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The Effect of the Behavioral Analysis Feedback Model on Improving Performance of Nursing Students During Clinical Rotations

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THE EFFECT OF THE BEHAVIORAL ANALYSIS FEEDBACK MODEL ON IMPROVING PERFORMANCE OF NURSING STUDENTS ENROLLED IN CLINICAL ROTATIONS

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ABSTRACT

THE EFFECT OF THE BEHAVIORAL ANALYSIS FEEDBACK MODEL ON IMPROVING PERFORMANCE OF NURSING STUDENTS DURING CLINICAL ROTATIONS

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Old Dominion University, 2018
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This study explored the effects the Behavioral Analysis Feedback (BAF) Model had on improving nursing student's performance. Research studies surrounding feedback primarily centered on frameworks designed as models for delivering feedback as well as the timing for delivering feedback. In addition, past research has also focused on individual elements that affect performance with little regard to environmental elements. The BAF Model was conceptualized based on the importance of providing feedback to nursing students while emphasizing three individual and three environmental elements that have the potential to influence behavior.

This multiple measure, single-case study utilized a quasi-experimental pre-post intervention study design. This research study also utilized a prescriptive script for nursing educators to deliver behavior-specific feedback with an emphasis on individual and environmental elements known to affect performance. It incorporated qualitative survey instruments to track feedback and assess nursing student performance. A follow-on interview was conducted with nursing educators to gain further insight into the nursing educator's feelings and experiences with using the BAF Model. Ultimately, the objective of this study was to provide some evidence that suggests whether performance is affected with feedback utilizing the BAF Model. Nursing educator perceptions for delivering feedback, nursing student's attitudes

for receiving feedback, and alignment of performer skillsets and organizational resources after utilizing the BAF Model were also explored.

Results indicated using the BAF Model to deliver behavior-specific feedback using a list of performance standards led to the overall improvement of performance among nursing students. Results also indicated using the prescriptive script to deliver feedback served as one reason nursing student's performance might have increased. In addition, results indicated the nursing student's receptivity towards receiving feedback did not improve or deteriorate after being exposed to the BAF Model. The lack of improvement or deterioration could be a direct result of the sample size being too small (n=14) to consider results statistically significant. Additionally, results indicated nursing educators developed the skills needed to deliver behavior-specific feedback and motivated them to do so; however, perception towards delivering feedback improved, deteriorated, and remained the same for different elements after being exposed to the BAF Model. The lack of improvement or deterioration could be a direct result of the sample size being too small (n=5) to consider results statistically significant. Last, results indicated there was a close alignment of the information, instrumentation, and motivation between the individual and environmental level after exposure to the BAF Model.

This dissertation is dedicated to family, friends, and colleagues who supported me every step of the way. Without your constant support, encouragement, and understanding, none of this would have been possible. This dissertation is also dedicated to my grandmother who I know has been watching over me every step of the way. Grandma Sunny, I know you would be proud of the dedication and effort I put into my academic career.

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CHAPTER I

INTRODUCTION

For centuries, individuals have been exchanging information with one another to share experiences, establish and maintain relationships, express needs and wants, and convey information. Known as communication, this exchange of information involves the use of biological, cognitive, and social-psychological systems (Richey, Klein, & Tracey, 2011), and is key to the success of any organization. One prominent form of communication that serves as one of the most powerful influences for improving performance and is used to ensure the success of an organization includes feedback (Hattie & Timperley, 2007; Richey et al., 2011).

Rooted in communication theory, feedback is a type of communication that can be defined by one of four perspectives including transmission, behavior, interaction, or transaction. According to Richey et al. (2011), the transmission perspective is a linear process where a sender sends a message through a particular channel to the receiver prior to reversing roles. Derived from behaviorism, feedback is essential under the behavioral perspective, a stimulus-response perspective, which places emphasis on the vehicle for delivering the message (Richey et al., 2011). The interactive perspective is social in nature where senders and receivers operate simultaneously and interpret the messages based on individual backgrounds and understanding of the situation (Richey et al., 2011). Rather than delivering a message, the transaction perspective promotes creating meaning by affording the participants the opportunity to construct and contextualize knowledge (Richey et al., 2011). Selecting an appropriate communication perspective to deliver feedback will be contingent upon the identified needs of the supervisor and performer.

Whether used to confirm knowledge of performance or to provide strategies to correct, inform, or reflect upon knowledge, feedback allows nursing educators to compare a nursing students performance to an established set of standards for the purpose of achieving or exceeding the desired goals (Schartel, 2012). In order to invoke a permanent change in behavior, feedback delivered to nursing students needs to be meaningful and effective (Richey et al., 2011). Meaningful and effective feedback requires recognizing strengths as well as areas for improvement while ensuring receptivity to develop competence with self-awareness, self-verification, and self-enhancement (London & Smither, 2002). Since delivering meaningful and effective feedback is an acquired skill, it is necessary to train nursing educators to provide feedback, especially since very few empirical studies focused on the training the providers received for delivering effective feedback (Al Wahbi, 2014; Dobbelaer, Prins, & van Dongen, 2013; Mitchell et al., 2013).

In nurse education, feedback is often known as debriefing or clinical evaluation. Debriefing is used to provide nursing students structured, formative feedback during and/or after experiential learning opportunities that primarily occur in simulation settings (Cant & Cooper, 2011). During a learning opportunity, debriefing affords the learner the ability to adapt to a variety of situations as they occur, as well as to address errors or changes in the environment (Huggard, 2013). When debriefing sessions occur after a learning opportunity, learners are guided through a purposeful discussion relating to the experience (Huggard, 2013). This guided discussion aids in drawing out the explanations behind the individual's performance and highlights progress while also enabling the individual to develop strategies to enhance future performance (Cant & Cooper, 2011). Clinical evaluation is also a term commonly used for providing feedback in nurse education clinical settings where student's care for patients during

hands-on rotations (Hendricks, Wallace, Narwold, Guy, & Wallace, 2013). For years, clinical skills of nursing students have been studied to assess the effects of different media, methodologies, and tools on measuring the clinical performance of nursing students (Hawkins, Osborne, Schofield, Pournaras, & Chester, 2012; Hendricks et al., 2013; Walsh, Jairath, Paterson, & Grandjean, 2010). Despite the varying terminology based on simulation or clinical rotations, both are designed to provide nursing students structured feedback to assess performance in regard to a variety of skills. For purposes of this research study, the terms feedback, debriefing, and clinical evaluation were used interchangeably.

The Behavioral Analysis Feedback (BAF) Model was conceptualized based on the importance of providing feedback to nursing students as well as the elements that have the potential to influence behavior. According to Richey et al. (2011), feedback serves as an essential concept for orienting behavior. Grounded in communication and behavior theories, the BAF Model aligns with Berlo's Sender-Message-Channel-Receiver Model (S-M-C-R) where the stimulus becomes the words the nursing educator uses to provide feedback to the nursing student (Richey et al., 2011); emphasis is placed on the nursing student's behavior that results from the stimulus (Richey et al., 2011). To account for the elements that have the potential to influence behavior, the BAF Model incorporates three environmental (data, resources, and incentives) elements and three individual (knowledge, capacity, and motives) elements from Thomas Gilbert's Behavior Engineering Model (Gilbert, 2007). Derived from these two behavioral-based models, the BAF Model emphasizes the need for nursing educators to communicate with nursing students while reinforcing positive behavior or redirecting and correcting behavior through feedback (Swank & McCarthy, 2013).

This research study sought to train nursing educators to properly use and implement the BAF Model in order to deliver effective feedback to nursing students during clinical rotations. By focusing feedback on the six elements that affect performance, this research study also sought to assess the effects the BAF Model had on improving a nursing educator's perception for delivering feedback as well as improving nursing student's performance and receptivity of feedback. This research study also sought to compare the individual and environmental elements to see how the nursing student's skillsets aligned with the organizational resources.

LITERATURE REVIEW

This section presents key concepts relevant to the research in order to introduce the current literature. This includes a brief introduction to effective feedback, feedback in nursing, time and frequency of feedback, and Thomas Gilbert's Behavior Engineering Model. The BAF Model is then discussed to provide behavior-specific feedback using a four-step approach. This section also discusses other prominent feedback models used in education, industry, and nursing as well as the BAF Model in nurse education. Last, this section discusses the purpose as well as the four research questions used to guide the research study.

Effective Feedback

Feedback can occur between individuals or large groups of people instantaneously or in a delayed manner, and can occur in a variety of forms whether oral, written, or mediated (Richey et al., 2011). Despite the industry, feedback is often used to provide individuals with the information needed to assess their performance against a set of standards or goals; individuals can then use the information to help achieve or exceed the pre-established goals (Schartel, 2012). More often than not, individuals receive basic feedback from supervisors at the surface level,

which is ineffective at providing the individual the information necessary for improving performance.

In recent years, research garnered on feedback focused on the importance of providing feedback to promote performance improvement. While Roebuck (1996) defines feedback as a response to an action, Tosti (2006) defines it as a modification of subsequent actions due to the performance output that is returned to the performance input. According to Schute (2007), effective feedback requires the comparison of the actual performance versus an established standard of performance whereas Schartel (2012) contends it is performance-based from direct observation, delivered in an appropriate setting using non-judgmental language, and incorporates a plan for improvement. Ifenthaler (2010) believes the use of feedback serves an essential component for supporting and regulating learning processes, which ultimately contributes to performance outputs. Similarly, Peters (2015) believes that effective feedback comes from performers conducting self-feedback by allowing them to make comments about their productivity and behavior. Feedback that lacks specificity and individuality is ineffective, surface-level feedback that does not afford nursing students the information needed to improve performance. Feedback that is on time and specific allows nursing students to reach their full potential (Al Wahbi, 2014). The ability to provide effective feedback is an integral skill required to invoke performance improvement among nursing students in the performance environment.

Despite the varying definitions of effective feedback, in order for feedback to be effective, the nursing educator must communicate the desired behavior in a receptive manner for the nursing student to receive, understand, and physically accomplish the behavior (Rasheed, Khan, Rasheed, & Munir, 2015). If the accomplishment is not a result of the changed behavior, the feedback provided was ineffective. Although effective feedback is necessary to promote

performance improvement, the environment, individual competencies, and training are several factors that contribute to a nursing educator's ability to provide effective feedback. Nursing educators cannot be expected to provide effective feedback to nursing students without the proper resources and skills gained through training.

Feedback in Nursing

Occurring in both clinical and simulation-based learning environments, debriefing is situation-dependent, and is commonly used to correct errors, discuss different ways to handle similar events the next time, encourage self-assessment, and promote reflective thinking (Rivera-Chiauzzi, Lee, & Goffman, 2016). Debriefing sessions in clinical situations allows the nursing student to manage and/or reduce stress while improving the ability to develop strategies to improve quality and patient safety (Rivera-Chiauzzi et al., 2016) and effectively cope with sudden, overwhelming, and unexpected situations (Huggard, 2013). Debriefing sessions in simulation-based learning environments enhances the practice of clinical skills in a safer learning environment due to the exposure to rare, but critical events without a real patient (Rivera-Chiauzzi et al., 2016).

Similar to feedback sessions found in different industries, debriefing is unique to the situation and can occur collective or individually; dictated by the nature of the debriefing session, which can focus on daily required tasks and procedures or adverse events surrounding tasks and procedures or stressful and unusual traumatic events (Huggard, 2013). For example, a nursing educator may wish to conduct an organization debriefing session as a group to discuss an error made in administering medication to a patient. During this group setting, the nursing educator will meet with the cohort of nursing students to identify the cause of the error as well as discuss future policies and procedures to safeguard future instances (Huggard, 2013). In addition,

they may discuss what went well, what did not go well, and what lessons were learned during the event (Huggard, 2013; Rivera-Chiauzzi et al., 2016). Contrary to the organizational debrief, the nursing educator may wish to conduct a psychological debrief one-on-one with a nursing student to allow the student to validate feelings and emotions experienced during a stressful or unusual traumatic event; contributes to reducing potential psychological harm due to talking about the experiences (Huggard, 2013). This one-on-one session allows for the nursing student to make sense of the situation and the adverse outcome while understanding and validating their feelings. A psychological debriefing session can also occur in small groups.

The debriefing sessions above requires the use of two-way communication between the nursing educator and the nursing student; however, debriefing can also occur through reflective practices, such as journaling. The act of journaling allows nursing students to reflect upon their experiences in order to decompress and manage feelings associated with adverse outcomes, ethical dilemmas, conflicts, and other situations (Andersen, 2016; Santiago & Abdool, 2011). Reflective debriefing also allows for nursing students to reflect upon experiences in a nonthreatening environment, thus potentially reducing anxieties and improving clinical judgment when experienced in clinical practice (Davies, 1995; Lavoie, Pepin, & Boyer, 2013). In some instances, nurse educators may use self-reflection practices in conjunction with organizational and psychological debriefing sessions to further enhance the learning opportunity. As mentioned previously, debriefing sessions are situation-dependent where nursing educators will often employ a variety of techniques to debrief their students; all techniques are implemented to improve the quality of healthcare and patient safety during critical and non-critical procedures.

Feedback Timing and Frequency

Delivering feedback is necessary in order to improve performance; however, when and how often to deliver feedback has been at the forefront of many research studies. For decades, researchers have focused their efforts on studying the efficacy of feedback timing. Many performers prefer to receive immediate feedback (Mullet, Butler, Verdin, von Borries, & Marsh, 2014), which often leads to only a temporary improvement in performance (Austermann Hula, Robin, Maas, Ballard, & Schmidt, 2008). Although immediate feedback may lead to a temporary change in behavior, performers are less likely to retain the improvement over time (Chan, Li, Law, & Yiu, 2012). Research shows that delayed feedback leads to better overall long-term retention of the material for later usage (Phye, Gugliemelia, & Sola, 1976) as well as better performance over time (Butler, Karpicke, & Roediger, 2007; Mullet et al., 2014; Phye et al., 1976). This phenomenon is known as the Delayed Retention Effect (DRE), which implies that performers retain less when provided immediate feedback compared to receiving delayed feedback (Brackbill, Bravos, & Starr, 1962; Brackbill & Kappy, 1962; Kulhavy & Anderson, 1972) due to the spaced presentation of information (Butler et al., 2007). Kulhavy and Anderson (1972) continued to study this phenomenon and provided a widely accepted explanation of the DRE through their interference-perseveration hypothesis. Both Kulhavy and Anderson (1972) believed the performer was able to forget the incorrect response given during the delay period, thus minimizing any interference that might be present when the feedback was delivered.

Nursing educators understand feedback is necessary to improve performance; however, there is no prescribed number of times to deliver feedback in a specified time period to invoke a change in behavior. Despite not knowing an exact number of times to provide feedback, research has found that receiving feedback too frequently leads to a decrease in performance due to

excessive focus on and more systematic processing of recent data rather than comparing information received from multiple time periods (Lurie & Swaminathan, 2009). Similarly, receiving feedback too frequently may interfere with a nursing student's ability to learn tasks due to an overload of information (Hemayattalab & Rostami, 2010).

Researchers have also focused their efforts on studying the efficacy of feedback frequency. Determining the appropriate number of times to deliver feedback in a given time period is situation-dependent; however, a conclusive number for delivering feedback does not exist for each situation. Although research shows that the frequency of feedback affects participant's attitudes as well as performance levels (Cook, 1968), providing too much feedback has the potential to interfere with learning tasks in performers (Hemayattalab & Rostami, 2010). In more recent years, studies began assessing the effects of feedback frequency on the development of motor skills and cognitive process. With regards to the development of motor skills, research found that children with impaired motor skill development benefited more from less frequent feedback compared with children with typical motor skill development (Hemayattalab & Rostami, 2010; Sidaway, Bates, Occhiogrosso, Schlagenhaufer, & Wilkes, 2012). In cognitive processes, feedback frequency depends on the age of the performer; younger performers benefited from increased feedback frequency whereas older performers are able to make cognitive corrections prior to receiving feedback (Scruton, Webb, & Holland Fiorentino, 2015). Although feedback frequency affects motor skills and cognitive processing differently among performers, the majority of the research supported delaying and reducing feedback frequency to lead to better overall long-term retention (Austermann Hula et al., 2008; Phye & Andre, 1989) and better performance over time (Butler et al., 2007; Mullet et al., 2014; Phye et al., 1976).

Behavior Engineering Model

Thomas Gilbert was a distinguished scholar, researcher, and practitioner. As a major pioneer of Human Performance Technology (HPT) and former graduate student of B.F. Skinner, Thomas Gilbert was considered a behavior analyst although he spent much of his efforts focusing on accomplishments prior to focusing on behavior (Lindsley, n.d.). Behavior was not his focal point because he wanted to develop a system of performance engineering to improve human competence (Gilbert, 2007). Thomas Gilbert believed that the valuable output of behavior was not a direct result of human behavior, but human accomplishment; therefore, focused on the various influential factors of environment and the performer during performance improvement initiatives (O'Driscoll, 2003).

In 1978, Thomas Gilbert also wrote the book, *Human Competence: Engineering Worthy Performance,* a notorious contribution, as he produced two significant conceptual milestones of measuring performance accomplishments and analyzing six general aspects of behavior to identify causes of performance discrepancies (O'Driscoll, 2003). The latter of the two conceptual milestones is widely known as Gilbert's Behavior Engineering Model (BEM), a model that serves as a cause analysis model separating performance problems into two levels; the first level consists of the individual and the second level consists of the environment (Marker, 2007). The BEM allows for an individual to look at information, instrumentation, and motivation at the individual and environmental levels to determine whether performance deficiencies are due to individual competencies, environmental support, or both. It seeks to assist with defining worthy performance as well as methods for improving performance with six components in mind that can be manipulated to affect performance (Gilbert, 2007).

The purpose of the BEM is to improve performance by determining the influences that affect behavior (Marker, 2007), as well as the methods of modifying behavior (O'Driscoll, 2003). It also has the potential to serve as a diagnostic tool, which can be utilized in a variety of occupational areas (Crossman, 2010). The first step of the BEM focuses on Gilbert's Third Leisurely Theorem behavior, and seeks to define worthy performance by characterizing the intended behavior and assessing whether the outcome produced by the performer achieves accomplishment (Krapfl, 1982). The second step is to determine the potential for improving performance by looking at the measurement system, specifically the influences on behavior; the focus is placed on identifying the gap between the current performance and the desired performance (Krapfl, 1982). The third step of the BEM is to identify strategies for performance improvement.

The original design of Gilbert's model alluded to each element being equally important in its ability to affect performance based on the equal distribution of the boxes. Although each box is interrelated and performance is affected when any of the six boxes is not accounted for, research has led to the discovery that individual factors are secondary to the environmental factors when it comes to performance issues (Gilbert, 2007). Once all of the environmental factors are accounted for and provided, any performance issues will be due to the person's repertory of behavior. For this reason, the BEM has begun to place more emphasis on the environmental elements that affect performance including data, instruments, and incentives (Krapfl, 1982). Despite the individual elements being secondary, the knowledge, capacity, and motives of the individual all play a factor in influencing behavior and need to be included when delivering feedback.

The Behavioral Analysis Feedback Model

The Behavioral Analysis Feedback (BAF) Model serves as a prescriptive feedback model designed to continuously provide feedback while accounting for the environmental and individual elements that influence behavior. In order to deliver feedback that is effective in influencing performance, the BAF Model incorporates each of the six elements found in Gilbert's BEM, and places emphasis on the environmental elements first followed by the individual elements.

Utilizing a continuous circle, the BAF Model signifies a feedback loop to demonstrate how it works as a system for improving performance through aggregating, analyzing, and interpreting the assessed information to make decisions (Walvoord & Anderson, 2010). Two pyramids face one another to account for Gilbert's individual and environmental elements each containing three components; the three individual components that influence behavior are in the top pyramid facing downward while the three environmental components that influence behavior are in the bottom pyramid facing upward. The two pyramids facing each other signify that all components of the individual and environmental elements need to be addressed in order for performers to reach the desired behavior; feedback needs to be provided for each of the individual and environmental components. Figure 1 depicts the BAF Model.

