rather a framework that you can use as validation and based on your experience, knowledge or perspective. I will now consolidate the composite theories and decision theories, in the following discussuion and consider how I applied my perspective to reduce scrutiny.

Discussion

From the literature, there are two crucial elements that relate to decision making and prioritization. Birnbaum (1988) made an interesting observation by stating that, "people in different roles will have different ideas about which constraints should be optimized" (p. 61), such as the faculty, chair, dean, and provost will have different perspectives on how academic excellence are defined. Also, Dietrich (2010) indicated that factors definitely influencing decision making are associated with "past experience" (Julisson, Karlsson, & Garling, 2005), "cognitive biases" (Stanovich & West, 2008), "age and individual differences" (de Bruin, Parker, & Fischoff, 2007) that are associated with the decision maker's experience, and "belief in personal relevance" (Acevedo & Krueger, 2004). While there are different issues in decision making, they more often arise in cross-cultural conflicts which is why I am including my personal perspective as a key part of the equation, in response to factors indicated by Dietrich (2010) that link past experience to personal relevance.

Thus, this section will address the question of how the intersectional relationships of dual-process theory and heuristics/bias manifest the decision analysis of an educational leader with a deaf lens. The previous sections described the dual-process and heuristic/bias and reviewed what has been learned about decision making models that may affect a leader's decision making process. From this information, decision-analysis models were identified and juxtaposed to increase the understanding of the viewpoints of different decision making analysis frameworks or models. The following sub-sections detail the intersectional relationships between dual-process, heuristic and biases, and decision-making models categories as I

see them through my lens as a deaf educational leader. Examples of perspective, as I see them through this lens, will be offered with examples such as incidental learning, peer pressure among deaf peers, and overconfidence.

Intersectional relationship *A* (intersection regions of dual-process – decision-making linkage)

Intersectional relationship *A* constitutes the shared areas between the dual-process and decision-making model disciplines in Figure 1 and can be viewed as "[accounting] for choice, response times, and prices" depending on uncertainty (Trueblood, 2013). These are often based on information, impact, or influence results of an automatic (i.e. System 1) or controlled (i.e. System 2) environment related to information seeking and information processing (Bell et al. 1988; Kahneman, 2011).

As a department chairperson for 12 years, I see educational leaders making decisions every day and hearing and deaf faculty members responding to them. One of the challenges I face as a deaf person is related to how hearing and deaf people seek and process information to make decisions. For example, it is frustrating when hearing people in my department have access to more details than I do because of their ability to hear side conversations. Freeman-King (n.d.) indicated that incidental learning is "what a person learns through informal communicative interactions with others in public and educational settings" (para 1). Also, Hauser, O'Hearn, McKee, Steider, and Thew (2010, p.488) indicated that "deaf individuals are deprived of incidental learning opportunities" since a large amount of information is lost to deaf while hearing people have full access to the data. As a result, I often feel that I am not keeping up-to-date with a given situation and being able to guide faculty members within the department because I am unable to access the information and process the information as quickly as a hearing person would. While I cannot hear the news and gossip that happens in the hallways or during lunchtime, it is true that I often feel like a second-class citizen in such situations.

As my experience grew as a chairperson, I aimed for transparency and realized that experience and knowledge is what makes me reach out to develop more connections with the community, because as a deaf person, I do not want to be deprived of access to information, both seeking and processing, that influences my decision-making process. I learned that, for me, System 2 processing is recommended and plays in my favor when I take the time to ferret for information, process the information, and validate the source regardless of whether the issue is time-sensitive.

Intersectional relationship *B* (Intersection regions of decision making – Heuristic/bias linkage)

The intersectional relationship (*B*) that exists between the areas of analytical decision models and heuristic and bias categories include qualities like influence and impact on the current emotions of a decision maker (from Figure 1). The critical element is to use heuristic and bias elements such as experience, or a perspective from research or data to influence a decision.

As discussed above, there is no way I can escape from the incidental learning environment, which is part of my life that influences my perspective because there is a different pressure, that of peer pressure within the D/deaf community. After serving as chairperson for a number of years, when thought I had become adept at handling a cultural, diverse, and linguistics-heavy department, my deaf peers within the department challenged me that I provided preferential treatment to hearing faculty members, a situation that the Deaf community considers quite discriminatory. Instantly, my heart fell apart and I was depressed when I lost the support of my "home crowd." My decision making was affected because of the Deaf crowd's perspective of affinity bias (i.e. as a stereotype of hearing people) (Kahneman, 2011). I tried to explain that I need hearing people to help me grasp the information that I am seeking and process the information to make better decisions, and that we also need to be collegial with hearing faculty (e.g. we teach them to sign better and they help us with writing). As my frustration mounted, the Deaf community did not accept my suggested resolution because of trust issues. My view now includes Rest's (1984) concepts of moral sensitivity (i.e. to interpret the situation in terms of how one's actions affect the welfare of others) and moral judgment (i.e. to formulate what an ethical course of action would be) in a complex multiple-culture environment between hearing and deaf educators within a deaf college in a hearing university. After attending several professional development workshops such as the Academic Chairperson Conference and the American Council on Education, I learned to change my perspective by leaving my ego at the door, allowing me to do my job as a way to learn skills I need in order to negotiate better. Changing my perspective by accepting that I cannot please everyone, whether they are deaf or hearing, makes all the difference.