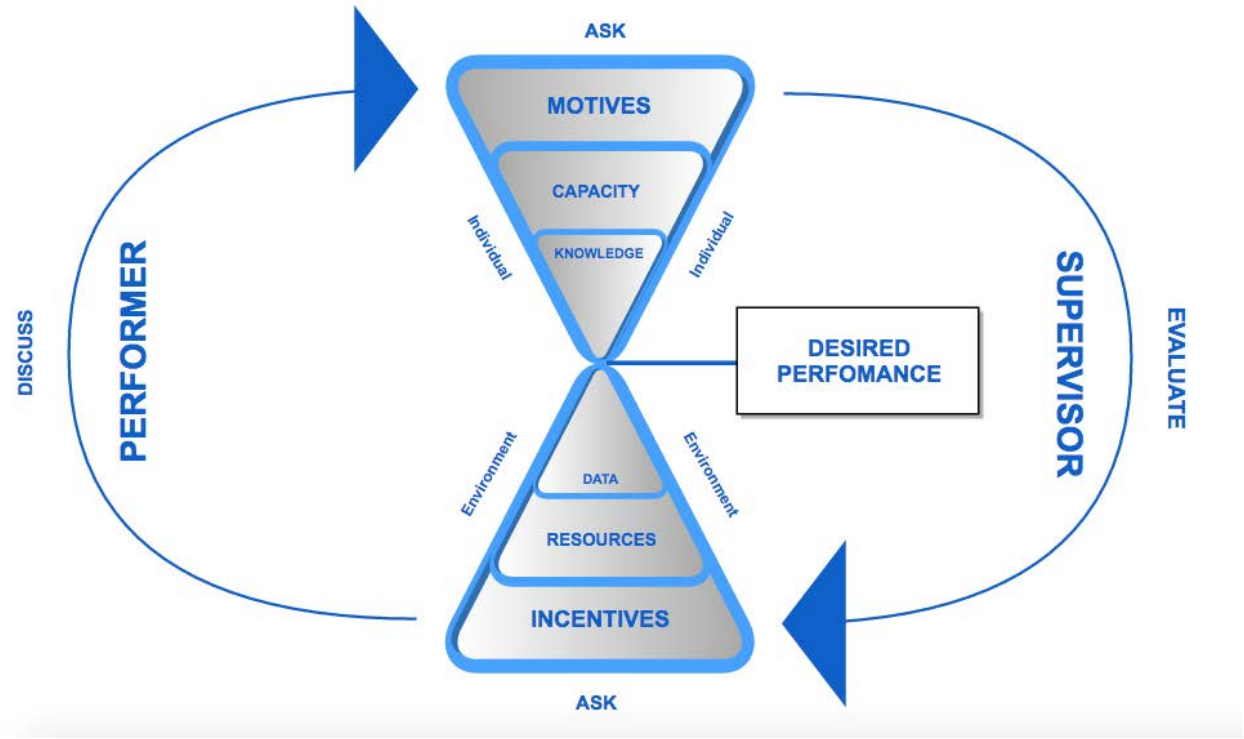


Figure 1. The Behavioral Analysis Feedback Model

In order to reach the desired behavior, it is necessary for frequent communication surrounding each of the six components to occur between the nursing educator and nursing student. Borrowed from Gilbert's BEM and obtained from Bailey's (2007) PROBE Model, each component has specific factors that has the potential to influence a nursing student's behavior; feedback to nursing students will surround these factors although not all factors may be addressed in every debriefing session.

Four-Step Approach

Comprised of four steps, the BAF Model utilizes a supervisor-centered approach with performer input for reinforcing and modifying behaviors. Table 1 includes the four steps needed for delivering feedback after performance has been observed. Although the steps appear to be linear, due to the constant evaluation for each of the components and the ability to revisit any step at any point, the BAF Model and the four-step approach is considered recursive in nature.

Table 1.

Four-Step Approach

Step	Activity	Actions
1	Ask	• Select one individual or one environmental element to be discussed. • Ask nursing students to think about where they were in terms of their current performance. • Ask nursing students where they would like to go in terms of the element.
2	Discuss	• From direct observations and relating to the factors, identify specific behaviors that need to be reinforced or corrected. • Provide behavior-specific suggestions for improvement.
3	Ask	• Ask nursing students what they need to reach the desired performance. • Develop a plan of action including proposed timeline. • Check performer's understanding.
4	Evaluate	• Continuously evaluate the nursing students' performance based on the established plan of action. • Revisit each step as needed, and evaluate performance again.

Other Feedback Models

Throughout the decades of research surrounding feedback, several feedback models and processes have been developed and implemented with the intent of improving performance in the medical, educational, and corporate fields among many others. Many feedback models tend to serve as a framework for how feedback should be set up including tone, timing, frequency, and content. Very few feedback models employ a prescriptive process equipped with a script that guides an individual through the steps for delivering and/or receiving feedback as conclusively as does the BAF Model.

In any feedback model, there is at least one individual responsible for serving as the rater. Based on the research, single-rater models are often employed more in business, education, and healthcare professions where a supervisor provides feedback to a performer (French, Colbert, Pien, Dannefer, & Taylor, 2015; Grant, 2011; Hattie & Timperley, 2007; Kirkland, Manoogian, & Center for Creative, 1998; Rudland et al., 2013). Although not conclusive, single-rater

feedback models include the Situation-Behavior-Impact (SBI) Model, Hattie and Timperley's Model for Effective Feedback, the Briefing, Intraoperative Teaching, Debriefing (BID) Model, the GROW Model, the 3D Model, the Ask-Tell-Ask (ATA) Model, and the Student-Centered Model of Feedback. The first two are more supervisor-centered while the latter are more performer-centered.

The Situation-Behavior-Impact (SBI) Model is a feedback model that affords individuals the opportunity to develop a framework for structuring information and perceptions about a performer (Kirkland et al., 1998). Developed by the Creative Center for Leadership, the SBI Model seeks to simplify the structure for delivering feedback while ensuring effectiveness by keeping comments relevant and focused (Kirkland et al., 1998). Under this model, the rater observes the performer in a specific situation and describes the behavior observed as well as the impact on others (Buron & McDonald-Mann, 2000). While this model is effective for describing a performer's actions, when the actions occur, and how it affects others involved, it fails to incorporate an element in the framework for the performer to be involved in the discussion surrounding the observed behavior. The lack of this step in the model contributes to subjectivity, as it can exclude the performer from participating in the dialogue. Unlike the BAF Model, this model has the potential to promote a one-sided conversation, which can be subjective and place blame on the individual for not achieving the desired behavior; providing ineffective feedback that is subjective can result in the performer misinterpreting the message and/or receiving confusing messages from the feedback deliverer (Bommelje, 2012). In addition, the SBI Model also does not place any focus or emphasis on the environmental elements that could affect performance. Unlike the BAF Model, which incorporates both environmental and individual

elements that influence behavior, the SBI Model does not guarantee feedback would be objective due to the lack of incorporating objective elements that influence behavior in the framework.

Hattie and Timperley propose a model of feedback in education to enhance learning and deliver effective feedback by focusing on the end goals, the progress made towards reaching those goals, and the required activities to make the necessary progress (Hattie & Timperley, 2007). This particular model breaks down feedback into four levels including task (what), process (how), self-regulated (checklists for performer), and self (personality); the instructor is responsible for guiding performers through the necessary steps to help reduce discrepancies between current performances compared with desired performance in alignment with the defined goal (Hattie & Timperley, 2007).

At the task level, the focus is on knowledge of results, also known as corrective feedback (Richey et al., 2011). When knowledge is lacking, additional instruction is provided by the instructor; however, providing too much instruction and guidance on achieving the right answer can be detrimental to the performer's ability to self-regulate their own learning (Hemayattalab & Rostami, 2010; Lurie & Swaminathan, 2009; Rivera-Chiauzzi et al., 2016). Self-regulation is enhanced when the focus of feedback is on the learning strategies needed to achieve the desired behavior. Last, the performer's self, or personality and cultural background, plays an effect on how the performer receives feedback and when it should be delivered. In order for this model to be effective, it is necessary to provide an appropriate amount of feedback with regards to each level to reduce discrepancies between current and desired performances without jeopardizing the performer's commitment to the task (Hattie & Timperley, 2007). Without guidelines for the instructor to follow, instructors may provide too much or too little feedback for each level, thus

reducing the discrepancies between current performances compared with desired performance in accordance with the established goal (Hattie & Timperley, 2007).

While both the performer and instructor have an active role, one major disadvantage to Hattie and Timperley's feedback model includes the lack of environmental elements that affect performance. This particular model focuses solely on the individual's skills, personality, and their abilities, and does not account for the environmental elements that contribute to performance. As mentioned by Gilbert (2007), individual elements, such as knowledge are secondary to the environmental elements that affect performance.

Roberts, William, Kim, and Dunnington (2009) proposed the Briefing, Intraoperative, Teaching, Debriefing (BID) Model for teaching in the operating room. This model was developed due in part to infrequent opportunities for teaching in the operating room. The BID Model is great for strategically engaging the learner before, during, and after surgery in a fast moving, demanding field. It begins with the surgeon briefing the learner for two to three minutes to assess the needs of the learner, for the learner to assess individual needs, and to collaborate to identify and establish objectives for the operation; the learner is responsible for selecting one to two objectives to focus on during the operation (N. K. Roberts, Williams, Kim, & Dunnington, 2009). The next step includes intraoperative teaching where the surgeon uses teaching scripts to have didactic discussions with the learner based upon the established learning objectives to guide the learner through the surgery (N. K. Roberts et al., 2009). The last step in the BID model includes debriefing where the attending physician asks the learner to reflect upon the performance with respect to the established objectives; learners are required to assess what they learned while listening to the attending surgeon diagnose identified problems (N. K. Roberts et al., 2009).

Despite the frequent interactions between surgeons and learners in the operating room, the BID Model possesses several limitations. Rather than developing a plan to observe and debrief a learner, the BID Model promotes opportunistic teaching where the surgeon teaches the learner in the current moment. Since situations rarely ever mimic one another entirely, the situations in which feedback is delivered will differ, thus potentially causing confusion due to different feedback delivered and/or received each time. Similarly, with the BAF Model, learners are involved in the debriefing process through constant communication about present and future behaviors whereas the BID Model employs a passive transfer of information, as the surgeon walks the learner through the surgery while placing emphasis on the established objectives. Although the BID Model is designed for surgeons to avoid spending time debriefing learners outside the operating room, it fails to provide adequate time to allow surgeons to provide the necessary feedback for learners to improve performance as well as for them to reflect upon and process their experiences. Unlike the BAF Model, the BID Model fails to incorporate any environmental elements that could affect performance; it offers severely limited feedback using a narrow scope of passive information focusing only on the individual and their performance (N. K. Roberts et al., 2009).

Developed by Graham Alexander, Alan Fine, and Sir John Whitmore in 1980, the GROW Model is a well-known performer-centered feedback model that guides coaches to break down feedback into four separate, but interrelated sessions including goals, reality, options, and wrap-up (Grant, 2011). It is designed to provide performers a road map for improving performance by encouraging them to become self-aware of their current performance. Although guided by the coach, the performer is responsible for taking the lead to determine goals to accomplish, examining their current performance and how it impacts the goals, identifying and

assessing options for improving performance, and assisting with determining a path to move forward towards achieving the goals (Grant, 2011). The roadmap afforded in this model provides a major benefit to users to assist with identifying the discrepancies between the current and desired performance. Despite the benefit of the roadmap, the GROW Model fails to account for anything outside of the individual. Additionally, this model fails to incorporate dedicated steps for the instructor or supervisor to deliver feedback to the performer; performers only know what they know and may not be capable of seeing the bigger picture in regards to performance. Although the instructor or supervisor participates in sessions and provides structured questions that guide the performer to promote a deeper understanding, there is limited or no direct feedback delivered about performance.

The 3D Model of Debriefing developed by Zigmont, Kappus, and Sudikoff (2011) is a debriefing model that focuses on defusing, discovering, and deepening the experience of the performer. Defusing allows the performer to express any emotions, struggles, or events that occur during simulated events or first-hand experience. Discovering allows the performer to analyze and evaluate their performance by reflecting upon experiences as well as discovering mental models for exhibiting specific behaviors (Zigmont, Kappus, & Sudikoff, 2011). Deepening allows for the performer to develop connections learned in simulation to create cues to implement in clinical practice; it discusses how the relationship of performance during the simulation period can be related to the clinical setting (Zigmont et al., 2011). Although this comprehensive model allows performers to identify discrepancies in performance during the discovery stage, this model relies heavily upon the performer to be honest about experiences and emotions exhibited during experiences. Unlike the BAF Model, this model fails to incorporate an element that requires the facilitator to observe the performer in the learning and practice

environments, thus relying heavily upon information from the performer. Performers may be dishonest out of fear of feeling silly or behind when compared with peers.

In addition, the 3D Model of Debriefing utilizes elements from the Learning Outcomes Model, which focuses on the importance of the learner, experience, and environment to promote effective learning (Zigmont et al., 2011). The learner element focuses on intrinsic motivation, prior knowledge and experience through mental models, competence and reasoning, and emotions while the environmental element of the model focuses on the learning and performance environments, to include skilled mentors, location of learning and equipment available, and policies in place during practice (Zigmont et al., 2011). The experience is based on Kolb's Experiential Learning Cycle, which promotes active learning where previous experiences are considered alongside new experiences to make connections (Zigmont et al., 2011); experiences may be positive or negative and can occur during simulation or with patients (Zigmont et al., 2011). This is the only model reviewed that encompasses the individual and environmental elements found in the BAF Model; however, unlike the BAF Model, this model only discusses resources and fails to articulate the data or incentives in the environment that could influence performance. Similarly, unlike the BAF Model, this particular focuses on the performer's orientation, analogical reasoning, and mental models rather than the knowledge, capacity, and motives that influence performance. While these elements are imperative for diffusing, discovering, and deepening experiences, this particular model leaves out important elements captured in the BAF Model known to influence performance.

The Ask-Tell-Ask (ATA) Model was initially adapted and implemented at the Cleveland Clinic in 2005 to assist medical trainees with reflecting upon and assessing their own skills (French et al., 2015). The rater asks performers to conduct a self-assessment prior to the

facilitator sharing observations, concerns, strengths, and weaknesses. It then seeks to check the performer's understanding before discussing a plan for improvement (French et al., 2015). Although this model aligns with the BAF in that it utilizes direct observation and addresses a maximum of one to two objectives per session, it fails to provide the instructor or supervisor specific elements to focus on in the feedback session. Since there are individual and environmental elements that are known to affect performance, it is imperative to surround the feedback sessions around these elements. Without focusing feedback around these elements, it is highly possible that the information delivered will not affect performance in the way the instructor or supervisor hopes or in the way the BAF Model is intended to affect performance.

Rudland et al. (2013) developed the Student-Centered Model of Feedback with the intention of placing the performer at the center of the feedback process. This model seeks to emphasize the performer's self-regulation attributes specific to responsiveness, receptiveness, and reflection while understanding the influence of the context and supervisor attributes (Rudland et al., 2013). This model serves more as a framework than it does a model because it simply provides a basic structure for how the performer needs to be a central component for shaping the quality of feedback. There is little to no guidance provided for what clarification performers should seek. Although the instructor or supervisor delivers feedback, it is the performer's responsibility to seek clarification for lack of or confusing feedback prior to evaluating the feedback against their own views surrounding progress (Rudland et al., 2013). Leaving these tasks up to the performer provides a major disadvantage for improving performance because performers only know what they know and not what they need to improve upon. Unlike the BAF Model, this model focuses on the elements that effect feedback, such as

amount and time of feedback, nature, setting, and agenda rather than the individual and environmental elements discussed in the BAF Model that affect performance.

Contrary to the plethora of single-rater models, the use of the multi-rater feedback model is on the rise. One well-known multi-source feedback model often used in business includes the 360-degree feedback model, which seeks to solicit feedback from all personnel that interact with the performer including, but not limited to supervisors, subordinates, peers, and others (Langdon, Whiteside, McKenna, & (Eds.). 1999). According to Langdon et al. (1999), the primary goal of the 360-degree feedback model is to facilitate a change in individual or team behavior that is purposeful through self-awareness, insight and motivation, self-efficacy, and ability. A multi-rater feedback model used in healthcare includes the Multi-Rater Feedback Approach. Developed by Wachter and Lion (2016), this model seeks to develop the confidence and skills needed to perform in the operation room. Wachter and Lion's previous model relied upon weekly feedback during clinical rotations whereas this particular model utilizes peer feedback, instructor evaluations, and self-evaluation to receive feedback on an on-going basis (Wachter & Lion, 2016). In theory, multi-rater models appear to be beneficial because it allows feedback to be received from all avenues of approach; however, there may be too much subjectivity from colleagues. When competing against colleagues, a colleague might provide negative or incorrect remarks about a performer to boost their own performance. This alone makes the use of a multi-rater feedback model a disadvantage for many.

Despite the number of feedback models and processes that exist in corporate, medical, and education fields alike, each offers its own benefits, whether it seeks to provide performers information needed to achieve goals, promote self-regulation, hold supervisors and performers accountable for behaviors, identify performance gaps, and/or facilitate discussions. While each

have their benefits and drawbacks, none of the abovementioned feedback and debriefing models incorporate all components from Gilbert's BEM. Since feedback is intended to invoke a permanent change in behavior, feedback models should incorporate the components within the individual and environmental levels known to influence behavior. Table 2 summarizes the different feedback models found in education, industry, and nurse education; each discusses the elements found in the BEM.

Table 2.

Summary of Feedback Models

Model	Author	Advantages	Disadvantages	Context	Elements of the BEM Included
Situation-Behavior-Impact Model	Center for Creative Leadership	• Simplifies the structure by keeping comments relevant and focused.	• Fails to involve the performer in the discussion, thus leading to one-sided subjectivity. • It does not place emphasis on all the environmental or individual elements.	Business & Organization	Environment • Data: Timing of behavior-specific. Individual • Knowledge: Impact
Hattie & Timperley's Model of Feedback	John Hattie & Helen Timperley	• To provide effective feedback in a learning context to which feedback is addressed. • Focuses on the task, process, self-regulation, and self-levels.	• Fails to include environmental elements.	K-12	Individual • Knowledge: Skills • Capacity: Ability • Motives: Selection
The GROW Model	Graham Alexander, Alan Fine, & Sir John Whitmore	• Guides coaches to break down feedback into four separate, but interrelated sessions including goals, reality, options, and wrap-up (Grant, 2011).	• Performer takes charge; does not always know • No dedicated steps for delivering feedback	Business & Organization	Environmental • Resources: Obstacles Individual • Capacity: Realities • Motives: Alignment • Motives: Incentives
Student-Centered Model of Feedback	Joy Rudland, Tim Wilkinson,	• Provides basic structure for prompting feedback	• Does not focus on all individual or	Higher Education	Environment • Data: Timing

	Andy Wearn, & Maree O'Keefe	• Focuses on context issues including timing, amount, formality, group or individual, nature of task, assessment, and setting	environmental elements. • Requires performer to be proactive in seeking clarification of feedback.		• Resources: Setting
The BID Model	Nicole Roberts, Reed Williams, Michael Kim, & Gary Dunnington	• Utilizes a teaching script that focuses on student-selected objectives; promotes self-reflection.	• Employs passive transfer of information in a short amount of time. • Limited feedback focuses only on individual's performance for that particular situation.	Healthcare: Operating Room	Individual • Knowledge: Training Program
The 3D Model of Debriefing	Zigmont, Kappus, & Sudikoff	• Focuses on defusing by expressing through emotion, discovering through reflection, and deepening experiences through developing connections.	• Information about performance comes from the performer, which requires honesty about emotions and experiences. • Does not allow for performance to be observed.	Healthcare: Clinical Setting	Individual • Knowledge: Knowledge, Skills, Experience • Motives: Placement
The ATA Model	Cleveland Clinic	• Promotes self-assessment of skills and reflection, and promotes observations and discussions.	• No specific guidance is provided for what to focus on during the feedback session.	Healthcare: Clinical Setting	Individual • Knowledge: Training Program
360 Degree Feedback Model	Unknown	• Allows feedback to be received from all avenues of approach. • Facilitates purposeful change through self-awareness, insight & motivation, self-efficacy, and ability.	• Subjective • May not be truthful due in order to boost own performance.	Business & Organization	Individual • Knowledge: Training Program • Capacity: Ability • Motives: Alignment
Multi-Rater Feedback Approach	Wachter & Lion	• Utilizes peer feedback and instructor and self-evaluation on an on-going basis to develop the skills and confidence needed to perform.	• Subjective • May not be truthful due in order to boost own performance.	Healthcare: Operating Room	Individual • Knowledge: Training Program • Capacity: Ability • Motives: Alignment

The BAF Model in Nurse Education

Previously explored feedback models tend to serve as a framework for providing feedback, as they provided insight into how feedback should be structured, but failed to deliver specifics for delivering feedback. Due to the nature of the nursing environment and the understanding that patient's lives are in the hands of nursing students, nursing educators need a prescriptive feedback model for delivering behavior-specific feedback surrounding the elements that are known to influence a change in behavior. Research on feedback found the individual elements that affect performance are secondary to the environmental elements (Gilbert, 2007). For this reason, the BAF Model focuses on the environmental elements prior to the individual elements.

In clinical environments, nursing educators constantly step into situations to deliver immediate feedback that is specific to the student's behavior. Although immediate feedback is necessary, research proves delayed feedback leads to better retention of information over time for later usage, which contributes to improved performance over time (Butler et al., 2007; Mullet et al., 2014; Phye et al., 1976). The BAF Model is designed to deliver delayed feedback in a formalized feedback session; however, nursing educators are able to utilize elements found in the model to provide immediate feedback to nursing students.