Intersectional relationship *C* (Intersection regions of heuristic/bias and dual-process linkage)

Intersectional relationship *C* establishes the shared areas between heuristic/bias and dual-process disciplines. It is associated with judgment and prejudice that is aligned with a decision maker's emotional responses. Kahneman discussed human judgment (i.e. depending on System 1 or System 2) and decision-making with all of the associated biases and

heuristics as traps (e.g. overconfidence). In this case, bias is regarding the decision maker's cognition and perceptions of human biases (or preference), such as how people use the knowledge whether they are biased or not.

Considering the challenges related to incidental learning and peer pressure from deaf colleagues, I am placed squarely between the hearing and Deaf cultures because of who I am and because my role as chairperson influences my decision-making process. When I am at cross-hairs, I have a natural tendency to hesitate when I make decisions, which increases scrutiny. I will admit that when I thought I resolved the incidental learning by depending on hearing members more often, my deaf peers accused me of giving preferential treatment to my hearing colleagues. During the journey, when I figured how to navigate these two difficult cultures together, I admit that it boosted my ego and drove my confidence higher (i.e. overconfidence) because my perspective demonstrated that I thought resolution (or direction) was much better than it was. Here, Kahneman (2011) highlighted that overconfidence bias impacts decision-makers because they put "too much faith in their intuitions" (p. 45) based on beliefs and judgments. Another perspective that I learned on the way was that if I feel that others know about something that I do not know regardless if they are hearing or deaf, it is my responsibility to ask them questions! By shifting to this perspective, I am better able to close the gap between deaf and hearing cultures, create opportunities, and reduce the overconfidence bias that may occur between dual-process and heuristic and bias. The lesson within a lesson is that the critical element is my change of perspective to accommodate the multiple-culture situation-the hearing and deaf cultures.

Intersectional relationship *D* (selection of decision-making model)

Finally, the intersectional relationship *D,* where (*A*), (*B*), and (*C*) intersect, which includes Dietrich et al. (2010) factors, internal and external factors about the institute, and my deaf perspective that hangs over the framework. The common theme is to make a better decision.

It is challenging to manage a complicated department, which can be frustrating, however, using decision-making models assists this process. If it were not for the proposed mechanism, with my deaf perspective as a lens, I would have operated through System 1 thinking more often, that could then result in many bad decisions because of a lot of misunderstanding, or I did not think through carefully, or because of panic due to time-sensitive decisions. Utilizing system 2 with my perspectives allows me to process through the decision-making process more thoroughly and fact-checking the information that I sought and prepared to develop a decision outcome as the final product. My perspective, research, and knowledge developed through my doctoral study, and writing this article emphasized to me that Hoy and Tarter's (2008) shared decision model may be the most reasonable model to address my cases with incidental learning, peer pressure from the deaf community, and managing my overconfidence during the process. Another lesson within a lesson is that I learned to change my perspective, gain experience from research, and update my philosophy to accommodate hearing and deaf cultures simultaneously to make better decisions even though scrutiny still exists.

Implications and Future Research

The proposed framework from the collected works viewed through a deaf lens perspective is what I currently utilize on a daily basis as the department chairperson for Engineering Studies at NTID. The role of the department chair includes budgeting, scheduling, curriculum development, committee appointments, day-to-day operations of the department, supervising and evaluating the faculty and staff in a collegial environment that requires various decision-making selections. The circumstances, political climate, or change agent factors will influence which decision model (i.e. intersectional relationship *D*) is used. For instance, to increase the probability of a consensus vote, I consulted with department faculty members by conducting curriculum development through the strength, weakness, opportunity, and threat (SWOT) analysis during the academic year 2017-2018. Eventually a program modification of 29% was submitted to a college curriculum committee for approval. Another example is when, based on student requests and resource availability, several engineering technology department chair people agreed to support and maintain articulation agreements within the university. The two examples used two different decision models based on my experience and knowledge. However, Hoy and Tarter's (2008) shared decision-making model perfectly aligns with both examples due to its flexibility. This is where the Hoy and Tarter (2008) model has worked well for me.