Unlike the previously explored feedback models, the BAF Model is prescriptive in nature. It employs a variety of elements captured in other models, such as timing, content, and approach, to create an encompassing model that affords individuals the opportunity to conceptualize and understand the feedback with regards to a specific behavior. The BAF Model also offers new elements, such as a prescriptive script, to provide the nursing educator clear direction and verbiage for delivering behavior-specific feedback to nursing students. In addition, the use of the four-step approach coupled with the prescriptive script allows the nursing educator

and student to engage in meaningful dialogue to assist in identifying underlying root causes for the behaviors exhibited as well as offer the nursing student instructional and non-instructional interventions for reinforcing or correcting the behaviors. Not only does the consistent behavior-specific feedback assist with influence performance, the BAF Model also affords the nursing student the opportunity to reflect upon the behavior, the discussion, and the steps needed to achieve the desired performance. The use of the BAF Model in nurse education affords the nursing educators the tools and resources to deliver behavior-specific feedback, which is needed in a hospital's fast-paced environment to ensure effective and efficient patient care.

Purpose of Study

The purpose of this research study was to assess the effects on improving performance from feedback delivered using the BAF Model. For purposes of this study, feedback was defined as behavior-specific information that was delivered in an appropriate setting, utilized neutral language that is not judgmental, focused on observable behaviors or performances (Schartel, 2012), and provided specific guidance about improvement opportunities for performers (Tosti, 2006) with regards to individual and environmental factors outlined in Gilbert's BEM.

The research was aimed at nursing educators employed in a nursing education program that were responsible for overseeing and training nursing students in a pre-licensure Bachelor of Science nursing program. The study sought to 1) train nursing educators to use the BAF Model to provide feedback to nursing students 2) assess the effects of the feedback delivered using the BAF Model on improving the nursing student's performance, and 3) assess the postulated benefits of the BAF Model. In this research study, the terms s*upervisor* and *nursing educator* were used interchangeably as well as the terms *nursing student* and *performer*.

Research Questions

The focus of this research was to learn if feedback delivered using the BAF Model derived from Gilbert's BEM improved performance of the nursing students. This study sought to gather insight guided by the following research questions:

1. To what effect does the BAF Model have on improving performance among nursing students?
2. To what effect does the model have on improving receptivity of feedback among nursing students?
3. To what effect does the BAF Model have on improving the nursing educator's perception of providing feedback to nursing students?
4. How did the performer's skillsets align with the organizational resources provided during clinical rotations?

CHAPTER II

METHODOLOGY

This chapter details the research design, participants, materials and instruments, procedures, and scoring procedures for this research study. It concludes with a detailed description of the analysis used to assess each of the four research questions.

Research Design

This research study served as a descriptive, single-case study with the intent of shedding empirical light on delivering behavior-specific feedback using a prescriptive script. It focused on circumstances and conditions specific to nursing education, which rationalized the use of the common case, single-case study approach (Yin, 2018). More specifically, this descriptive, single-case research study focused on analytic generalizations with the purpose of contributing to the general theory that the BAF Model improved performance due to the emphasis placed on the individual and environmental elements during the feedback sessions in the real-world context of nursing education (Yin, 2018).

Despite this case study occurring within a single organization, this research utilized multiple units of analysis from embedded subunits where data was collected from different elements (Yin, 2018). The main unit included the nursing education department at Old Dominion University with the smallest unit being the individual members that made up the department. In addition to these two units, the case study collected data about intermediary units from members belonging to specific groups including nursing educators who delivered and assessed feedback and nursing students who received feedback (Yin, 2018). This embedded, single-case study was achieved through collecting data from different sources of evidence including nursing educator surveys and interviews, nursing student surveys, and questionnaires and feedback trackers.

In addition, this embedded, single-case study utilized a quasi-experimental pre-post intervention study design in order to assess the effects the BAF Model had on improving performance of nursing students. The BAF Model served as the independent variable while the nursing student's performance served as the dependent variable. Purposive sampling was employed since each group of nursing students and nursing educators were specific to Old Dominion University's (ODU) pre-licensure Bachelor of Science Nursing (BSN) program and already assigned to clinical rotations prior to the start of the research study. Although this non-randomized design allowed nursing educators to implement feedback directly to the nursing students they oversaw, the sample size of this single-case study was small in nature.

Participants

Participants included nursing educators employed within ODU's pre-licensure BSN program located in southeastern Virginia as well as nursing students enrolled in ODU's pre-licensure BSN program; nursing students included undergraduate student's enrolled traditional and accelerated nursing courses. A total of five instructors participated in the research study and captured the data of 22 students enrolled in either Adult Health II, Psych Mental Health Nursing, and/or Role Transition for Professional Practice. Many nursing students were enrolled in more than one clinical course and several of the nursing educators were responsible for instructing and supervising students enrolled in more than one clinical course. Additionally, a total of 14 nursing students participated in the surveys; however, data was evaluated based on the participation of five instructors and 29 students.

Inclusion criteria for this study required participants to be at least 18 years of age. Nursing educators had to currently be serving in a nursing educator role responsible for overseeing nursing students in a direct reporting relationship. The length of service as a nursing

educator was irrelevant for participation in this study because nursing educators assessed current performance, participated in training to learn how to deliver feedback using the model, implemented feedback using the model, and assessed the nursing student's performance again. For nursing students, they had to currently be enrolled in the university pre-licensure BSN nursing courses. Exclusion criteria of this study prevented individuals from participating if not currently serving as a nursing educator at ODU, not enrolled as a student in the pre-licensure BSN program at ODU, or not at least 18 years of age. All participants included personnel from mixed ethnicities, as well as varying background experiences. Two limitations of this methodology included the lack of random assignment and the potential for creating non-equivalent groups, which could affect the internal validity of the study and the generalizability of the findings. One strength of this methodology included increasing external validity by presenting the situation under real-world conditions (Mariani, Cantrell, Meakim, Prieto, & Dreifuerst, 2013).

Protection of Participants

To keep confidentiality, the researcher was the only individual viewing any data instruments collected. All surveys and questionnaires completed by the nursing educators required the use of a unique identifier, which was comprised of the first two initials of their high school, the two-digit day of the month they were born, and the last letter of their first name. Prior to the start of the optional interview, participants were informed they could withdraw at any point, change their answers, add on to their answers, and contact the investigator for questions. Permission to record the interview was requested, and all participants gave verbal consent to record the interview. Each interview was transcribed using a third-party vendor.

Similarly, all surveys and questionnaires required the nursing student's university identification number. Prior to the start of the survey, an information sheet was presented to the participant. The informed consent introduced the survey and described the research study along with the risks and benefits, costs and payments, new information, confidentiality, withdrawal privilege, and opportunity to contact the investigator for questions. By completing the survey, participants agreed to participate in this study.

The nursing educator's unique identifier and the nursing student's UIN were utilized to conduct data analyses including, but not limited to baseline and post-implementation comparisons. All surveys and questionnaires completed by the nursing educators and nursing students were filled out online and not printed for anyone other than the researcher to view. Personal identifying information was removed after developing the coding spreadsheet.

Materials

Several materials were developed for this research study. The first instrument includes the facilitator guide that was developed to instruct nursing educators how to use the BAF Model. The second instrument included a debriefing script that was used by the nursing educator to deliver formal debriefing sessions. The third instrument included a performance analysis questionnaire to determine current behaviors while the fourth instrument included a feedback tracker to keep track of the feedback provided with respect to one of the six elements. A handout containing behavior factors relevant to each of Gilbert's six elements was developed and included. The last material that was developed included an online repository to house all of the documents, links, and videos needed to train the nursing educators to use and implement the BAF Model; the repository was broken down into modules to allow easy access to documents while providing the necessary information to complete each step throughout the research study.

Facilitator guide. Nursing educators were provided a comprehensive facilitator guide (Appendix A) to learn how to use the BAF Model. It was geared towards providing the nursing educators the knowledge and resources necessary to successfully implement the BAF Model in their own environment. In addition, the facilitator guide provided nursing educators the opportunity to activate prior knowledge, generate new knowledge, make connections, and receive feedback to help refine and shape their schema. The facilitator guide contained an introduction and eight modules along with corresponding supplemental materials for nursing educators to acquire the skills and confidence for delivering effective, behavior-specific feedback. The facilitator guide was designed according to the Kemp Design Model for developing effective instruction (Morrison, Ross, Kalman, & Kemp, 2013).

Debriefing script. The debriefing script (Appendix B) was designed to provide the nursing educator the direction and language for delivering feedback to each nursing student. It included an introduction and was divided into three sections to follow the first three steps of the *Four-Step Approach*. The debriefing script provided the nursing educator the exact language for debriefing their students during formal sessions. Although the responses from each nursing student differed and the discussion may have occurred further, the debriefing script kept the nursing educator on track for delivering behavior-specific feedback for the first three steps of the four-step approach. More importantly, not only did the model provide nursing educators to provide feedback that is behavior specific, it also allowed for the nursing student to reflect upon their experiences, which is always imperative for any learning environment. Directions for evaluation, the fourth step, were also presented in the debriefing script.

Feedback tracker. A feedback tracker (Appendix C) was developed for the nursing educator to track the formal feedback provided to each nursing student. The nursing educator

was required to fill out a feedback tracker for each nursing student; it was designed for the nursing educator to keep track of which element(s) they delivered feedback for during the formal feedback session as well as the nursing student's current behavior and the target behavior. Overtime, this document was used to see which of the six behavior elements were prominent during the debriefing sessions.

Behavior factors. The behavior factors handout (Appendix D) was developed based on Elizabeth Bailey's PROBE Model (2007) and provided specific questions to reflect upon and/or ask nursing students surrounding each of Gilbert's six elements affecting performance. This was imperative for the nursing educators to use in conjunction with the debriefing script during the formal debriefing sessions, as behaviors were pulled and assessed from here.

Repository. Nursing educators were required to complete training in order to learn to use and implement the BAF Model. After talking with the Director of Technology and Simulation, it was determined that self-paced instruction was the best option to implement since the educators were full-time and adjunct professors with extremely busy coursework. All documents, videos, and links needed for this research study were housed in a password-protected repository for the nursing educators to access.

Instruments

There were several instruments developed for this research study. The first included a pre-perception survey designed to capture feelings and attitudes for delivering feedback prior to using the BAF Model whereas the second was a post-perception survey designed to capture feelings and attitudes for using the facilitator guide, the BAF Model, and for delivering feedback after using the BAF Model; both were used to identify the perceived benefits of using the BAF Model. The third instrument included a job analysis performance questionnaire for the nursing

educator to assess job performance for each nursing student they oversaw. The last instrument developed for the research study included an attitude survey for the nursing students to complete prior to the start of the research study as well as at the conclusion of the research study. All instruments underwent pilot testing to ensure reliability; the Director of Technology and Simulation reviewed the surveys, questionnaires, feedback trackers, facilitator guide, and accompanying videos.

Pre-perception survey. Prior to implementing the BAF Model as the intervention, nursing educators were asked to complete a pre-perception survey (Appendix E) to assess their feelings and attitudes for delivering feedback. The pre-perception survey was broken down into two sections. The first section contained two questions focusing on general information surrounding the nursing educator's length of employment at the facility and number of nursing student's the nursing educator oversees. The second section included 12 statements focusing on experiences with delivering feedback as well as two open-ended questions focusing on challenges experiences and resources needed to overcome the challenges. At the end of the survey, participants were provided the option to leave additional feedback not captured in the survey.

Post-perception survey. At the conclusion of the study, after implementing the BAF Model to influence performance, nursing educators were asked to complete a post-perception survey (Appendix F) to assess their feelings and experiences with the facilitator guide, BAF Model, and delivering feedback. This 49-item survey assisted with determining the perceived benefits of utilizing the BAF Model on improving performance. The survey was broken down into four sections. The first section contained two questions focusing on general information surrounding the nursing educator's length of employment at ODU and number of nursing

student's the nursing educator oversees. The second section included 12 statements focusing on experiences with the facilitator guide as well as two open-ended questions focusing on what the nursing educators liked and how the unit could be improved. The third section included 12 statements focusing on experiences with the BAF Model as well as two open-ended questions focusing on the likes and dislikes of the BAF Model. The third section included 12 statements focusing on feelings and attitudes towards delivering feedback as well as two open-ended questions focusing on the challenges experienced delivering feedback and the resources needed to overcome the challenges. At the end of the survey, participants were provided the option to leave additional feedback not captured in the survey.

Interview protocol. Three months into the research study, a semi-structured interview (Appendix G) with six open-ended questions with additional probing questions to guide the discussion, if needed, was developed to gain further insight into the nursing educator's feelings and experiences with the BAF Model. The first question focused on their feelings associated with using the facilitator guide while question two focused on their feelings associated with using the BAF Model. Questions three and four sought to identify challenges and successes experienced with implementing the feedback model. Question five required the participant to identify ways they would alter the model to meet their needs as a supervisor. The final question asked the nursing educators to describe their thoughts about the effectiveness of the model in their line of work. Results were analyzed using structural description coding; a spreadsheet was developed with the questions along the top and the participant's responses under each respective question. Each response was examined and summarized one at a time in the adjacent box to develop an initial code using a term or phrase. Each question was then analyzed to identify themes and trends for each of the terms or phrases. Similarly, this information assisted with

identifying major themes to modify the BAF Model to fit other industries going forward, thus increasing generalizability.

Job performance analysis questionnaire. Each nursing educator was asked to complete a 22-item performer job performance analysis questionnaire (Appendix H) for each nursing student they oversaw and assessed. This questionnaire was designed to gather data surrounding each nursing student's current performance with regards to environmental and individual components that influenced behavior. The questionnaire was broken down into three sections. The first three questions focused on general information surrounding the nursing student's current class level, length of enrollment in the nursing program at ODU, and the nursing educator's length of time overseeing the nursing student. The second section related to the environmental components – data, resources, and incentives – that influenced performance. There were three questions per environmental component totaling nine questions for this section. The third section related to the individual components – knowledge, capacity, and motives – that influenced performance. There were three questions per individual component totaling nine questions for this section. At the end, the nursing educator was provided the option to leave additional feedback not captured in the questionnaire.

Attitude survey. Each nursing student was asked to complete a 30-item attitude survey (Appendix I) for receiving feedback both before implementation of the BAF Model and again after the BAF Model was implemented. The survey was broken down into three sections. The first included three questions focusing on general information including the nursing student's current class level, length of enrollment in the nursing program at ODU, and the length of time the current supervisor has supervised the nursing student since being enrolled in the program. The second section included 30 statements focusing on attitudes and feelings surrounding how

they felt prior to, during, and after receiving feedback. At the end of the survey, the nursing student was provided the option to leave additional information about their feeling and attitudes towards feedback not captured in the survey.

Procedure

Over the course of the 2017 spring and fall academic semesters, the researcher obtained data from nursing educators and nursing students surrounding performance, perception of delivering feedback, and perception of receiving feedback. The spring semester was a full 12 weeks in length and required three data collection points whereas the fall semester was split between two six sessions; each session only required two data collections.

Prior to beginning the research study, all nursing educators and nursing students were asked to participate in the study. Each received a copy of the consent form containing an introduction, the researchers, a description of the research study, the risks and benefits, the costs and payments, new information, confidentiality, withdrawal privilege, and questions prior to giving consent. All nursing educators were required to deliver feedback using the BAF Model for the duration of the semester whether they chose to participate in the study or not. The researcher reached out to nursing educators employed in the university's pre-licensure BSN program two weeks prior to the start of each semester to deliver the website link to the repository of information, specifically the facilitator guide for review as well as to identify a date for an optional live training session to clarify any questions surrounding the BAF Model. The website itself was designed for the nursing educator to access all surveys and questionnaires, videos, documents, and other resources needed. Three days prior to the start of the semester, except for the spring semester, an email was sent to each nursing educator requesting participation in the research study. Those who agreed to participate and signed the consent forms were automatically

directed to complete the *Pre-Perception Survey*. Three instructors participated in the spring and two instructors participated in second six-week session.

During the time prior to the start of the semester, nursing educators were encouraged to look through the website, which was designed to guide the nursing educator to complete five different modules in order of appearance. The first module, *Training*, contained specific instructions for delivering feedback during formal feedback sessions. Included in this module was the facilitator guide and corresponding supplemental materials; nursing educators were trained to deliver feedback using the BAF Model. Throughout the duration of the training and the first few weeks of classes, the researcher was available to answer any questions surrounding the use and implementation of the BAF Model.

In this module, the nursing educator learned they were required to provide weekly face-to-face feedback to their nursing students using the provided debriefing script. Feedback sessions had to be conducted individually in person or through the use of video conferencing software, such as Adobe Connect, Skype, or WebEx. Feedback sessions were set up between the nursing educator and nursing student. In accordance with the nursing program, nursing students were required to conduct self-reflection activities after each clinical rotation day. Depending on the course, students had a pre-established timeframe to complete the logs. The nursing educator was responsible for reading the nursing student's log and providing feedback to the nursing student prior to the start of the next clinical rotation day. By doing this, learners were afforded the opportunity to reflect upon their experiences while also promoting delayed feedback. Although the nursing educators were required to meet with their nursing students weekly to deliver feedback, data was collected at the beginning, midpoint, and conclusion of the study; during the

condensed six-week clinical rotation, data were collected only at the beginning and conclusion of the semester.

Modules two, three, and four made up the baseline, midpoint, and final assessments to the data collection points. In these modules, the nursing educator was asked to complete a *Job Performance Analysis Questionnaire* for each nursing student they supervised at each data collection point. The nursing educator was also required to fill out the *Feedback Tracker* during the formalized feedback session for each nursing student; nursing educators were given the option to print and pre-fill out the feedback tracker to ensure they assessed and discussed the appropriate elements for the week. The baseline data collection assessment was conducted in the second week of the semester after the nursing educators had a chance to meet with their assigned nursing students. The midpoint data collection assessment, if applicable, occurred in the middle of the clinical rotation. The final data collection point occurred the second to last week the nursing students participated in the clinical rotation, so the nursing educator could provide feedback one last time.

All surveys and trackers were required to be filled out within the same week; direct links to the survey and questionnaires were provided on the website under the respective module. The researcher reminded the nursing educators to complete the performance analysis questionnaire and the trackers via email every three days during the weeks the baseline, midpoint, and concluding data assessments took place. Although data was only collected two or three times throughout the semester, the nursing educator was required to conduct weekly formal debriefing sessions using the BAF Model and the debriefing script. Once all data collection points were completed and all surveys and questionnaires were submitted, the researcher analyzed and aggregated the results as needed.

After all surveys and questionnaires were completed, the nursing educators completed module five, *Post-Intervention Surveys*, including the *Perception Survey*; the researcher followed up with any nursing educator for any missing surveys or questionnaires. In addition, the nursing students completed the *Attitude Survey* again; the nursing students were given up to 10 days at the end of the semester to complete the survey. The surveys of students who completed the pre-attitude survey and the post-attitude survey were aggregated; all other surveys in which only either the pre-attitude survey or post-attitude survey was completed were disregarded.

At the end of the study, all nursing educators who completed the surveys and questionnaires were invited to participate in an interview to further discuss their experiences with the BAF Model. Prior to conducting each interview, the researcher stated the opening script, requested permission to record the interview, began the recording, and started the interview. At the conclusion of the interview, the researcher stated the closing script and asked for additional comments prior to concluding the interview. Without further statements, the interview concluded. The researcher kindly thanked the participant one more time for his or her participation before ending the phone call or conversation. The researcher conducted the three interviews within two weeks of the semester ending; all three were conducted over the phone. All interviews were recorded using a mobile device application. The length of the interviews ranged from 18 minutes to 41 minutes depending on the dialogue between the researcher and participant.

Table 3 summarizes the procedures in this research study.

Table 3.

Summary of Procedure

Timeframe	Activity
Two weeks prior to start of semester	• Send consent form; nursing educators complete *Pre-Perception Survey*. • Send website link to repository of information including all surveys, questionnaires, videos, documents, and other resources.
One to two weeks prior to start of semester	• Review and complete the facilitator guide and supplemental materials
First day of class	• Students receive and sign consent form and complete the *Pre-Attitude Survey*.
Entire semester	• Live question and answer sessions; individual dates and times available upon request. • Deliver weekly feedback using the debriefing script. • Complete baseline, midpoint, and concluding data point documents; dates will vary based on class, and will be provided by the Director of Training and Simulation.
Last week of semester	• Nursing educators complete the *Post-Perception Survey*. • Nursing students complete the *Post-Attitude Survey*.

Scoring Procedures

Data from the different data collection tools were aggregated using the reports section of the survey tool and verified to ensure reliability. In order to quantify the feelings and attitudes of the nursing educators and students from the different surveys, all statements excluding demographics, logistics, and open-ended statements were scored numerically. The questions pertaining directly to attitudes and feelings utilized the rating scale of Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neutral (4), Somewhat Agree (5), Agree (6), and Strongly Agree (7). This methodology was utilized to better understand the frequency of each response selected as well as to determine differences before, during, and after the implementation of the BAF Model.