For future research on this subject matter, the first question would be what to do with the framework (see Figure 1). Two aspects will come into play: (a) applying the framework to future research in decision-making that intertwined engineering education and educational leadership, and (b) studying the impact of the deaf lens on the deaf educational leader and how we differ from hearing decision makers. Regarding future research, there will be two different articles addressing engineering education curriculum and program modifications. The goal is to enhance the decision due process to determine the best resolution at the lowest cost to run an academic program and determine if sharing resources with another college within the university is reasonable (i.e. articulation agreement). Also, the current research did not address the question of whether the framework differs if the deaf lens was not present. There is no research regarding whether the models help with deafness or if the choice of model would differ if the deaf lens were not present; however, the disability lens will always be a factor regardless of the degree of influence. Thus, there is a necessity to validate the impact of decision models helping the deaf lens or not. The deaf culture is my perspective and lens; whereas, the literature review cited were mostly from hearing

culture that led to potential influence upon the decision-making process could be a good research topic in the future to validate if our lens is actually different based on Merten's social transformation paradigm.

Conclusion

This analysis provided for an examination of my experiences as a deaf educational leader manifested by the dual process and heuristic/bias in selecting one of the eight decision-making models that molded the proposed framework. Therefore, the proposed decision-making framework illustrated different concepts from the three intersectional relationships based on the my applied perspectives as a deaf administrator. The key concepts associated through the intersectional relationships were related to emotional responses and information collected by the decision-maker with the deaf lens that will likely impact results of a unit, organization, or community. First, from the dual process and decision model analysis connection, information seeking and information processing had an impact on decision-making regarding choices or response times. Secondly, from the decision model and heuristic/bias connection, the influence and impact depended on current emotions of decision-makers, which could sway the decision-maker from making a decision or selecting a model to potentially recall in the future. Lastly, for the connection between heuristic/bias and dual process, the issues that were associated with judgment and prejudice aligned with the decision-maker's emotional responses through trap effects such as affinity bias or halo effects. Based on this, the final decision likely will be assisted by the three intersectional relationships (or the further/final intersection of these three), is where the final decision for the selection will assist the decision-maker's due process based on my philosophy, experience, knowledge, and deaf lens. More significantly, this helps decision makers with a deaf lens understand that the proposed framework leads to better decisions based on (a) checking again for validity, (b) checking the sources, and (c) relying on trusted peers to minimize misleading attribute(s) to make a better decision. The implication and future research associated with the proposed framework will aim to increase the probability of creating a better decision.

Biography

Dean (Dino) Laury is a chairperson and faculty member for the Department of Engineering Studies at the National Technical Institute for the Deaf at Rochester Institute of Technology, Rochester, NY. He holds a Doctoral degree in Educational Leadership from the University of Rochester, and undergraduate degrees in Mechanical Engineering Technology from RIT. Dean can be reached at djlnet@rit.edu.

Acknowledgments

The author thanks his dissertation advisors Karen DeAngelis, Brian Brent, and Logan Hazen as well as NTID colleagues Todd Pagano, Matthew Dye, Matthew A. Lynn, and Robyn Dean for helpful discussions during the development of this manuscript.

References

Acevedo, M., & Krueger, JI. (2004). Two egocentric sources of the decision to vote: The voter's illusion and the belief in personal relevance. *Political Psychology*, 25(1), 115-134. DOI:10.1111/j.1467-9221.2004.00359.x.

Bell, D. E., Raiffa, H., & Tversky, A. (Eds.). (1988). *Decision making: Descriptive, normative, and prescriptive Interactions*. Cambridge, England: Cambridge University Press.

Birnbaum, R. (1988). *How colleges work the cybernetics of academic organization and leadership*. San Francisco, CA: Jossey-Bass.

Brent, B. (2012). EDU 515 *Decision-making for educational leaders* [PowerPoints]. Rochester, NY: University of Rochester.

Business Dictionary. (2018). *Decision-making: Definition*. Retrieved from http://www.businessdictionary.com/definition/decision-making.html

Cohen, M., March, J., & Olsen, J. (1972). A garbage can model of organizational choice. *Administrative Science Quarterly, 17*(1), pp. 1-25.

Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd Ed.). Thousand Oaks, CA: Sage Publishing.

De Bruin, W. B., Parker, A. M., & Fischhoff, B. (2007). Individual differences in adult decision-making competence. *Journal of Personality and Social Psychology, 92*(5), 938-956. DOI:10.1037/0022-3514.92.5.938.