All open-ended answers provided by the nursing educators and/or nursing students were coded utilizing structural description coding for common categories and themes. To determine

codes, a visual model was developed to represent each survey section's open-ended questions. Under each open-ended question, the researcher input the participant's response. The researcher then went through each open-ended answer and highlighted key words or phrases to identify initial codes. Codes were refined as needed in order to identify common categories and themes. The open-ended responses from each survey were coded independently of one another to conduct horizontalization, or the identification of non-repetitive, non-overlapping statements in participant's responses and/or transcripts (Hays & Singh, 2012).

Data Analysis

Data from surveys and questionnaires were analyzed utilizing the paired t-test to assess whether feedback delivered using the BAF Model had an effect on improving performance of the nursing students. This test was selected since the same subjects were assessed on at least two occasions using the same dependent variable once before and once after implementing the independent variable. Similarly, the paired t-test for paired samples was selected to compare the means of the two related groups to detect whether there were any statistically significant differences between the means using the same dependent variable under two different conditions prior to receiving feedback using the BAF Model and after receiving feedback using the BAF Model.

In order to ensure normal distribution of the differences between the scores of the two related groups, it was necessary to subtract each individual's score in one group from their score in the other related group prior to testing for normality. Although the differences between the groups needs to be normally distributed, the two related groups did not need to be normally distributed. By running the paired t-test, a higher degree of statistical significance can be

obtained even with a smaller sample size compared to running a straight t-test with all the samples grouped together.

Nursing Student Performance. To assess the overall effect the BAF Model had on improving performance among nursing students, it was necessary to compare the data from the pre-intervention *Job Analysis Performance Questionnaire* with the midpoint intervention *Job Analysis Performance Questionnaire*, the midpoint intervention *Job Analysis Performance Questionnaire* with the final intervention *Job Analysis Performance Questionnaire*, and the baseline *Job Analysis Performance Questionnaire* with the final intervention *Job Analysis Performance Questionnaire* using a paired t-test. Last, data was assessed using the *Feedback Trackers* and *Job Analysis Performance Questionnaire*; it was necessary to look at which elements were discussed on the nursing student's feedback tracker at the baseline, midpoint, and final assessment points, and compare it with how they were assessed on the performance questionnaire. Performance was only assessed for each element if it was captured on the feedback tracker; this assisted in determining whether improvement was based on feedback delivered during the debriefing session or if it was because the performer improved individually. The results from this data determined how performance had been influenced, if at all, using the BAF Model.

Nursing Student Feedback Receptivity. To assess the affect the BAF Model had on improving receptivity of feedback among nursing students, it was necessary to first quantify the attitudes of the nursing students by assigning each attitude a numerical score. Once the attitudes were numerically scored, comparisons occurred based on individual and collective results. Utilizing the paired t-test, the results from each nursing student's baseline attitude survey were compared with the results from each nursing student's post-intervention attitude survey. The

results from this assessment identified how each nursing student's feelings and attitudes for receiving feedback was influenced based on the use of the BAF Model.

The researcher aggregated the baseline attitude surveys for all nursing students separately from aggregating the post-intervention attitude surveys for all nursing students. Once all baseline and post-intervention attitude surveys were aggregated, the researcher compared the data from the baseline attitude surveys with the post-intervention attitude surveys to determine the overall effect of the BAF on receptivity.

Nursing Educator Feedback Perception. To assess how a nursing educator's perception changed for delivering feedback after using the BAF Model, it was necessary to first quantify the feelings of the nursing educators by assigning each attitude a numerical score. In addition, all written responses from the surveys were coded and refined to identify common themes. Once the feelings were numerically scored and all written responses were coded with common themes, it was necessary to compare the data from gathered from the baseline perception survey and post-perception survey for each nursing educator. The researcher then aggregated the baseline perception surveys for all nursing educators separately from aggregating the post-intervention perception surveys for all nursing educators. Once all baseline and post-intervention perception surveys were aggregated, the researcher compared the data from the baseline perception survey with the post-intervention perception survey to determine how a nursing educator's perception for delivering feedback changed, if any at all, after using the BAF Model.

Alignment of Performer Skillset with Organizational Resources. To assess how the performer's skill set aligned with the organizational resources provided during clinical rotations, it was necessary to compare and align the two triangles found in the BAF Model. All data was

compared in accordance with the setup of Thomas Gilbert's BEM where data from the environment was aligned with the individual. Data was aligned based on three sets of data including information, instrumentation, and motivation. Under information, the researcher compared and analyzed information surrounding the data at the environmental level and the knowledge at the individual level. Under instrumentation, the researcher compared and analyzed information surrounding the resources at the environmental level with the capacity of the performer at the individual level. Under motivation, the researcher compared incentives found at the environmental level with the performer's motives at the individual level. Comparisons occurred based on individual and collective results. Each *Job Performance Analysis Questionnaire* contained three questions per element assessed. Utilizing a paired t-test, results from each nursing student's baseline questionnaire were compared with the results from each nursing student's post-intervention questionnaire. The results from this assessment identified how the performer's skillsets aligned with the organizational resources provided during clinical rotations. Table 4 summarizes the methods used for analyzing each piece of data in the research study.

Table 4.

Summary of Data Analysis Methods

#	Research Question	Variables	Data Collection	Data Analysis Technique
1	To what effect does the BAF Model have on improving performance among nursing students?	Performance	Job Performance Analysis Questionnaire Feedback Tracker Baseline Results Post-Intervention Results	Paired t-Test Comparison
2	To what effect does the model have on improving receptivity of feedback among nursing students?	Attitude	Attitude Survey Feedback Tracker	Paired t-Test
3	To what effect does the BAF Model have on improving the nursing educator's perception of providing feedback to nursing students?	Perception	Pre-Perception Survey Post-Perception Survey	Paired t-Test
4	How do the performer's skillsets align with the organizational resources provided during clinical rotations?	Skillsets Resources	Job Performance Analysis Questionnaire	Compare/align the individual and environmental factors Paired t-Test

CHAPTER III

RESULTS

The purpose of this chapter is to present the results of the nursing student's performance and receptivity of receiving feedback as well as the nursing educator's perception towards delivering feedback after utilizing and implementing the BAF Model. Similarly, this chapter presents the results of how a nursing student's skillset aligns with organizational resources. Following an overview of the participants, results are presented according to each of the research questions. Data collection for this case study took place over the course of three semesters.

Participants

In total, five instructors (*n*=5) delivered feedback using the BAF Model. Instructors were required to be an instructor in ODU's pre-licensure BSN program; however, this research study did not require instructors to instruct for any minimum length of time to participate. The instructors reported data for 22 nursing students (*n*=22) class level, class semester, and how long they have been assigned to oversee the student. Table 5 shows a summary of the nursing student's general information reported by the nursing educator on the *Feedback Tracker* and *Job Performance Analysis Questionnaire* (JPAQ).

Table 5.

Nursing Student's General Information Reported by Nursing Educator

Student	Instructor	Class Level	Class Semester	Duration Assigned to Instructor
00946549	CHS07N	Senior	6th Semester Accelerated	0 – 6 months
01009391	CHS07N	Senior	6th Semester Accelerated	0 – 6 months
00940506	IC09A	Senior	4th Semester Accelerated	6 – 12 months
00997962	IC09A	Senior	4th Semester Accelerated	6 – 12 months
00960555	CC02A	Senior	6th Semester Traditional	6 – 12 months
00975703	CC02A	Senior	6th Semester Accelerated	6 – 12 months
00988671	CC02A	Senior	6th Semester Accelerated	6 – 12 months
01014964	CC02A	Senior	6th Semester Accelerated	6 – 12 months
00102455	OD30E	Junior	2nd Semester Accelerated	0 – 6 months
00428735	OD30E	Junior	2nd Semester Accelerated	0 – 6 months
00948461	OD30E	Junior	2nd Semester Accelerated	0 – 6 months
00960554	OD30E	Junior	2nd Semester Accelerated	0 – 6 months
00970664	OD30E	Junior	2nd Semester Accelerated	0 – 6 months
01020365	OD30E	Junior	2nd Semester Accelerated	0 – 6 months
01062319	OD30E	Junior	2nd Semester Accelerated	0 – 6 months
00986843	SA30E	Senior	4th Semester Accelerated	0 – 6 months
00989926	SA30E	Senior	4th Semester Accelerated	0 – 6 months
00996027	SA30E	Senior	4th Semester Accelerated	0 – 6 months
00997322	SA30E	Senior	4th Semester Accelerated	0 – 6 months
00997374	SA30E	Senior	4th Semester Accelerated	0 – 6 months
01032164	SA30E	Senior	4th Semester Accelerated	0 – 6 months
01043425	SA30E	Senior	4th Semester Accelerated	0 – 6 months

Similarly, 14 students (*n*=14) completed the pre-attitude and post-attitude surveys. Students were required to be at least 18 years of age and enrolled in ODU's pre-licensure BSN program. This research study did not require students to be enrolled in the program for any minimum length of time to participate. Table 6 shows a summary of the nursing student's general information reported by the nursing student on the *Attitude Survey*.

Table 6.

Nursing Student's General Information Summary from Attitude Survey

Student	Class Level	Class Semester
00957278	Junior	2nd Semester Accelerated
00986843	Junior	2nd Semester Accelerated
00997374	Junior	2nd Semester Accelerated
01000524	Junior	2nd Semester Accelerated
01010257	Senior	2nd Semester Accelerated
01016411	Junior	2nd Semester Accelerated
00989926	Senior	6th Semester Accelerated
00996027	Senior	6th Semester Accelerated
00997374	Senior	6th Semester Accelerated
00997962	Senior	6th Semester Accelerated
01032164	Senior	6th Semester Accelerated
00957819	Senior	6th Semester Traditional
00957992	Senior	6th Semester Traditional
00975353	Senior	6th Semester Traditional

Of the 14 nursing students (*n*=14), six nursing students (43%) were enrolled in the second semester accelerated course, five nursing students (36%) were enrolled in the 6th semester accelerated course, and three nursing students (21%) were enrolled in the 6th semester traditional course. Of those enrolled in the second semester accelerated, five nursing students (83%) were juniors and one nursing student (17%) was a senior. Of the three enrolled in the 6th semester traditional course, all three nursing students (100%) were seniors.

Nursing Student Performance

Feedback tracker. In order to assist with assessing the nursing student's performance with regards to the six elements found in the BAF Model, nursing educators tracked the feedback they delivered during the feedback session using one feedback tracker per student assessed at each data collection point. The feedback tracker was divided into four sections including general information, environmental factors, individual factors, and fill-in the blank responses to identify nursing student's current versus targeted behavior and additional comments not captured in the tracker.

General information. For each nursing student, the nursing educator reported the student's class level, class semester, and how long they had been assigned to oversee the student. Table 5 shows a summary of the student's general information reported by the nursing educator.

Environmental factors. The *Feedback Tracker* included 12 questions to account for the three elements found at the environmental level. Questions one through five were dedicated to the data element, questions six through eight were dedicated to the resources element, and questions nine through 12 were dedicated to the incentives element that all had the ability to encourage or impede performance. Each of the elements were accounted for so nursing educators could keep track of the identified barriers that impeded individual and/or organizational performance. Table's 7, 8, and 9 provides a summary of how many nursing students had each element discussed with them during the debriefing session and assessed during the baseline, midpoint, and final assessment points.

Table 7.

Feedback Tracker Data Statements Summarized

Statement	Baseline	Midpoint	Final
Communicated clear performance expectations.	21	2	12
Discussed roles and responsibilities; priority for doing them	19	9	10
Referenced any performance aids to guide the nursing student.	18	3	6
Provide behavior-specific feedback about performance.	18	7	7
Discuss the performance management system.	18	1	1

Table 8.

Feedback Tracker Resources Statements Summarized

Statement	Baseline	Midpoint	Final
Discuss materials, equipment, or time needed to do the job.	18	2	8
Define processes and/or procedures to enhance the student's performance	21	11	18
Discuss the safety, cleanliness, and organization of the physical work environment.	14	2	2

Table 9.

Feedback Tracker Incentives Statements Summarized

Statement	Baseline	Midpoint	Final
Discuss the financial and non-financial incentives present to encourage excellent performance.	2	0	2
Discuss tracking activities and results through the measurement and reporting system.	11	7	10
Discuss fulfillment of higher level needs.	7	3	17
Discuss the opportunities for career development.	10	2	2

Individual factors. The *Feedback Tracker* included 12 questions to account for the three elements found at the individual level. Questions 13 through 15 were dedicated to the knowledge element, questions 16 through 19 were dedicated to the capacity element, and questions 20 through 24 were dedicated to the motives element that all had the ability to encourage or impede performance. Each of the elements were accounted for so nursing educators could keep track of the identified barriers that impeded individual and/or organizational performance. Table's 10, 11, and 12 provides a summary of how many nursing students had each element discussed with them during the debriefing session and assessed during the baseline, midpoint, and final assessment points.

Table 10.

Feedback Tracker Knowledge Statements Summarized

Statement	Baseline	Midpoint	Final
Discuss the knowledge, skills, or experience needed to be successful at the job.	19	13	16
Reference any training programs needed to enhance knowledge and skills.	10	0	3
Communicate how the student's role impacts the patient or hospital's performance.	11	0	3

Table 11.

Feedback Tracker Capacity Statements Summarized

Statement	Baseline	Midpoint	Final
Communicate the strength and/or dexterity to do the job.	18	7	16
Discuss the ability to learn what is expected in order to be successful.	21	8	2
Communicate any emotional limitations that impedes performance.	10	4	1
Reference the realities of the work situation to determine if they are a good fit.	10	3	5

Table 12.

Feedback Tracker Motive Statements Summarized

Statement	Baseline	Midpoint	Final
Discuss nursing student's motives and see if they are aligned with environmental incentives.	20	8	4
Communicate level of desire to do the job to the best of their ability.	19	7	11
Reference the realities of the work situation to determine if they are a good fit.	11	5	5
Identify and discuss any rewards that reinforce poor performance or negative consequences that reinforce good performance.	10	0	2
Identify and discuss if the work environment is positive.	9	2	1

Job Performance Analysis Questionnaire. Using the data collected from the *Feedback Tracker* during the feedback session, instructors completed one JPAQ for each student assessed during the baseline, midpoint, and/or final assessment data collection points. A seven-point Likert Scale allowed the nursing instructor to express how much they agreed or disagreed with the nursing student’s performance with each particular statement; all scales were scored numerically and then compared with one another to determine whether nursing students demonstrated an improvement in performance. Table 13 shows the number of students each instructor assessed.

Table 13.

Number of Assessments Completed Per Nursing Educator

Number of Assessments Completed Per Nursing Educator	
CHS07N	2
IC09A	2
CC02A	4
OD30E	7
SA30E	7

Mimicking the feedback tracker, the JPAQ was divided into four sections including general information, environmental factors, individual factors, and fill-in the blank responses to identify differences in nursing student's best practices exhibited in a classroom setting versus clinical rotation as observed by the nursing educator.

General information. For each nursing student, the nursing educator reported the student's class level, class semester, and how long they have been assigned to oversee the student. Table 5 shows a summary of the student's general information reported by the nursing educator.

Environment. The JPAQ included nine questions to account for the three elements found at the environmental level. Questions one through three were dedicated to the data element, questions four through six were dedicated to the resources element, and questions seven through nine were dedicated to the incentives element. Each of the elements was accounted for since it had the ability to affect an individual's overall performance.

Data. This element focused on the relevancy and frequency of adequate performance, clear expectations, and clear guides and job aids for adequate performance. Table 14 provides a summary of the average statistics for the data elements assessed during the debriefing sessions and performance assessments.

Table 14.

JPAQ Data Element Summary Statistics

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
1	The nursing student demonstrates a clear understanding of performance expectations.	22	5.86	6.77	1	7	0.91	0.68	0.000
2	The nursing student demonstrates a clear understanding of their role and the priorities for doing them.	22	5.95	6.82	1	7	0.86	0.64	0.000
3	The nursing student utilizes the feedback provided to them to improve performance.	22	5.91	6.86	1	7	0.95	0.79	0.000

A paired t-test was run on a sample of 22 nursing students (n=22) to determine whether there was a statistically significant mean difference between their understanding of performance expectations, understanding of roles and priorities for doing them, and whether they utilized the feedback provided to them to improve performance prior to and after implementation of the BAF Model. On average, nursing students demonstrated an improvement in their understanding of performance expectations (μ_d = 0.91) and their roles and responsibilities for doing them (μ_d =0.86). More importantly, nursing students demonstrated improvement in utilizing the feedback that was provided to them (μ_d =0.95). Although this study had a small sample size, these results suggest that using the BAF Model to deliver feedback does improve performance with regards to the data element.

Resources. This element focused on the tools, resources, time, and materials designed to match performance needs. Table 15 provides a summary of the average statistics for the resource elements assessed during the debriefing sessions and performance assessments.

Table 15.

JPAQ Resources Element Summary Statistics

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
4	The nursing student uses materials and equipment appropriately to do their job.	22	6.00	6.82	1	7	0.82	0.59	0.000
5	The nursing student demonstrates a clear understanding of the processes and procedures and uses them to enhance their performance.	22	5.77	6.82	1	7	1.05	0.72	0.000
6	The nursing student uses their time appropriately to follow through with tasks and responsibilities in a timely manner.	22	5.73	6.73	1	7	1.00	1.02	0.000

A paired t-test was run on a sample of 22 nursing students (n=22) to determine whether there was a statistically significant mean difference between nursing students using the materials and equipment required to carry out the job, understanding of processes and procedures as well as using them, and using their time appropriately to follow through with their tasks and responsibilities in a timely manner to improve performance prior to and after implementation of the BAF Model. On average, nursing students improved their usage of materials and equipment to do their job (μ_d = 0.82). They also demonstrated an improvement in their use and understanding of the processes and procedures (μ_d = 1.05) as well as their use of time to carry out the tasks and responsibilities in a timely manner (μ_d = 1.00). Although this study had a small sample size, these results suggest that using the BAF Model to deliver feedback does improve performance with regards to the resources element.

Incentives. This element focused on the financial and non-financial incentives, opportunities for career development, and clear consequences for poor performance. Table 16

provides a summary of the average statistics for the incentive elements assessed during the debriefing sessions and performance assessments.

Table 16.

JPAQ Incentives Element Summary Statistics

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
7	The nursing student is someone who would make an effective supervisor.	20	5.50	6.35	1	7	0.85	0.99	0.001
8	The nursing student abides by the measurement and reporting systems in place to track appropriate tasks and/or results.	19	6.05	6.84	1	7	0.79	0.42	0.000
9	The nursing student is interested in continuing to develop new skills and to grow as a professional.	22	6.27	6.82	1	7	0.55	0.51	0.000

A paired t-test was run on a sample of 20 nursing students (n=20) to determine whether there was a statistically significant mean difference between nursing students making an effective supervisor. Results suggested an improvement in the number of nursing students that would make an effective supervisor (μ_d =0.85). A paired t-test was also run on a sample of 19 nursing students (n=19) to determine whether there was a statistically significant mean difference between nursing students who abided by the measurement and reporting systems in place to track appropriate tasks and/or results. Results suggested an improvement in their correct usage of reporting systems to track tasks and/or results (μ_d =0.79). A paired t-test was run on a sample of 22 nursing students (n=22) to identify if there was a statistically significant mean difference between nursing students who demonstrated an interest in developing new skills to grow as a professional. Results indicated an improvement among nursing students who were interested in developing new skills to grow as a professional (μ_d =0.55). Although this study had a small

sample size, these results suggest that using the BAF Model to deliver feedback does improve performance with regards to the incentives element.

Individual. The JPAQ included nine questions to account for the three elements found at the individual level. Questions 10 through 12 were dedicated to the knowledge element, questions 13 through 15 were dedicated to the capacity element, and questions 16 through 18 were dedicated to the motives element. Each of the elements was accounted for since they had the ability to affect an individual's overall performance.

Knowledge. This element focused on the placement of the performance into an appropriate position and the training needed to match the requirements to enable exemplary performance. Table 17 provides a summary of the average statistics for the knowledge elements assessed during the debriefing sessions and performance assessments.

Table 17.

JPAQ Knowledge Element Summary Statistics

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
10	The nursing student understands how their role impacts organizational performance.	22	5.82	6.68	1	7	0.86	0.89	0.000
11	The nursing student demonstrates appropriate knowledge to perform the job and takes responsibility for their actions.	22	5.95	6.77	1	7	0.82	0.59	0.000
12	The nursing student demonstrates a willingness to listen to what others have to say.	22	6.00	6.82	1	7	0.82	0.73	0.000

A paired t-test was run on a sample of 22 nursing students (n=22) to determine whether there was a statistically significant mean difference between nursing students understanding of

how their role impacts organizational performance, demonstrating their knowledge to perform their job while taking responsibility for their actions, and demonstrating a willingness to listen to what others say. On average, nursing students improved the understanding of how their role impacts organizational performance (μ_d =0.86). Similarly, nursing students demonstrated an improvement in their knowledge to perform the job and taking responsibility for their actions (μ_d =0.82) as well as willingness to listen to what others have to say (μ_d =0.82). Although this study had a small sample size, these results suggest that using the BAF Model to deliver feedback does improve performance with regards to the knowledge element.

Capacity. This element focused on the scheduling performance to match peak performance, required aids, physical shaping, adaptation, and selection. Table 18 provides a summary of the average statistics for the capacity elements assessed during the debriefing sessions and performance assessments.

Table 18.

JPAQ Capacity Element Summary Statistics

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
13	The nursing student demonstrates the necessary skills to perform the job adequately.	22	5.73	6.73	1	7	1.00	0.62	0.000
14	The nursing student always puts forth their best effort without the need for reminders.	22	5.86	6.73	1	7	0.86	0.83	0.000
15	The nursing student demonstrates the ability to learn what is expected to be successful on the job.	22	6.05	6.82	1	7	0.77	0.43	0.000

A paired t-test was run on a sample of 22 nursing students (n=22) to determine whether there was a statistically significant mean difference between nursing students demonstrating the

necessary skills to perform the job adequately, putting forth the effort without the need for reminders, and demonstrating the ability to learn what is expects to be successful on the job. On average, nursing students demonstrated an improvement with their skills to perform the job adequately (μ_d =1.00). Similarly, nursing students improved with putting forth their best efforts without requiring reminders (μ_d =0.86). Last, nursing students demonstrated an improvement with their ability to learn what was expected to be successful as a nurse (μ_d =0.77). Although this study had a small sample size, these results suggest that using the BAF Model to deliver feedback does improve performance with regards to the capacity element.

Motives. This element focused on the nursing student's motive to work and ensuring those recruited matched the realities of the situation. Table 19 provides a summary of the average statistics for the motive elements assessed during the debriefing sessions and performance assessments.

Table 19.

JPAQ Motive Element Summary Statistics

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
16	The nursing student was selected to match the realities of the work environment.	20	6.10	6.90	1	7	0.80	0.41	0.000
17	The nursing student is recognized with financial or non-financial rewards when great work is produced.	17	5.88	6.76	1	7	0.88	1.11	0.005
18	The nursing student demonstrates the desire to do their job without the need for rewards.	22	5.86	6.73	1	7	0.86	0.83	0.000

A paired t-test was run on a sample of 20 nursing students (*n*=20) to determine whether there was a statistically significant mean difference between nursing students who were selected

to match the realities of the work environment. Results suggested an improvement among matching the nursing student with the realities of the work environment (μ_d =0.80). A paired t-test was also run on a sample of 17 nursing students (n=17) to determine whether the student was recognized with financial or non-financial rewards when producing great work. Results suggested an improvement in the financial and non-financial rewards for producing great work (μ_d =0.88). A paired t-test was run on a sample of 22 nursing students (n=22) to identify if there was a statistically significant mean difference between nursing students who demonstrated their desire to do the job without the need for rewards. Results indicated more students demonstrated the desire to complete the job without the need for rewards, thus suggesting an improvement (μ_d =0.86). Overall, although this study had a small sample size, these results suggest that using the BAF Model to deliver feedback does improve performance with regards to the motive element.

Fill-in responses. A part of a nursing educator's responsibility is to ensure what is learned in the classroom environment is carried over into the performance environment. In order to assess whether nursing students learned the material and could apply it to relative situations, it was necessary to ensure best practices that were learned in the classroom were also experienced firsthand during the clinical rotation. The questionnaire contained two questions that required the nursing educator to fill in their answer for each nursing student assessed to further understand their performance. The first question focused on any instances in which the nursing student exhibited differences in best practices learned in the classroom and practiced in the performance environment. Results indicated nursing students (n=4) exhibited consistent techniques between the learning and performance environment. The second question focused on additional comments that were important to note, but not captured in the questionnaire. Results indicated the nursing students (n=4) were self-motivated at the beginning of the study and showed signs of excelling at

the end of the semester. Due to the small sample size, it is difficult to ascertain whether the student's self-motivation, the BAF Model, both, or something else contributed to the nursing students excelling in their performance.

Nursing Student Feedback Receptivity

Attitude Survey. In order to assess attitudes towards receiving feedback, nursing students were asked to complete the attitude survey before and after being exposed to feedback using the BAF Model. The survey was broken down into three parts including general information about the student's enrollment status, feelings, behaviors, thoughts, and perceptions before, during, and after receiving feedback, and differences noticed between best practices in a school setting versus clinical environment. A seven-point Likert Scale allowed the nursing student to express how much they agreed or disagreed with each particular statement; all scales were scored numerically and then compared with one another to determine whether nursing students receptivity changed after exposure to the BAF Model.

General information. Students reported their length of time in the program, class level, and how long they have been assigned to their current instructor. Table's 20, 21, and 22 shows a summary of the general information.

Table 20.

Length of Experience in ODU's Pre-Licensure BSN Program for Students

Assigned Course/Experience Level	
2nd Semester Accelerated	6
6th Semester Traditional	3
6th Semester Accelerated	5

Table 21.

Class Level for Nursing Students in ODU's Pre-Licensure BSN Program

Class Level	
Junior	5
Senior	9

Table 22.

Length of Time Assigned to Current Instructor Reported by Participants

Total Time Assigned to Instructor	
0 – 6 months	6
6 – 12 months	2
1 – 2 years	6

Feelings, behaviors, thoughts, and perceptions. The survey consisted of 30 positive and negative statements that were later categorized into five subcategories including feelings leading up to feedback, feelings during feedback, actions exhibited during feedback, thoughts about feedback received, and overall perceptions of feedback. Although the survey was categorized into subcategories, each statement was assessed independently of one another. This was done to ensure the results reflected each statement; positive statements will be assessed differently from the negative statements to determine whether receptivity improved. This is important to note because some scores that increase do not automatically mean student's feelings behaviors, thoughts, or perceptions improved.

Feelings leading up to feedback sessions. There were six statements that focused on the nursing student's feelings leading up to feedback. Table 23 provides a summary of the average statistics for the feelings nursing students exhibited leading up to feedback sessions.

Table 23.

Feelings Exhibited by Nursing Students Leading Up to Feedback Sessions

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
1	I am open to receiving feedback from my supervisor.	14	6.79	6.86	1	7	0.07	0.27	0.336
6	I often worry about future feedback sessions.	14	3.57	4.00	1	7	0.43	1.99	0.435
13	When I am about to receive feedback, I feel anxious.	14	4.71	4.50	1	7	-0.21	1.12	0.487
14	Before feedback sessions begin, I feel nervous for what is about to come.	14	4.21	4.29	1	7	0.08	1.27	0.836
16	I feel apprehensive prior to feedback sessions.	14	3.57	4.21	1	7	0.64	1.55	0.145
18	I feel feedback is only given to me when I am doing something wrong.	14	2.86	3.14	1	7	0.29	2.09	0.618

Of the six statements assessed, two were viewed as positive and four were viewed as negative. A paired t-test was run on a sample of 14 nursing students (n=14) to determine whether there was a statistically significant mean difference between feelings exhibited leading up to feedback sessions. Results suggested student's feelings about receiving feedback from their supervisor improved (μ_d =0.07) and grew less anxious when they were about to receive feedback (μ_d = -0.21). Contrary to this, results suggested that nursing students grew more worried about future feedback sessions (μ_d =0.43) and reported feeling more nervous about what was to come before feedback sessions after the implementation of the BAF Model (μ_d =0.08). Results also suggested nursing students grew more apprehensive prior to feedback sessions (μ_d =0.64) and only felt that feedback was delivered to them when they were doing something wrong (μ_d =0.29). Despite the nursing student's feelings improving and declining leading up to feedback sessions, none of the statements yielded statistically significant results due to the small sample size and the p-value being greater than 0.05.

Feelings during feedback sessions. There were 10 statements that focused on the nursing student's feelings during feedback sessions. Table 24 provides a summary of the average statistics for the feelings nursing students exhibited during feedback sessions.

Table 24.

Feelings Exhibited by Nursing Students During Feedback Sessions

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
2	I am excited to participate in feedback sessions with my supervisor.	14	6.50	6.21	1	7	-0.29	1.14	0.365
5	I feel comfortable when my supervisor gives me feedback.	14	6.57	6.21	1	7	-0.36	1.28	0.315
7	I feel the feedback given to me is fair.	14	6.43	5.93	1	7	-0.50	1.91	0.346
10	I feel the way feedback is delivered to me is effective.	14	6.36	6.21	1	7	-0.14	0.77	0.5
11	I feel the feedback delivered to me is constructive.	14	6.43	6.5	1	7	0.07	0.47	0.583
15	I often feel the feedback I receive is behavior-specific.	13	3.38	3.62	1	7	0.23	1.42	0.57
27	I feel the feedback I receive is clear and specific.	14	6.07	5.86	1	7	-0.21	1.12	0.487
28	I feel anxious when I attend feedback sessions.	13	4.15	4.08	1	7	-0.08	1.80	0.88
29	I feel excited when I receive positive feedback.	14	6.64	6.57	1	7	-0.07	0.47	0.583
30	I feel disappointed if I receive negative feedback.	14	3.71	4.79	1	7	1.07	1.77	0.042

Of the 10 statements assessed, eight were viewed as positive and two were viewed as negative. A paired t-test was run on a sample of 14 nursing students (n=14) to determine whether there was a statistically significant mean difference between feelings exhibited during feedback sessions. Results suggested students became less excited when they had to participate in feedback sessions with their supervisor (μ_d = -0.29) and grew less comfortable when their supervisor provided feedback to them (μ_d = -0.36). Similarly, nursing student's felt the feedback they received was not fair (μ_d = -0.50) nor was it effective (μ_d = -0.14). They also felt less excited

about receiving positive feedback (μ_d = -0.07) and reported an increase in feeling disappointed when receiving negative feedback (μ_d = 1.07). Contrary to this, nursing student's felt the feedback delivered was more constructive (μ_d = 0.07) despite not being clear and specific (μ_d = -0.21).

In two instances a paired t-test was run on a sample of 13 nursing students (n=13) to determine whether there was a statistically significant mean difference between feelings exhibited during feedback sessions. Results indicated nursing students felt the feedback was behavior specific (μ_d = 0.23), but still exhibited feelings of anxiety when attending feedback sessions (μ_d = -0.08). Despite the nursing student's feelings improving and declining during feedback sessions, none of the statements yielded statistically significant results due to the small sample size and the p-value being greater than 0.05.

Actions during feedback sessions. There were four statements that focused on the actions the nursing students exhibited during feedback sessions. Table 25 provides a summary of the average statistics for the actions nursing students exhibited during feedback sessions.

Table 25.

Actions Exhibited by Nursing Students During Feedback Sessions

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
3	I listen to what my supervisor is saying.	14	6.79	6.86	1	7	0.07	0.27	0.336
17	I often fidget during feedback sessions.	14	3.36	3.71	1	7	0.36	1.65	0.431
25	I get angry if I receive negative feedback.	14	1.86	2.07	1	7	0.21	1.67	0.64
26	I become defensive when I receive negative feedback	14	2.14	2.43	1	7	0.29	1.68	0.537

Of the four statements assessed, one was viewed as positive and three were viewed as negative. A paired t-test was run on a sample of 14 nursing students (n=14) to determine whether

there was a statistically significant mean difference between actions exhibited during feedback sessions. Results suggested students listened more to what their supervisor was saying (μ_d = 0.07). Although they were listening to the feedback their supervisor was delivering, nursing students fidgeted more (μ_d = 0.36) during the session and grew angrier (μ_d = 0.21) and more defensive (μ_d = 0.29) if negative feedback was received. Although the nursing student's actions improved or deteriorated during feedback sessions, none of the statements yielded statistically significant results due to the small sample size and the p-value being greater than 0.05.

Thoughts about receiving feedback. There were eight statements that focused on the nursing student's thoughts about receiving feedback. Table 26 provides a summary of the average statistics for the thoughts nursing students exhibited about receiving feedback.

Table 26.

Thoughts of Nursing Students About Receiving Feedback

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
4	I utilize the feedback given to me in future situations.	14	6.93	6.86	1	7	-0.07	0.27	0.336
8	I understand the feedback my supervisor gives me.	14	6.43	6.5	1	7	0.07	0.62	0.671
9	I like the way my supervisor delivers feedback to me.	14	6.21	6.21	1	7	0.00	0.68	1
19	I keep feedback in perspective and do not over react.	14	5.93	6.14	1	7	0.21	0.97	0.426
20	I feel motivated to use the feedback delivered to me.	14	6.64	6.57	1	7	-0.07	1.00	0.793
21	I am hopeful that I will take the feedback and apply it future situations.	14	6.71	6.71	1	7	0.00	0.68	1
22	I think about the feedback sessions long after they are given.	14	5.43	6.14	1	7	0.71	2.16	0.239
23	I often criticize myself after receiving negative feedback.	14	5.21	5	1	7	-0.21	1.48	0.596

Of the eight statements assessed, seven were viewed as positive and one was viewed as negative. A paired t-test was run on a sample of 14 nursing students (n=14) to determine whether there was a statistically significant mean difference between the thoughts of nursing students about receiving feedback. Results suggested student's thought more about feedback sessions long after they were given (μ_d = 0.71), kept feedback in perspective and did not over react (μ_d = 0.21), but did criticize themselves more if negative feedback was received (μ_d = -0.21). On the other hand, results suggested there was a decrease in students using the feedback given to them in future situations (μ_d = -0.07) as well as the motivation to use the feedback given to them (μ_d = -0.07), but demonstrated an increase in student's understanding of the feedback given (μ_d = 0.07). Results also suggested there was no change in the nursing student's thoughts about liking the way their supervisor delivered feedback to them (μ_d = 0.00) and being hopeful towards applying the feedback received in future situations (μ_d = 0.00). Although the nursing student's thoughts about receiving feedback improved, deteriorated, or stayed the same during feedback sessions, none of the statements yielded statistically significant results due to the small sample size and the p-value being greater than 0.05.

Perceptions about feedback. There were two statements that focused on the nursing student's perceptions about receiving feedback. Table 27 provides a summary of the average statistics for the nursing student's perceptions about feedback.

Table 27.

Perceptions of Nursing Students About Receiving Feedback

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
12	I perceive feedback as a positive thing	14	6.86	6.43	1	7	-0.43	1.09	0.165
24	I perceive feedback as a negative thing.	14	1.86	2.29	1	7	0.43	1.45	0.29

Of the two statements assessed, one was viewed as positive and one was viewed as negative. A paired t-test was run on a sample of 14 nursing students (n=14) to determine whether there was a statistically significant mean difference between the nursing student's perception surrounding feedback. Results suggested less students perceived feedback as a positive thing (μ_d = -0.43) and more as a negative thing (μ_d = 0.43). Although the nursing student's perceptions of feedback deteriorated, none of the statements yielded statistically significant results due to the small sample size and the p-value being greater than 0.05.

Results also uncovered that of the 14 nursing students who participated in the pre- and post-attitude survey, only seven nursing students were formally assessed by their nursing educator using the BAF Model. After running the abovementioned paired t-tests collectively for each subcategory, I ran two separate paired t-tests for each of the subcategories to determine if there was any statistical significance between those who participated in the pre- and post-attitude survey and were formally assessed by their nursing educator using the BAF Model and those who participated in the pre- and post-attitude survey and were not formally assessed by their nursing educator using the BAF Model. Although the sample size was small, the results did not determine any differences between the two groups with regards to their feelings leading up to feedback, feelings during feedback, actions exhibited during feedback, thoughts about feedback received, and overall perceptions of feedback.

In summary, the overall results from the nursing student's attitude survey indicated that although there were some improvements and declines among the feelings, thoughts, actions, and perceptions of feedback before, during, and after the session, the results were not statistically significant due to the small sample size; therefore, the results may have been due to chance.

Fill-in responses. In order for instructors to expect nursing students to perform at a certain level, it was necessary to ensure best practices that were taught in the classroom were also experienced firsthand during the clinical rotation. The survey contained two questions that required the nursing student to fill in their answer to further understand the nursing student's feelings, behaviors, thoughts, and perceptions before, during, and after participating in formal feedback sessions. The first question focused on difference in best practices taught in school and actual practices seen during clinical rotations. Results indicated nursing students (n=6) identified two major difference in best practices taught in the classroom versus what was experienced during their clinical rotation. Of the nursing students who answered the first question, five identified that instructors took shortcuts whether it was with patient identifiers, giving medication, or during implementation of care plans while one noted instructors exhibited unethical behavior, such as diluting morphine, giving all medications through one line, or not remaining sterile during sterile procedures. It is difficult to expect nursing students to perform to a certain level when the instructors consistently cut corners and do not perform ethical practices, as taught in the classroom. The second question focused on additional comments that were important to note, but not captured in the survey. Results indicated the nursing students (n=3) were in agreement the most important thing they sought out that was not captured included receiving additional feedback including positive feedback that was specific and clear; not just receiving feedback when a mistake was made. Although this study had a small sample size, these results suggested implementing the BAF Model more frequently could aid in nursing students receiving more feedback that is not just designed to improve performance, but to also praise current performance.

Nursing Educator Feedback Perception

Perception Survey. In order to assess the nursing educator's perception towards delivering feedback, nursing educators were asked to complete the perception survey before and after using the BAF Model to deliver feedback to the nursing students they oversaw. The survey consisted of 50 statements that were broken down into four parts including general information about the nursing educator's tenure in ODU's pre-licensure BSN program and number of students they oversaw, experiences with the facilitator guide, experiences with the BAF Model, and experiences with delivering feedback; the pre-perception survey only included 18 statements and questions that focused on general information and experiences with delivering feedback prior to learning about the BAF Model.

General Information. Instructors reported their length of time as an instructor in ODU's pre-licensure BSN program and how many students they oversaw. Table's 28 and 29 show a summary of the instructor's general information.

Table 28.

Number of Years of Experience in ODU's Pre-Licensure BSN Program for Nursing Educators

Years of Experience in the Pre-Licensure BSN Program	
0 – 2 years	2
3 – 5 years	0
6 – 9 years	0
10 -15 years	1
16+ years	2

Table 29.

Number of Supervised Students Reported by Participants

Total Students Supervised Per Instructor	
CHS07N	2
OD30E	7
SA30E	7
IC09A	10+
CC02A	10+

Facilitator guide. There were 12 statements that focused on the nursing educator's experiences with the facilitator guide. Table 30 provides a summary of the average statistics for the nursing educator's experiences with the facilitator guide.

Table 30.

Nursing Educator's Experiences Using the Facilitator Guide

#	Statement	*n*	Mean	Sd	Min	Max
4a	The facilitator guide was easy to navigate.	5	6.60	0.49	1	7
4b	The typeface, font size, and color were easy to read.	5	6.60	0.49	1	7
4c	Course goals and objectives were clearly identified.	5	6.60	0.49	1	7
4d	The information presented was applicable and appropriate.	5	6.60	0.49	1	7
4e	The training assisted in developing skills to deliver effective behavior-specific feedback.	5	6.20	0.98	1	7
4f	Overall, the course content and activities were relevant to the topic.	5	6.60	0.49	1	7
4g	The training was delivered at a pace that I could understand the content.	5	5.40	1.85	1	7
4h	The facilitator guide used an effective delivery format.	5	6.60	0.49	1	7
4i	Although a guide, I was able to have my questions answered.	5	6.80	0.40	1	7
4j	I was provided reference materials for later use.	5	7.00	0.36	1	7
4k	Completing the training motivates me to provide behavior-specific feedback.	5	6.60	0.49	1	7
4l	My overall experience with the training has been positive.	5	6.80	0.40	1	7

All nursing educators (*n*=5) strongly agreed they were provided reference materials to use later in the research study (M=7.00). Despite receiving reference materials for later use, nursing educators agreed their overall experience with the facilitator guide was positive (M=6.80) and that it was easy to navigate (M=6.60), the typeface, font color, and size of the font was easy to

read (M=6.60), the course goals and objectives were clearly identified and articulated (M=6.60), and the information provided was appropriate and applicable (M=6.60). Similarly, the majority of the nursing educators agreed their overall experience with the training was positive (M=6.80) and completing the facilitator guide assisted in developing skills to deliver effective behavior-specific feedback (M=6.20) as well as motivated them to provide behavior-specific feedback (M=6.60) to their subordinate nursing students; they also agreed they were able to have their questions answered (M=6.80). In addition, nursing educators felt the delivery format for the facilitator guide was effective (M=6.60) and the content and activities found in the facilitator guide were applicable and appropriate for delivering behavior-specific feedback. Participants somewhat agreed the training was delivered at a pace that the content could be understood (M=5.40). Overall, despite the small sample size in this case study, the nursing educators exhibited positive feelings towards using the facilitator guide.