Dictionary.com. (2019). *Heuristic*. Retrieved from https://www.dictionary.com/browse/heuristic

Dietrich, C. (2010). Decision-making: Factors that influence decision-making, heuristic used, and decision outcomes. *Inquiries Journal/Student Pulse, 2*(02). Retrieved from http://www.inquireies journal.com/aid=180

Eply, N., & Gilovich, T. (2006). The anchoring-and-adjustment heuristic. *Psychological Science, 17*(4), pp. 311-318.

Etzioni, A. (1967). Mixed-scanning: A "third" approach to decision making. *Public Administration Review,* pp. 385-392.

Fox, C. (2006). The availability heuristic in the classroom: how soliciting more criticism can boot your course ratings. *Judgment and Decision-Making, 1*(1), pp. 86-90.

Freeman-King, J. (2017). Incidental learning & the Deaf child. Retrieved on October 28, 2019, by http://www.eparent.com/features-3/incidental-learning-deaf-child/

Hall, R.H. (1987). *Organizations: Structures, processes, and outcomes* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Hammond, J., Keeney, R., & Raiffa, H. (1999). *Smart choices: A practical guide to making better life decisions*. New York, NY: Broadway Books.

Harris, R., Holmes, H., and Mertens, D. (2009). Research Ethics in Sign Language Communities. *Sign Language Studies, 9*(2), 104-131, DOI: 10.1353/sls.0.0011

Hauser, P., O'Hearn, A., McKee, M., Steider, A., and Threw, D. (2010). Deaf epistemology: Deafhood and Deafness. *American Annals of the Deaf, 154*(5), pp 486-492. DOI:10.1353/aad.0.0120.

Hoy, W., & Miskel, C. (2001). Decision-making in schools. In *Educational administration: Theory, research, and practice* (pp. 316-355). New York, NY: McGraw-Hill

Hoy, W., & Tarter, C. (2008). Administrators solving the problems of practice (3rd Ed.). Boston, MA: Pearson Education.

Kahneman, D. (2011). *Thinking, fast and slow*. New York, NY: Farrar, Straus, and Giroux.

Klein, G. (1998). The recognition-primed decision model. In *Sources of power: How people make decisions* (pp. 15-30). Cambridge, MA: MIT Press.

Laury, D. (2016). *Which associate degree programs should NTID's Department of Engineering Studies offer? A decision analysis dissertation* (Unpublished doctoral dissertation). University of Rochester, Rochester, NY.

Lindblom, C. (1959). The science of muddling through. *Public Administration Review, 19,* 79-99.

Mertens, D. (2013). Chapter 18: Social transformation and evaluation. In M. Alkin (Eds.), Evaluation Roots, A wider perspective of theorists' views and influences (pp. 229-240). Thousand Oaks, CA: Sage Publishing.

Mertens, D. M. (2003). Mixed methods and the politics of human research: The transformative-emancipatory perspective. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 135-164). Thousand Oaks, CA. Sage.

Newell, A., & Simon, H. A. (1972). *Human problem-solving*. Englewood Cliffs, NJ: Prentice-Hall.

Noppe, R., Yager, S., Webb, C., & Sheng, B. (2013). Decision-making and problem-solving practices of Superintendents confronted by district dilemmas. *NCPEA International Journal of Educational Leadership Preparation, 8*(1), 1-18. ISSN: 2155-9635.

Rest, J. (1984). Research on moral development: Implications for training counseling psychologists. *The Counseling Psychologist, 12*(3), 19-29.

Ridley, D. (2nd Ed.) (2012). The literature review: A step-by-step guide for students. Thousand Oaks, CA: Sage.

Russo, E, & Schoemaker, P. (1992). Managing overconfidence. *Sloan Management Review, 33*(2), pp. 7-17.

Simon, H. (1955). A behavioral model of rational choices. *The Quarterly Journal of Economics, 69*(1), 99-118. doi:10.2307/1884852

Stanovich, K.E., & West, R.F. (2008). On the relative independence of thinking biases and cognitive ability. *Journal of Personality and Social Psychology, 94*(4), 672-695. DOI:10.1037/0022-3514.94.4.672.

Thaler, R. (1980). Toward a positive theory of consumer choice. *Journal of Economic Behavior and organization, 1,* 39-60.

Trueblood, J. (2013). A Dynamic Dual-Process Model of Decision-making Under Uncertainty. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 35. Retrieved from https://escholarship.org/uc/item/7dh6g4m8

Tversky, A. & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science, New Series, 185*(4157), 1124-1131.

Tversky, A. & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology, 5*, 207-232.

Wellington, J., Bathmaker, A., Hunt, C., McCulloch, G., & Sikes, P. (2005). *Succeeding with your doctorate*. London, England: Sage.