Behavioral analysis feedback model. There were 16 statements that focused on the nursing educator's understanding of and experiences with the BAF Model. Table 31 provides a summary of the average statistics for the nursing educator's understanding and experiences with the BAF Model.

Table 31.

Nursing Educator's Experiences Using the Behavioral Analysis Feedback Model

#	Statement	*n*	Mean	Sd	Min	Max
7a	The model made sense to me.	5	6.40	0.80	1	7
7b	The model was easy to follow.	5	6.40	0.80	1	7
7c	The model served as a guide for delivering behavior-specific feedback.	5	6.60	0.49	1	7
7d	The environmental components were clearly articulated.	5	6.80	0.40	1	7
7e	Examples of environmental factors were provided.	5	7.00	0.00	1	7

7f	The individual components were clearly articulated.	5	6.80	0.40	1	7
7g	Examples of individual factors were provided.	5	7.00	0.00	1	7
7h	The four steps for delivering behavior-specific feedback were clearly articulated.	5	6.60	0.80	1	7
7i	The actions in step one (ask) were appropriate for delivering behavior-specific feedback.	5	6.40	0.80	1	7
7j	The actions in step two (discuss) were appropriate for delivering behavior-specific feedback.	5	6.60	0.49	1	7
7k	The actions in step three (ask) were appropriate for delivering behavior-specific feedback.	5	6.60	0.49	1	7
7l	The actions in step four (evaluate) were appropriate for delivering behavior-specific feedback.	5	6.60	0.49	1	7
7m	The model encouraged feedback to be behavior-specific.	5	6.60	0.49	1	7
7n	The model led to frequent communication between the nursing student and myself.	5	6.40	0.80	1	7
7o	This feedback model assisted with increasing comfort levels for delivering behavior-specific feedback.	5	6.40	0.80	1	7
7p	Implementing the model assisted with influencing the nursing student's behavior in a positive way.	5	6.60	0.49	1	7

On average, participants agreed the model made sense (M=6.40), was easy to follow (M=6.40), and served as a guide for delivering behavior-specific feedback (M=6.60). In addition, the majority of the nursing educators agreed the model included the environmental components (M=6.80) and individual components (M=6.80) needed to deliver behavior-specific feedback; all strongly agreed examples of environmental components (M=7.00) and individual components (M=7.00) were present in the explanation of the BAF Model. Similarly, on average, the nursing educators agreed the four steps for delivering behavior-specific feedback were clearly articulated (M=6.60) and the actions in steps one (M=6.40), two (M=6.60), three (M=6.60), and four

(M=6.60) were appropriate for delivering behavior-specific feedback. In addition, the nursing educators agreed the model encouraged behavior-specific (M=6.60) feedback, led to frequent communication with the nursing students (M=6.40), increased comfort levels for delivering behavior-specific feedback (M=6.40), and assisted with influencing the nursing student's behavior in a positive way (M=6.60). Overall, despite the small sample size in this case study, the nursing educators exhibited positive feelings towards using the BAF Model.

Delivering feedback. There were 12 statements that focused on the nursing educator's feelings for delivering feedback to nursing student based on using the BAF Model to deliver feedback. Table 32 provides a summary of the average statistics for the nursing educator's understanding and experiences with delivering feedback using the BAF Model.

Table 32.

Nursing Educator's Experiences Delivering Feedback

#	Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
10a	I feel (more) confident in my ability to provide effective feedback to nursing students.	5	6.20	6.20	1	7	0.00	1.87	1.000
10b	I feel (better) equipped to communicate clear and specific guidance for my nursing student	5	6.20	6.40	1	7	0.20	1.64	0.799
10c	I (still) feel anxious when I have to provide feedback to nursing students.	5	3.40	3.00	1	7	-0.40	0.55	0.178
10d	I feel (more) prepared to handle difficult feedback situations.	5	5.40	5.60	1	7	0.20	0.84	0.621
10e	I feel less apprehensive when delivering feedback.	5	5.20	4.20	1	7	-1.00	2.55	0.430
10f	I feel (more) knowledgeable in delivering behavior-specific feedback.	5	5.20	6.40	1	7	1.20	1.10	0.070

10g	I feel the need for more feedback training in order to be successful for delivering behavior-specific feedback.	5	5.40	4.20	1	7	-1.20	1.30	0.109
10h	I have all of the necessary tools and resources to provide effective feedback.	5	5.20	6.20	1	7	1.00	1.00	0.089
10i	Having (this) a specific debriefing model to follow as a resource increases my motivation to provide feedback.	5	5.40	6.40	1	7	1.00	1.41	0.189
10j	I feel the feedback I provide influences nursing student's behavior in the way I hoped.	5	5.40	6.40	1	7	1.00	1.58	0.230
10k	Nursing students are (were more) receptive towards receiving the feedback I provide.	5	5.40	5.80	1	7	0.40	1.67	0.621
10l	I will continue to deliver feedback to nursing students using my current methods.	4	4.50	6.50	1	7	2.00	0.82	0.016

Of the 12 statements assessed, nine were viewed as positive and three was viewed as negative. A paired t-test was run on a sample of five nursing educators (n=5) to determine whether there was a statistically significant mean difference between the nursing educator's feelings surrounding delivering feedback using the BAF Model. On average, nursing educators agreed they had the necessary tools and resources to provide effective feedback (μ_d = 1.00) and felt that having the BAF Model to use as a resource increased their motivation to provide feedback to nursing students (μ_d = 1.00). In addition, nursing educators felt more knowledgeable with delivering behavior-specific feedback (μ_d = 1.20) and felt the nursing students were more receptive towards receiving the feedback provided (μ_d = 0.40). Results also suggested the majority of nursing educators felt the nursing student's behavior was influenced in the way they hoped (μ_d = 1.00). Despite feeling better prepared to handle difficult feedback sessions (μ_d =

0.20) and communicate clear and specific guidance (μ_d = 0.20) to nursing students, there was no change in the nursing educator's confidence levels for providing effective feedback to nursing students. Similarly, nursing educators continued to feel anxious when required to provide feedback to nursing students (μ_d = -0.40), and exhibited more feelings of apprehension when delivering feedback (μ_d = -1.00). Even though nursing educators exhibited feelings of anxiety and apprehension, the majority of nursing educators reported they did not feel the need for more feedback training in order to be successful for delivering behavior specific (μ_d = -1.20). Results also suggested that nursing educators would continue to deliver feedback the way they normally do (μ_d = 2.00). Although the nursing educator's thoughts, feelings, and actions about using the BAF Model to deliver behavior-specific feedback to nursing students improved, deteriorated, or stayed the same during feedback sessions, none of the statements yielded statistically significant results due to the small sample size and the p-value being greater than 0.05.

Fill-in responses. In order to gain further insight into the nursing educator's experiences and feelings using the BAF Model, seven open-ended questions were included in the perception survey with the option for additional comments to be added to capture feelings and experiences not previously requested in the survey. The first two questions focused on what they liked about the facilitator guide and what improvements could be made to make learning more effective. Of the five nursing educators (n=5) who responded, three (60%) stated they liked the flow of the feedback model whereas one (20%) liked the examples and another instructor (20%) liked the focus of the model. Three instructors (60%) suggested adding in additional examples to make it more effective while one instructor (20%) suggested slowing down the speed and another instructor (20%) did not have any recommendations. The third and fourth questions focused on what the nursing educator liked about the feedback model and what they did not particularly care

for with the model. Of the five nursing educators (*n*=5), three (60%) really liked the fact that it included individual and environmental factors whereas the other two (40%) really liked how the model focused on behavior-specific feedback. Contrary to the likes, two instructors (40%) felt it could have been better used if they directly observed their own students, one instructor (20%) said there was not anything they did not care for, and one instructor (20%) felt there was too much paperwork. The fifth question focused on challenges experienced with delivering feedback using the model. Three nursing educators (60%) stated the biggest challenge with delivering feedback included trying to deliver it without invoking negative feelings whereas two nursing educators (40%) stated the biggest challenge included trying to deliver it without pre-conceptions of negative performance, such as being unfocused versus not understanding. The sixth question asked nursing educators about any resources needed to overcome the challenges. Of the three nursing educators (*n*=3) who responded, one instructor (33%) suggested having specific questions to ask during the sessions to determine the core of the problem whereas two instructors (66%) said there were not any other resources needed to overcome the challenges. The seventh question was tailored towards identifying differences in best practices taught in the classroom and actual practices seen on the clinical rotation floor; of the four nursing educators (*n*=4), all four instructors (100%) stated students became complacent or were in a hurry, therefore, often skipped steps while in the performance environment. Although the sample size was small, none of the instructors had additional information to capture that was not already discussed in the survey.

In summary, the overall results from the nursing educator's perception survey indicated that although there were some improvements and declines among the feelings, thoughts, actions,

and perceptions of feedback using the BAF Model, the results were not statistically significant due to the small sample size; therefore, the results may have been due to chance.

Interview. To gain further insight into each nursing educator's initial responses to using and implementing the BAF Model, each nursing educator was asked to participate in a 15-20-minute interview. Over the course of two weeks, three participants were interviewed to share their experiences with the BAF Model. Although the sample size was small, results from the interview uncovered three themes about their likes and dislikes with the facilitator guide, debriefing script, and feedback model including feedback accountability, two-way communication, and performance context.

Feedback accountability. In order for feedback to be effective, it is important for students to be aware of the performance requirements as well as for instructors to know what and how to deliver feedback effectively. Although the intention and focus of feedback may differ between organizations and industries, instructors must be held accountable for delivering behavior-specific feedback in order to invoke a change in performance. While it was mentioned that many feedback models lack a prescriptive process equipped with a script to guide an instructor through the steps for delivering feedback, results from the interview indicated the instructors liked how the model accounted for the environmental and individual factors and that the debriefing script was a resource to follow, if needed. Participant C explained that it was often easy to blame the student for poor performance, and that although they are responsible for *"evaluating the individuals and not the environment…sometimes students aren't able to do what you want them to do because the environment doesn't like it."* The participant stated the use of this model allowed them to focus more on the environmental factors, which is *"one of the things that [participant] may have talked about more this time than [participant] do in the past."*

Participant B felt the model in conjunction with the script *"helped enhance and facilitate open discussion…"* and *"actually helped them key into more specific feedback."* Similarly, Participant B indicated the debriefing script *"…helped enhance what was the existing tool for the school"* and was *"definitely"* effective for incorporating the six elements into the behavior factors. All in all, although the sample size was small, the use of the debriefing script in conjunction with the BAF Model held the nursing educators accountable for delivering feedback specific to the environmental and individual elements, which was welcomed by the nursing educators.

Two-way communication. The use of feedback in any industry is a form of communication that aids in improving performance. Although many models are designed to promote communication, more often than not, feedback models lack the component to facilitate two-way communication. While many feedback models employ the passive transfer of information to performers, the BAF Model required the performer to be an active participant in the process. Through the use of the debriefing script, the nursing educator was required to facilitate conversation with the nursing student and the nursing student was required to be an active participant in the conversation, thus replying to and contributing to the conversation. Results from the interview suggested the nursing educators saw the BAF Model and the debriefing script as a benefit to promoting two-way communication. Participant A stated the BAF Model *"…made it easier to talk with some of the students because you had a process that you would go through so you didn't miss out really on skipping anything."* Similarly, Participant A felt the model *"…enabled the process better and the students were receptive."* Participant B also stated *"…using the model and having the discussion with the student actually helped enhance and facilitate open discussion…"* Not only did Participant B feel the model facilitated open discussion, but that it also *"…helped them key into some more specific feedback."* Overall,

although the sample size was small, the BAF Model allowed instructors to deliver behavior-specific feedback while incorporating the student into the discussion, thus facilitating two-way communication.

Performance context. Despite the industry or organization, behavior-specific feedback is necessary in order to improve performance. The field of nursing, however, was unique compared to other industries because unlike other industries where performers are able to make grave mistakes and use them as learning opportunities, nursing educators were not able to let nursing students make critical mistakes; corrective action needed to be taken immediately to prevent any life-threatening changes. Results from the interview suggested the BAF Model was appropriate to implement during the formal feedback sessions; however, on-the-job feedback was required for any situations that could cause life-threatening changes. All three participants felt the model was effective for their industry. Participant A stated the model was *"appropriate and effective,"* Participant B stated they *"think it's effective in my line of work,"* and Participant C stated they *"think it's effective."* Although all three participants felt the BAF Model was appropriate and effective for the nursing context, Participant C stated they felt the model would be more effective if there were identified ways to incorporate nursing standards surrounding *"…critical thinking, nursing practice, communication, teaching, research, culture, leadership, and professionalism"* into the already existing environmental and individual elements. Participant C suggested *"creat[ing] an evaluation tool that could encompass the feedback with the questions you already have…"* Participant B, on the other hand, felt the model was effective in dealing with challenging students. This participant stated the students were *"…not quite there with the experience… because they're young, never been in the workforce, especially never a hospital environment."* Participant B felt the model, in conjunction with *"being in the role of a manager*

in the past, and being in the role of the instructor, I was able to…help them get the perception that being an employee, and what their expectations would be." Ultimately, Participant B stated *"…a lot of the things that were addressed in the tool actually helped enhance what their goal would be in their profession"* and *"can be used "for future employees [and] not just current students."* Despite the small sample size used in this study, and although deemed effective in their profession, Participants A, B, and C provided insight into how the BAF Model could include other relevant elements to ensure the model was tailored towards their profession.

Alignment of Performer Skillsets with Organizational Resources

In order to assess how the performer's skillset aligned with the organizational resources provided during clinical rotations, it was necessary to compare the data from the individual level with the data from the environmental level. Data was aligned based on three sets of data including information, instrumentation, and motivation, and comparisons occurred based on individual and collective results.

Under information, the researcher compared and analyzed information surrounding the data at the environmental level and the knowledge at the individual level. The three questions (questions one through three) pertaining to the data element and the three questions (questions 10 through 12) pertaining to the knowledge element were assessed for the nursing students the instructors evaluated, thus totaling 132 responses (n=132) for the six questions assessed. Table 33 provides a summary of the average statistics for the information elements assessed during the performance assessments. Table 34 provides a summary of the average statistics comparing each set of statements at the environmental and individual level for this component for the nursing students evaluated.

Table 33.

Overall Information Summary Statistics

Information	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
Data / Knowledge	132	5.92	6.79	1	7	0.87	0.714	0.000

Table 34.

Comparison of Information Statements Summary

Environment Statement	Individual Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
The nursing student demonstrates a clear understanding of performance expectations.	The nursing student demonstrates appropriate knowledge to perform the job and takes responsibility for their actions.	44	5.91	6.77	1	7	0.86	0.63	.000
The nursing student demonstrates a clear understanding of their role and the priorities for doing them.	The nursing student understands how their role impacts organizational performance.	44	5.89	6.75	1	7	0.86	0.77	.000
The nursing student utilizes the feedback provided to them to improve performance.	The nursing student demonstrates a willingness to listen to what others have to say.	44	5.95	6.84	1	7	0.89	0.75	.000

A paired t-test was run on a sample of nursing student's responses for all six information elements (n=132) to determine whether there was a statistically significant mean difference between pre- and post-intervention results to see how the performer's skillsets aligned with the organizational resources. Results indicated (Table 33) that the nursing student's performance aligned with the organizational resources at the information level (μ_d =0.87). More specifically, results suggested that when performance expectations were clearly articulated, the nursing

students (n=22) demonstrated the knowledge to perform the job as well as take responsibility for their actions (μ_d =0.86). In addition, when roles and priorities for doing them were clearly articulated, nursing students (n=22) were more aware of how their role affected the organization (μ_d =0.86). Last, when behavior-specific feedback was provided to nursing students to assist with improving performance, nursing students (n=22) demonstrated a willingness to listen to the feedback, which resulted in performance improvement (μ_d =0.89). Overall, although the sample size was small, these results suggested that using the BAF Model assisted with aligning the student's knowledge (placement) with environment's data (adequacy of feedback and expectation of performance) more closely, as performance improved with regards to the instrumentation component.

Under instrumentation, the researcher compared and analyzed information surrounding the resources at the environmental level with the capacity of the performer at the individual level. The three questions (questions four through six) pertaining to the resources element and the three questions (questions 13 through 15) pertaining to the capacity element were assessed for the nursing students the instructors evaluated, thus totaling 132 responses (n=132) for the six questions assessed. Table 35 provides an overall summary of the average statistics for the instrumentation elements assessed during the performance assessments. Table 36 provides a summary of the average statistics comparing each set of statements at the environmental and individual level for this component for the nursing students evaluated.

Table 35.

Overall Instrumentation Summary Statistics

Instrumentation	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
Resources / Capacity	132	5.86	6.77	1	7	0.91	0.721	000

Table 36.

Comparison of Instrumentation Statements Summary

Environment Statement	Individual Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
The nursing student uses materials and equipment appropriately to do their job.	The nursing student demonstrates the necessary skills to perform the job adequately.	44	5.86	6.77	1	7	0.91	0.60	.000
The nursing student demonstrates a clear understanding of the processes and procedures and uses them to enhance their performance.	The nursing student always puts forth their best effort without the need for reminders.	44	5.82	6.77	1	7	0.95	0.78	.000
The nursing student uses their time appropriately to follow through with tasks and responsibilities in a timely manner.	The nursing student demonstrates the ability to learn what is expected to be successful on the job.	44	5.89	6.77	1	7	0.89	0.78	.000

A paired t-test was run on a sample of nursing student's responses for all six information elements (n=132) to determine whether there was a statistically significant mean difference between pre- and post-intervention results to see how the performer's skillsets aligned with the organizational resources. Results indicated (Table 35) that the nursing student's performance aligned with the organizational resource at the instrumentation level (μ_d =0.91). The results suggested that when nursing students (n=22) were provided the materials and equipment to do

their job appropriately, they demonstrated the necessary skills to perform the job adequately (μ_d =0.91). Similarly, when the nursing student (*n*=22) demonstrated a clear understanding of the processes and procedures and used them to enhance their performance, they put forth their best effort without the need for reminders (μ_d =0.95). Last, when using their time appropriately, the nursing students (*n*=22) demonstrated the ability to learn what is expected to be successful at the job (μ_d =0.89). Overall, although the sample size was small, these results suggested that using the BAF Model assisted with aligning the student's capacity (adaption and selection) with environment's resources (tools, resources, and time) more closely, as performance improved with regards to the instrumentation component.

Under motivation, the researcher compared incentives found at the environmental level with the performer's motives at the individual level. The three questions (questions seven through nine) pertaining to the incentives element and the three questions (questions 16 through 18) pertaining to the motives element were assessed for nursing students the instructors evaluated, thus totaling 120 responses (*n*=120) for the six questions assessed. Table 37 provides an overall summary of the average statistics for the instrumentation elements assessed during the performance assessments. Table 38 provides a summary of the average statistics comparing each set of statements at the environmental and individual level for all nursing students the instructors evaluated.

Table 37.

Overall Motivation Summary Statistics

Motivation	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
Incentives / Motives	120	5.95	6.73	1	7	0.78	0.747	.000

Table 38.

Comparison of Motivation Statements Summary

Environment Statement	Individual Statement	*n*	Mean μ_1	Mean μ_2	Min	Max	Mean Difference (μ_d)	SD	Sig (2-tailed)
The nursing student is someone who would make an effective supervisor.	The nursing student was selected to match the realities of the work environment.	40	5.80	6.63	1	7	0.83	0.12	.000
The nursing student abides by the measurement and reporting systems in place to track appropriate tasks and/or results.	The nursing student is recognized with financial or non-financial rewards when great work is produced.	36	5.97	6.81	1	7	0.83	0.81	.000
The nursing student is interested in continuing to develop new skills and to grow as a professional.	The nursing student demonstrates the desire to do their job without the need for rewards.	44	6.07	6.77	1	7	0.70	0.70	.000

A paired t-test was run on a sample of nursing student's responses for all six information elements (n=120) to determine whether there was a statistically significant mean difference between pre- and post-intervention results to see how the performer's skillsets aligned with the organizational resources. Results indicated (Table 37) that the nursing student's performance aligned with the organizational resources at the instrumentation level (μ_d =0.78). The results suggested that nursing students (n=20) who were identified as potential supervisors were matched to the realities of the work environment (μ_d =0.83). Similarly, when nursing students (n=18) used the measurement and reporting systems in place to track appropriate tasks and/or results appropriately, they produced quality work and were recognized with non-financial

rewards (μ_d =0.83). Last, nursing students (n=22) who were interested in continuing to develop new skills to grow as a professional demonstrated the desire to do their job without the need for financial or non-financial rewards (μ_d =0.70). Overall, although the sample size was small, these results suggested that using the BAF Model assisted with aligning the student's motives (motives to work) with environment's incentives (financial and non-financial rewards and career development) more closely, as performance improved with regards to the instrumentation component.

CHAPTER IV

DISCUSSION

This purpose of this chapter is to provide an interpretation of the results discussed in the previous chapter. First, the results will be interpreted within the context of each research question, and comparisons will be made to the existing body of research in this field. Second, implications of the research findings will be discussed. Third, limitations of this research study will be discussed, and recommendations for future research will be addressed. Finally, the overall conclusions of this case study will be presented.

In any industry, feedback is an important component for providing individuals with the information needed to discuss their current performance against the desired performance. The use of feedback in nursing is even more critical due to the potential life-threatening mistakes performance can result in for a patient. This research study examined the effects the BAF Model had on improving performance of nursing students. It specifically examined nursing student's performance, their receptivity towards feedback, nursing educator's perception of feedback, and the alignment of the nursing student's skillsets with organizational resources. Results of this case study indicated nursing students demonstrated an improvement in their performance after experiencing feedback using the model. Similarly, the use of the BAF model demonstrated an improved alignment of the nursing student's skillset with the organizational resources provided during clinical rotation; performance improved with regards to the information, instrumentation, and motivation components at the environmental and individual level, thus suggesting a closer alignment between resources and performance. Contrary to student performance, results from this case study indicated that neither the student's receptivity of receiving feedback or the

nursing educator's perception of delivering feedback improved after being exposed to and/or implementing the BAF Model.

Through decades of research, feedback models used in industry and education fields alike have been developed and utilized in the performance environment with the intention of improving an individual's performance. Although nine feedback models were assessed for advantages, disadvantages, context, and elements of Gilbert's BEM that were incorporated, it was determined the models that do exist in nursing education center on events rather than the behaviors exuded by the nursing student (Bradley & Dreifuerst, 2016; J. Roberts & Crittenden, 2009; Wachter & Lion, 2016; Zigmont et al., 2011). Similarly, none of the models assessed included all of the individual and environmental elements from Gilbert's BEM into the feedback. The use of the BAF Model uncovered additional evidence that, similar to Gilbert's BEM, incorporating the environmental and individual elements into the BAF Model allowed the nursing educator to define worthy performance and assess the performer's output to determine if accomplishment was achieved (Krapfl, 1982). This finding supports the notion that the BAF Model is effective for delivering behavior-specific feedback to invoke performance improvement among nursing students in the performance environment. Since the literature revealed no empirically-based research studies focusing on how performance is affected when one or more environmental and/or individual elements are not accounted for, additional research focusing on how performance is affected when not all environmental or individual elements are present is needed.

Nursing Student Performance

As predicted by the body of research surrounding effective feedback (Al Wahbi, 2014), the present study uncovered evidence that the nursing educator needs to provide on-time and

specific feedback for nursing students to reach their full potential, as it provides nursing students the information needed to improve performance. Current research shows that simply providing nursing student's surface-level feedback, such as praise or the right answer, does not support the nursing student's ability to comprehend or understand the effects of their performance or use the information to help achieve or exceed the pre-established goals (Schartel, 2012). Similarly, research has found that delivering behavior-specific feedback has been proven to be more beneficial than delivering surface-level feedback because it provides the performer the desired end result and the behaviors needed to achieve the desired end result (Austermann Hula et al., 2008; Zigmont et al., 2011). By employing a set of performance standards, the nursing educator was required to deliver behavior-specific feedback to the nursing student. Results from this study support that using the BAF Model to deliver behavior-specific feedback using a list of performance standards to achieve in the performance environment led to the overall improvement of performance among nursing students. Similarly, it was uncovered that nursing students demonstrated consistent techniques between the learning environment and the performance environment. It is unknown whether this discovery is a direct link to utilizing the BAF Model or due to the motivation of the nursing student.

Similarly, the frequency and timing of the feedback also played a role in improving performance among nursing students. While there is no prescribed number of times to deliver feedback in a specified time period to invoke a permanent change in behavior, too much or too little feedback is known to be detrimental (Hemayattalab & Rostami, 2010; Lurie & Swaminathan, 2009). The use of the BAF Model required the nursing educator to communicate behavior-specific feedback during two or three formal debriefing sessions depending on the length of the clinical rotation. By employing a set number of formal debriefing sessions, the

results of the BAF Model demonstrated the number of debriefing sessions conducted were adequate for improving performance (Lurie & Swaminathan, 2009) while avoiding hindrance of the nursing student's ability to perform the required tasks due to information overload (Hemayattalab & Rostami, 2010). This coincided with the current research that shows that providing too much feedback can cause a performer to lose the ability to self-reflect on their performance and correct any errors (Rivera-Chiauzzi et al., 2016) while providing too little feedback may allow a performer to exhibit the wrong behavior far too long. Since the BAF Model employed only two or three formal debriefing sessions throughout the clinical rotation, the feedback that was delivered was considered delayed. Nursing educators assessed their student's performance and provided feedback the following week during the formal feedback session. The use of delayed feedback with the BAF Model supports the current research that delaying feedback contributes to prolonged improvement over time, as it hinges on the performer's curiosity by encouraging them to anticipate the answer, which can ultimately increase their attention when feedback is received (Austermann Hula et al., 2008). Similarly, delaying feedback has been proven to lead to better performance over time (Butler et al., 2007; Mullet et al., 2014; Phye & Andre, 1989) since performers are able to retain the material for later usage (Phye & Andre, 1989). Results of this research study coincide with the current research surrounding frequency and timing of feedback, as nursing students demonstrated improvement in their performance over the duration of the study.

Nursing Student Feedback Receptivity

Results from this research study uncovered evidence that the nursing student's receptivity towards receiving feedback did not improve or deteriorate after being exposed to the BAF Model. Although feelings, behaviors, thoughts, and perceptions leading up to, during, and after

receiving feedback shifted, there was not an overall improvement or deterioration among receptivity. Despite current research showing that performers prefer to receive feedback immediately after exhibiting the performance (Mullet et al., 2014), the lack of deterioration insinuates performers were not against the delayed feedback. Due to the results not being statistically significant, this could be an indicator that the results from the nursing students did not reflect the reality of their feelings. It could also be an indicator that not all nursing students were exposed to receiving behavior-specific feedback in accordance with the BAF Model. It was determined that only half of the nursing students (50%) who completed the *Attitude Survey* had been assessed by their respective nursing educator using the BAF Model. The other half of the nursing students (50%) did not have formal assessments completed by the nursing educator using the BAF Model; therefore, in conjunction with the lack of observation, it is impossible to determine whether the students were exposed to the BAF Model. The lack of deterioration also indicates the BAF Model may not have employed enough assessment points to affect attitudes since research concludes the frequency of feedback has the potential to affect the participant's attitudes and performance levels (Cook, 1968). Last, the lack of improvement or deterioration could be a direct result of the sample size being too small (n=14) to consider results statistically significant. Due to the inconclusive data, this research study should be replicated with a larger sample size to determine whether or not the BAF Model has an effect on nursing student's receptivity towards feedback.

Nursing Educator Feedback Perception

Three elements, including the need for training, personal experiences, and the follow-on interview, contributed to influencing the nursing educator's perception for delivering feedback. As predicted by the body of research surrounding delivering feedback (Mitchell et al., 2013), the

present study uncovered evidence that supports the need for training to deliver feedback. Nursing educators were required to participate in a self-paced training program surrounding the utilization and implementation of the BAF Model with specific regards to communicating behavior-specific feedback. Results from this research study uncovered an overwhelming agreement that the nursing educators developed the skills needed to deliver behavior-specific feedback as well as motivated them to provide behavior-specific feedback to their nursing students. This coincides with the current research that suggests direct supervisors should participate in feedback training geared towards causal analyses to identify, determine, and bridge the identified gaps in performance (Van Tiem, Moseley, & Dessinger, 2012), which goes beyond the interpersonal communication, professionalism, adequacy, and resources needed to provide effective feedback to nursing students (Mitchell et al., 2013).

Similarly, the nursing educator serves as a direct supervisor to the nursing students and is responsible for providing guidance on what is deemed acceptable for proper performance (Ashford & Cummings, 1983; London & Smither, 2002). Not only is it important for the nursing educator to know what the acceptable performance includes, but also how to communicate it in a way the nursing student can accept and understand. Results from this research study uncovered an overwhelming agreement from the nursing educators that the use of the BAF Model led to increased communication between the nursing educator and nursing student and encouraged feedback to be behavior-specific. This supports the current research that nursing educator's need to communicate desired behaviors in a receptive manner to nursing students, so they can receive, understand, and physically accomplish the behavior (Rasheed et al., 2015).

Results from this research study uncovered evidence that the nursing educator's perception towards delivering feedback improved, deteriorated, and remained the same for

different elements assessed after being exposed to the BAF Model. Current research is severely limited surrounding instructor's perceptions for delivering feedback, as research studies primarily focus on student's perceptions for receiving feedback. Although the nursing educator's thoughts, feelings, and actions about using the BAF Model to deliver behavior-specific feedback to nursing students improved, deteriorated, or stayed the same during feedback sessions, none of the statements yielded statistically significant results, thus yielding inconclusive data. The lack of statistically significant results could be a direct result of the sample size being too small (n=5). Similarly, the fact that some perceptions increased for the nursing educators implies there is a trend that results may be statistically significant if the sample size was adequate. Due to the inconclusive data, this research study should be replicated with a larger sample size to determine whether or not the BAF Model has a statistically significant effect on nursing educator's perceptions for delivering feedback.

Similarly, the responses from the follow-on interview played a role in influencing the nursing educator's perception for delivering feedback. Three themes – feedback accountability, two-way communication, and performance context – were identified. Results uncovered that in order to invoke a change in performance among nursing students, nursing educators must be held accountable for delivering behavior-specific feedback. This coincides with current research that behavior-specific feedback requires the direct supervisor to compare actual performances against an established standard of performance (Schute, 2007) from multiple time periods (Lurie & Swaminathan, 2009) in order to lead to better performance over time (Butler et al., 2007; Mullet et al., 2014; Phye & Andre, 1989).

Similarly, results from the interview yielded agreement that the BAF Model employed two-way communication due to the inclusion of the debriefing script, which required nursing

students to be active participants in the conversation. Nursing educators had to identify the environmental and individual elements to discuss with nursing students, which served as the influential factors for affecting behavior (O'Driscoll, 2003). These findings suggest that one reason nursing student's performance might have increased is because of the employment of the debriefing script, which required nursing educators to deliver behavior-specific feedback as well as including nursing students in dialogue during the formal debriefing sessions.

One unique element of this single-case study includes the performance context in which the BAF Model was assessed. As has already been discussed, the performance context for nursing educators and nursing students alike includes the potential for stressful situations with adverse outcomes and the overall feelings and emotions experienced during such an event. Responses from the follow-on interview confirm behavior-specific feedback is necessary for making sense of situations and the outcomes while reducing potential psychological harm from discussing the experiences (Huggard, 2013). Similarly, results from the interview yielded agreement that the BAF Model was effective within the performance context, as it addressed elements in the tool that served to enhance the overall goal of their profession. This coincides with current research that delivering feedback that focuses on the elements that influence behavior will assist with identifying the gap between the nursing student's current performance and the desired performance (Krapfl, 1982; Marker, 2007). Despite the overwhelming influence that the BAF Model had on improving nursing educator's perception for delivering feedback, since the results were not statistically significant, additional research needs to be conducted assessing the effects the BAF Model might have on the nursing educator's perception for delivering feedback.

Although nursing educators may feel apprehensive and anxious before, during, and after feedback sessions, it is important that the nursing educator provides the nursing student behavior-specific feedback that leads them to achieve the desired behavior. While this may not always be easy, there are some quick principles the nursing educator could apply to assist with alleviating any feelings of apprehension and anxiety. Similarly, these principals may also assist with nursing students feeling less anxious and apprehensive towards receiving feedback.

- To ensure feedback is delivered to nursing students in a receptive manner, the nursing educator should use neutral, non-judgmental language focusing on observable behaviors.
- To ensure nursing students are paying attention to the conversation at hand, have the learner repeat the desired behavior and the actions he or she will need to conduct in order to reach the desired behavior.
- If the nursing student does not engage in the conversation with the nursing educator, the nursing educator should conduct a think-aloud approach where the nursing student walks the nursing educator through the required procedures to reach the desired result.
- If the nursing student continues to repeat mistakes or fails to reach the desired behavior after repeated debriefing sessions, the nursing educator should provide the nursing student one or more worked examples in the performance environment with a step-by-step demonstration of how to perform the task or how to solve the problem.
- To invoke a change in performance, the nursing educator should look at the three perspectives – information, instrumentation, and motivation – and compare the elements at the environmental level with the individual level to determine where deficiencies lie. *E.g. compare data with knowledge, resources with capacity, and/or incentives with*

motives to determine if it is an issue at either the environmental or individual level or both that is affecting performance.

Alignment of Performer Skillsets with Organizational Resources

The relationship between environmental and individual elements that affect performance appears complex. Since the BAF Model employed the environmental and individual elements of Gilbert's BEM, alignment occurred at the environmental and individual levels for information, instrumentation, and motivation. Although looking at each element independently of one another might be an easier focus during feedback sessions, it is imperative to look at the environmental level while considering the individual level in order to bridge the gap between current performance and the desired performance (Krapfl, 1982). To do this, it was necessary to employ a systems perspective to ensure the performer's output was a direct result of the resources found at the environmental level. Research confirms that individual elements are secondary to the environmental elements for improving performance (Gilbert, 2007).

This research study uncovered evidence that the BAF Model employs a whole system perspective as well as the importance of understanding how the environmental and individual elements work together, where the disconnects are, and how performance is affected when one or more elements is unaccounted for. Results suggested there is a close alignment of the information, instrumentation, and motivation between the individual and environmental level after exposure to the BAF Model. This coincides with the current research that there is a direct correlation between the resources found in the performance environment and the performance output exhibited by the nursing student (Rummler & Brache, 2012). Last, this research uncovered evidence that a nursing student's performance is contingent upon several components,

and if performance is not adequate, it could be any number of components in the system that is not functioning properly to yield the desired result (Rummler & Brache, 2012).

Implications

Feedback in nursing education is critical, as performance can be the result of life or death outcomes for patients in the nurse's care. Although feedback is often handled on-the-job, the need for formal feedback sessions is imminent for performance improvement. The use of the BAF Model in nursing education may enhance the overall feedback process. By following the model, nurse educators are required to deliver behavior-specific feedback with explicit objectives in mind based on assessed performance. This in conjunction with the timing, language, and format of the debriefing session will aid in continuity of the sessions, thus minimizing surprises that may lead nursing students to exhibit negative feelings about receiving feedback.

In addition, the use of the BAF Model may assist with removing barriers for delivering and receiving feedback, thus enhancing the quality of learning and teaching. Nursing educators and nursing students are required to participate in an on-going dialogue surrounding performance. From identifying areas for improvement to developing a plan of action to achieve the behaviors discussed, nursing educators and nursing students are in constant communication beyond the formal debriefing sessions. This may contribute to fostering better relationships between the nursing educator and nursing student, which may lead to better decision-making abilities amidst times of chaos. It may also open the eyes of nursing educators and students about resources that might be missing in the environment, which would contribute to more efficient and effective practices during such situations. In addition, with a better relationship developed, nursing educators may feel more comfortable delivering feedback since they are better prepared to deliver behavior-specific feedback. Similarly, nursing students may feel more receptive

towards the feedback being delivered since they know what to expect during the debriefing sessions.

With educators feeling better prepared to deliver behavior-specific feedback and nursing students more receptive towards receiving feedback, the quality of learning and teaching may be enhanced. With a positive relationship and minimal to no barriers present, nursing students may feel more inquisitive and less apprehensive seeking out their instructor's knowledge and expertise. On the other hand, nursing educators who previously worried about hurting nursing student's feelings when delivering negative feedback may no longer feel this way this since feedback is delivered the same way each time with an emphasis on specific behaviors that need to be modified.

Similar to nursing education, feedback is inherent for improving performance regardless of the industry. On a broader scale, using the BAF Model at the individual, organizational, and societal level, may improve performance. At the individual level, the performer would no longer have to decipher the surface-level feedback received from their supervisor to determine the adequacy of their performance. Feedback would be meaningful and behavior-specific. Similarly, performers would not have to wait weeks or months to receive meaningful feedback, as it would be delivered regularly. Rather than being passive receivers of information, performers would be required to participate in meaningful discussions with their supervisor. Similarly, inadequate performance exhibited by the performer may not be due to performance incompetence; the meaningful discussions might facilitate discovery that resources are missing from the performer's environment to adequately perform the task. Ultimately, this may contribute to performers exhibiting positive feelings and behaviors towards receiving feedback and supervisors exhibiting positive feelings and behaviors towards delivering feedback since

potential blame for inadequacy may shift from the performer to the environment; performers may not feel as though they are being picked on or attacked for inadequacy, especially if it is discovered that something missing in the environment is contributing to the inadequacy of performance. When performers are more apt to receiving feedback and supervisors are more apt to delivering feedback, not only does the performer reap the benefits, but so does the organization.

At the organizational level, the results of this study have implications for positive social change for improving performance across nursing educators and students nationwide. An organization's goals are discussed explicitly in the company's strategic organization plan. As previously mentioned, with an improvement in individual performance, the performer will be able to yield better products and/or services, thus upholding the organization's vision and goals. Similarly, supervisors will be able to determine whether the performance is relevant to achieving the goals as well as ensuring the necessary resources are allocated appropriately to achieve the goals. The use of the BAF Model may be considered innovative for many organizations who lack feedback models for delivering timely, behavior-specific feedback.

The results of this study may have implications for positive social change for improving feedback practices across various industries nationwide. At the societal level, the goal is to ensure value is added to external clients and society, and uses the performer's job and the organization as the vehicle for adding measurable value for external clients (Kaufman, 2005). Since performance improvement serves as part of the organizational landscape (Kaufman, 2003a), performance improvement should be based on a valid and useful strategic plan that identifies, reconciles, and utilizes strategies and tactics to add value to the organization and society (Dean & Ripley, 2016). By using the BAF Model, supervisors will be provided a

strategic plan for delivering behavior-specific feedback that incorporates useful and justifiable information to support the needs of the performer while ensuring the goals and missions of the organization are met (Kaufman, 2005). In addition, the use of the BAF Model may lead to a systemic way for delivering feedback to performers, as the feedback received allows for a performer to apply what is known and not just what they know (Kaufman, 2003a). Ultimately, since experts do not always know how to do things, and providing training to performers only improves performance one-third of the time (Kaufman, 2003b), using the BAF Model may support the opportunity for strategy-driven performance improvement efforts at the individual, organizational, and societal levels.

Limitations

This research study intentionally studied a group of narrowly defined nursing educators and nursing students at one university in south eastern Virginia. The research design employed a single-case study design, which utilized purposive sampling to obtain participants. Although case studies use relevant real-world situations, the single-case study design poses several limitations. First, since purposive sampling was employed to obtain participants, it must be noted that the results of this study are not representative of the whole population since a sample was selected based on specific inclusion and exclusion criteria. Similarly, despite the applicability of using nursing educators and students in real-world situations, the findings confirmed that the research design impacted the results. A second limitation associated with the research design includes the small sample size of nursing educators (n=5) and nursing students (n=14), which contributes to a high margin of error. This means the opinions and behaviors of the participants may deviate from the whole population. Both limitations regarding the sample size affect generalizability of the research study.

Another limitation of this research study included lack of direct observation of participants. Given the fact this research study was conducted among nursing educators and nursing students, direct observation of debriefing sessions by the researcher was not allowed due to the Health Insurance Portability and Accountability Act (HIPAA). Due to this limitation, it is unknown whether the nursing educators followed the debriefing script accurately. The results of the study might have been skewed based on the way in which feedback was delivered during the debriefing session. Similarly, the overall increase in performance of the nursing students may have been the direct result of something other than the BAF Model.

A fourth limitation of this research study included the amount of paperwork needed to be completed by each participant. In addition to filling out the pre and post *Nursing Educator Perception Survey,* each nursing educator was required to fill out the *Feedback Tracker* and *Job Performance Analysis Questionnaire* for each nursing student they oversaw at each data collection point. This may have contributed to participants being dishonest with their answers. Again, without the direct observation of the nursing educator completing the debriefing sessions with their nursing students, it is unknown whether the nursing educator assessed each student's performance individually or collectively; it is possible the nursing educator pre-filled out the trackers and surveys using the same criteria for each nursing student assessed, which would skew the results of the research study.

Due to the amount of paperwork, nursing educators were given the option to complete the study for a select number of nursing students they oversaw to encourage participation while minimizing the additional workload. This is a severe limitation of the research study because it does not guarantee the nursing educator delivered behavior-specific feedback to all of their nursing students as required despite filling out the paperwork for only a select few.

The final limitation of this this research study includes the lack of utilizing a second coder to code the nursing educator interviews or fill-in responses from the performance questionnaire. The use of a second coder would have ensured internal consistency and inter-rater reliability.

Future Research

The use of a single-case study serves as one of the best ways to stimulate new research since it is specific with regards to the sample size and context. In the present study, participation was limited to nursing educators who directly supervised nursing students and did not account for the preceptors who were responsible for observing nursing student performance. Future research should be conducted with nursing educators who directly observe their nursing students in the performance environment to determine the effect the BAF Model has on improving the nursing student's transferability of learning to the performance environment and subsequent situations. Similarly, to combat small sample sizes in nursing education, future research should focus on collecting data over an extended period of time using the same nursing educators and nursing students; this may allow receptivity and perceptions to be retested as well.

In the present study, nursing educators were responsible for providing feedback during debriefing sessions and then assessing nursing student performance at a later time. Future research should focus on the length of time between when feedback is delivered and performance is assessed to determine the optimal duration for improving performance using the BAF Model. Future research could also focus on the time of day feedback is delivered to nursing students. In addition, the present research study has underscored the number of times debriefing sessions occurred between nursing educators and nursing students was sufficient for improving performance. Since research has shown the frequency of feedback has the ability to affect

performance, future research should be conducted to determine the minimum and maximum number of times feedback needs to be delivered in order for the BAF Model to be effective at improving performance with ill-structured problems. Unlike well-structured problems that yields a correct answer and may only require behavior-specific feedback to be delivered one-time, ill-structured problems often have unclear goals and do not yield a single correct answer. For this reason, it may be necessary to provide behavior-specific feedback surrounding the problem more than once; therefore, future research should focus on the number of times behavior-specific feedback is delivered during ill-structured problems to determine when and how much performance has been influenced. Last, in the present study, nursing student's performance was assessed individually and collectively. Future research should look at class levels and enrolled courses to determine the effects the BAF Model has on improving performance in novice and advanced-level nursing students. All elements discussed above in the present research study's context should also be replicated and assessed in other industries. By replicating the current research study in other industries, it may be possible to yield a larger sample size while also allowing for direct observations and assessment of transferability of learning to the performance environment to occur, thus increasing the generalizability of the findings.

Conclusion

The results of this study broaden the current literature surrounding feedback by reinforcing the need for behavior-specific feedback that focuses on the information, instrumentation, and motivation at the environment and individual levels. While the focus of feedback surrounds performance and does not distinguish between individual and environmental elements, this study suggests that feedback delivered using the BAF Model assists with identifying the gaps in performance with relation to the individual and environmental elements.

Similarly, the results of this study uncovered the need for on-going, active communication where both the nursing educator and nursing student are active participants in the conversation. This technique contributed to the nursing educator's and nursing student's ability to identify issues within the environment that affected individual performance, which then became the focus during debriefing sessions to mitigate any unwarranted performance behaviors. More specifically, the use of the BAF Model broke down the individual and environmental elements that affected performance and allowed the nursing educator to gain a better understanding about how the organizational resources align with the skillset of the performer as well as affect and contribute to the overall performance of the nursing students.

This single-case study trained nursing educators to deliver behavior-specific feedback using the BAF Model; training consisted of a self-paced facilitator guide and supplemental materials as well as all resources needed to conduct formal debriefing sessions. This study then explored the nursing educator's perception towards delivering feedback. The results of the case study indicated nursing educators felt the training received was adequate and the model itself was relevant for delivering behavior-specific feedback to nursing students. Despite their feelings towards the training and utilizing the BAF Model, results of the study show that nursing educators demonstrated some improvements and declines among their feelings, thoughts, actions, and perceptions of feedback using the BAF Model; however, the results were not statistically significant. Similarly, this study also explored the nursing student's receptivity towards receiving feedback. The results of this research study indicated nursing student's receptivity neither increased nor decreased after being exposed to feedback using the BAF Model. Although the findings indicated there were some improvements and declines among the nursing student's feelings, thoughts, actions, and perceptions of feedback before, during, and

after the session, results were not statistically significant. Continuing to research the effects the BAF Model has on a supervisor's perception for delivering behavior-specific feedback and a performer's receptivity towards receiving behavior-specific feedback in other industries is critical to the literature.

The significance of this research study was to enter a useful feedback model into education and industry to provide educators and supervisors alike a standardized way for delivering behavior-specific feedback proven to improve performance. While many feedback models allow the supervisor to passively deliver information to the performers, the BAF Model is the only feedback model that employs a prescriptive script focusing on the six components at the environmental and individual levels that can be manipulated to invoke a change in performance. Utilizing the six elements in conjunction with the prescriptive script requires the supervisor to deliver behavior-specific feedback focusing only on observable behaviors while requiring the performer to be an active participant in every feedback session. Currently, there is no feedback model other than the BAF Model that focuses on behaviors at the environmental and individual levels while utilizing a prescriptive script for delivering behavior-specific feedback. Although the sample size of this single-case study was small, the results suggested the use of the BAF Model in nursing education assisted with improving performance of nursing students. For this reason, the BAF Model may serve as a useful feedback model for delivering behavior-specific feedback proven to improve performance in other industries.

References

Al Wahbi, A. (2014). The need for faculty training programs in effective feedback provision. *Advances in Medical Education & Practice, 5*, 263-268.

Andersen, E. (2016). Enhancing the clinical reflective capacities of nursing students. *Nurse Education in Practice, 19*, 31-35.

Ashford, S. J., & Cummings, L. L. (1983). Feedback as an individual resource: Personal strategies of creating information. *Organizational Behavior and Human Performance, 32*(3), 370-398.

Austermann Hula, S. N., Robin, D. A., Maas, E., Ballard, K. J., & Schmidt, R. A. (2008). Effects of feedback frequency and timing on acquisition, retention, and transfer of speech skills in acquired apraxia of speech. *Journal of Speech, Language & Hearing Research, 51*(5), 1088-1113 1026p.

Bailey, E. (2007). *Improving organizational effectiveness.* Paper presented at the LavaCon Conference on Content Strategy, New Orleans, LA.

Bommelje, R. (2012). The Listening Circle: Using the SBI Model to Enhance Peer Feedback. *International Journal of Listening, 26*(2), 67-70.

Brackbill, Y., Bravos, A., & Starr, R. H. (1962). Delay-improved retention of a difficult task. *Journal Of Comparative And Physiological Psychology, 55*, 947-952.

Brackbill, Y., & Kappy, M. S. (1962). Delay of reinforcement and retention. *Journal Of Comparative And Physiological Psychology, 55*(1), 14-18.

Bradley, C. S., & Dreifuerst, K. T. (2016). Pilot Testing the Debriefing for Meaningful Learning Evaluation Scale. *Clinical Simulation in Nursing, 12*(7), 277-280.

Buron, R. J., & McDonald-Mann, D. (2000). Leadership through feedback. *Leadership in Action, 20*(1), 8-13.

Butler, A. C., Karpicke, J. D., & Roediger, H. L., III. (2007). The Effect of Type and Timing of Feedback on Learning from Multiple-Choice Tests. *Journal of Experimental Psychology: Applied, 13*(4), 273-281.

Cant, R. P., & Cooper, S. J. (2011). The benefits of debriefing as formative feedback in nurse education. *Australian Journal of Advanced Nursing, 29*(1), 37-47.

Chan, K. M. K., Li, M., Law, T. Y., & Yiu, E. M. L. (2012). Effects of immediate feedback on learning auditory perceptual voice quality evaluation. *International Journal of Speech-Language Pathology, 14*(4), 363-369 367p.

Cook, D. M. (1968). The Impact on Managers of Frequency Feedback. *Academy of Management Journal, 11*(3), 263-277.

Crossman, D. C. (2010). Gilbert's Behavior Engineering Model: Contemporary support for an established theory. *Performance Improvement Quarterly, 23*(1), 31-52.

Davies, E. (1995). Reflective practice: a focus for caring. *Journal of Nursing Education, 34*(4), 167-174.

Dean, P. J., & Ripley, D. E. (2016). Chapter 9: Roger Kaufman, PhD: The Needs Assessment Audit. *Performance Improvement, 55*(7), 43-46.

Dobbelaer, M. J., Prins, F. J., & van Dongen, D. (2013). The impact of feedback training for inspectors. *European Journal of Training and Development, 37*(1), 86-104.

French, J. C., Colbert, C. Y., Pien, L. C., Dannefer, E. F., & Taylor, C. A. (2015). Targeted feedback in the milestones era: Utilization of the ask-tell-ask feedback model to promote reflection and self-assessment. *Journal of Surgical Education, 72*(6), e274-e279.

Gilbert, T. F. (2007). *Human competence: Engienering worthy performance*. San Francisco, CA Pfeiffer.

Grant, A. M. (2011). Is it time to regrow the grow model? Issues related to teaching coaching session structures. *Coaching Psychologist, 7*(2), 118-126.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 31.

Hawkins, S. C., Osborne, A., Schofield, S. J., Pournaras, D. J., & Chester, J. F. (2012). Improving the accuracy of self-assessment of practical clinical skills using video feedback - The importance of including benchmarks. *Medical Teacher, 34*(4), 279-284.

Hays, D. G., & Singh, A. A. (2012). *Qualitative inquiry in clinical and educational settings*. New York, New York: Guilford.

Hemayattalab, R., & Rostami, L. R. (2010). Effects of frequency of feedback on the learning of motor skill in individuals with cerebral palsy. *Research in Developmental Disabilities, 31*, 212-217.

Hendricks, S. M., Wallace, L. S., Narwold, L., Guy, G., & Wallace, D. (2013). Comparing the Effectiveness, Practice Opportunities, and Satisfaction of the Preceptored Clinical and the Traditional Clinical for Nursing Students. *Nursing Education Perspectives (National League for Nursing), 34*(5), 310-314.

Huggard, J. (2013). Debriefing: a valuable component of staff support. *International Journal of Palliative Nursing, 19*(5), 212-214.

Ifenthaler, D. (2009). Model-Based Feedback for Improving Expertise and Expert Performance. *Technology, Instruction, Cognition & Learning, 7*(2), 83-101.

Kaufman, R. (2003a). Debunking conventional wisdom: Selecting methods and processes that add value. *Performance Improvement, 42*(6), 5-8.

Kaufman, R. (2003b). Value, value where is the value? *Performance Improvement, 42*(2), 36-38.

Kaufman, R. (2005). Defining and Delivering Measurable Value: A Mega Thinking and Planning Primer. *Performance Improvement Quarterly*, *18*(3), 6-16.

Kirkland, K., Manoogian, S., & Center for Creative, L. (1998). *Ongoing feedback: How to get it, how to use it*. Greensboro, N.C.: Center for Creative Leadership.

Krapfl, J. E. (1982). A review of Gilbert's human competence: Engineering worthy performance. *The Behavior Analyst, 5*(2), 5.

Kulhavy, R. W., & Anderson, R. C. (1972). Delay-retention effect with multiple-choice tests. *Journal of Educational Psychology, 63,* 505-512.

Langdon, D. G., Whiteside, K. S., McKenna, M. M., & (Eds.). (1999). *Intervention resource guide: 50 performance improvement tools*. San Francisco, CA: Pfeiffer.

Lavoie, P., Pepin, J., & Boyer, L. (2013). Reflective debriefing to promote novice nurses' clinical judgment after high-fidelity clinical simulation: A pilot test. *Dynamics, 24*(4), 36-41.

Lindsley, O. (n.d.). Thomas F. Gilbert (1927 - 1995) - In Memoriam. *Behavior Analyst, 19*(1), 11-18.

London, M., & Smither, J. W. (2002). Feedback orientation, feedback culture, and the longitudinal performance management process. *Human Resource Management Review, 12*(1), 81-100.

Lurie, N. H., & Swaminathan, J. M. (2009). Is timely information always better? The effect of feedback frequency on decision making. *Organizational Behavior and Human Decision Processes, 108*(2), 315-329.

Mariani, B., Cantrell, M. A., Meakim, C., Prieto, P., & Dreifuerst, K. T. (2013). Structured Debriefing and Students' Clinical Judgment Abilities in Simulation. *Clinical Simulation in Nursing, 9*(5), e147-e155.

Marker, A. (2007). Synchronized analysis model: Linking Gilbert's behavioral engineering model with evironmental analysis models. *Performance Improvement, 46*(1), 26-32.

Mitchell, J. D., Holak, E. J., Tran, H. N., Muret-Wagstaff, S., Jones, S. B., & Brzezinski, M. (2013). Are we closing the gap in faculty development needs for feedback training? *Journal of Clinical Anesthesia, 25*(7), 560-564.

Morrison, G. R., Ross, S. M., Kalman, H. K., & Kemp, J. E. (2013). *Designing effective instruction* (7th ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Mullet, H. G., Butler, A. C., Verdin, B., von Borries, R., & Marsh, E. J. (2014). Delaying feedback promotes transfer of knowledge despite student preferences to receive feedback immediately. *Journal of Applied Research in Memory and Cognition, 3*(3), 222-229.

O'Driscoll, T. (2003). Chronicling the emergence of human performance technology. *Performance Improvement, 42*(6), 9-22.

Peters, P. (2015). 7 tips for delivering performance feedback. *Supervision, 76*(2), 13.

Phye, G., & Andre, T. (1989). Delayed retention effect: Attention, perseveration, or both? *Contemporary Educational Psychology, 14*(2), 173-185.

Phye, G., Gugliemelia, J., & Sola, J. (1976). Effects of delayed retention on multiple-choice test performance. *Contemporary Educational Psychology, 1*(1), 26-36.

Rasheed, A., Khan, S.-U.-R., Rasheed, M. F., & Munir, Y. (2015). The impact of feedback orientation and the effect of satisfaction with feedback on in-role job performance. *Human Resource Development Quarterly, 26*(1), 31-51.

Richey, R. C., Klein, J. D., & Tracey, M. W. (2011). *The instructional design knowledge base: Theory, research and practice*. New York, NY: Routledge.

Rivera-Chiauzzi, E., Lee, C., & Goffman, D. (2016). Debriefing after adverse outcomes. *Contemporary OB/GYN*, *61*(2), 24-32.

Roberts, J., & Crittenden, L. (2009). *Accessible Distance Education 101*.

Roberts, N. K., Williams, R. G., Kim, M. J., & Dunnington, G. L. (2009). The briefing, intraoperative teaching, debriefing model for teaching in the operating room. *Journal of the American College of Surgeons*, *208*(2), 299-303.

Roebuck, C. (1996). Constructive feedback: Key to higher performance and commitment. *Long Range Planning, 29*(3), 328-336.

Rudland, J., Wilkinson, T., Wearn, A., Nicol, P., Tunny, T., Owen, C., & O'Keefe, M. (2013). A student-centred feedback model for educators. *Clinical Teacher*, *10*(2), 99-102.

Rummler, G. A., & Brache, A. P. (2012). *Improving performance: How to manage the white space on the organization chart* (Third ed.).

Santiago, C., & Abdool, S. (2011). Conversations about challenging end-of-life cases: ethics debriefing in the medical surgical intensive care unit. *Dynamics*, *22*(4), 26-30.

Schartel, S. A. (2012). Giving feedback – An integral part of education. *Best Practice & Research Clinical Anaesthesiology, 26*(1), 77-87.

Schute, V. J. (2007). *Focus on formative feedback*. Retrieved from Princeton, NJ:

Scruton, D., Webb, B., & Holland Fiorentino, L. (2015). Type and Frequency of Feedback Comments Delivered by a Graduate Student Physical Education Teacher. *Chronicle of Kinesiology & Physical Education in Higher Education, 26*(1), 18-23.

Sidaway, B., Bates, J., Occhiogrosso, B., Schlagenhaufer, J., & Wilkes, D. (2012). Interaction of Feedback Frequency and Task Difficulty in Children's Motor Skill Learning. *Physical Therapy, 92*(7), 948-957 910p.

Swank, J. M., & McCarthy, S. N. (2013). The counselor feedback training model: Teaching counseling students feedback skills. *Adultspan Journal*, *12*(2), 100-112.

Tosti, D. T. (2006). Commentary: What ever happened to feedback technology? *Performance Improvement, 45*(2), 5-7.

Van Tiem, D. M., Moseley, J. L., & Dessinger, J. C. (2012). *Fundamentals of performance improvement: Optimizing results through people, process, and organizations* (3rd ed.): Pfeiffer.

Wachter, A., & Lion, R. W. (2016). Multi-Rater Feedback: Improving Students' Readiness for the OR. *Techniques: Connecting Education & Careers*, *91*(3), 44-49.

Walsh, T., Jairath, N., Paterson, M. A., & Grandjean, C. (2010). Quality and Safety Education for Nurses Clinical Evaluation Tool. *Journal of Nursing Education*, *49*(9), 517-522.

Walvoord, B. E. F., & Anderson, V. J. (2010). *Effective grading: a tool for learning and assessment in college.* (2nd ed.): San Francisco, CA: Jossey-Bass.

Yin, R. (2018). *Case Study Resarch and Applications: Design and Methods* (6th ed.). Los Angeles, CA: SAGE Publications, Inc.

Zigmont, J. J., Kappus, L. J., & Sudikoff, S. N. (2011). The 3D Model of Debriefing: Defusing, Discovering, and Deepening. *Seminars in Perinatology*, *35*(2), 52-58.

Appendix A

FACILITATOR GUIDE

The Behavioral Analysis Feedback Model

Improving Performance Through Behavior-Specific Feedback

Old Dominion University
A Dissertation Research Study

Melanie Ross
Doctor of Philosophy
Instructional Design and Technology
Old Dominion University

The Behavioral Analysis Feedback Model

Table of Contents

Welcome

INTRODUCTION

Thank you for participating in this research study and becoming a facilitator of the Behavioral Analysis Feedback (BAF) Model. You play an important role in helping people improve performance through behavior-specific feedback. Improving performance of nursing students will have an immense impact on individual, team, and organizational return on investment. I am confident you will have an incredible impact on influencing your nursing student's performance through the use of the BAF Model as long as you follow what is in this facilitator guide.

Preparing to improve performance using the BAF Model is especially critical because of the inclusion criteria for delivering behavior-specific feedback. Behavior-specific feedback focuses on the individual and environmental elements responsible for influencing human performance.

Facilitator Guide Overview

ABOUT THIS GUIDE

The goal of this facilitator guide is to provide you, the nursing educator, the skills, knowledge, and attitudes for delivering behavior-specific feedback using the Behavioral Analysis Feedback Model to influence nursing student's behavior.

You will be provided all resources and tools needed to deliver behavior-specific feedback during formal debriefing sessions and observe performance.

There is a supplemental video accompanying this guide to provide more details about each topic. Using all of the materials together will assist you in learning how to deliver behavior-specific feedback to your direct reports using the BAF Model.

TARGET AUDIENCE

This course is designed for nursing educators who are responsible for delivering feedback during debriefing sessions to nursing students.

LEARNING OBJECTIVES

When nursing educators complete this course they will be able to:

1. Describe behavior-specific feedback.
2. Identify the three environmental components responsible for influencing performance.
3. Identify the three individual components responsible for influencing performance.
4. Identify the components that make up the BAF Model.
5. Apply the prescriptive script for delivering behavior-specific feedback.
6. Explain how the BAF Model is used to deliver behavior-specific feedback.

MATERIALS

- The Facilitator Guide
- Supplemental Video
- The BAF Model
- Four-Step Approach
- Behavior Factors
- Behavior Factors Rubric
- Debriefing Script
- Resources
    - Pre- and Post-Perception Survey
    - Job Analysis Performance Questionnaire
    - Feedback Tracker

COURSE SCHEDULE

Tasks	Expected Time
Course Introduction	**1 minute**
• Welcome	1 minute
Introduction to Feedback	**10 minutes**
• How Do You Use Feedback?	2 minutes
• Short-Term or Long-Term	**8 minutes**
• Level	2 minutes
• Timing	2 minutes
• Frequency	2 minutes
• Environmental & Individual	2 minutes
The BAF Model	**13 minutes**
• Overview	3 minutes
• When to Use the Model	1 minute
• Model Strategy	1 minute
• The Design of the BAF Model	0 minutes
• The Design Explained	8 minutes
Behavior Factors	**26 minutes**
Factors that Influence Behavior	2 minutes
• **Environment**	**12 minutes**
• Data	4 minutes
• Resources	4 minutes
• Incentives	4 minutes
• **Individual**	**12 minutes**
• Knowledge	4 minutes

• Capacity	4 minutes
• Motives	4 minutes
• **Behavior Factors Rubric**	2 minutes
The Four Step Approach	**10 minutes**
• **The Purpose**	2 minutes
• **The Four Steps**	**8 minutes**
• Ask	2 minutes
• Discuss	2 minutes
• Ask	2 minutes
• Evaluate	2 minutes
Debriefing Script	**14 minutes**
• Debriefing Defined	2 minutes
• What is the Debriefing Script	2 minutes
• Using the Debriefing Script	10 minutes
Tracking Feedback Sessions & Observing Performance	**10 minutes**
• Job Performance Analysis Questionnaire	3 minutes
• Feedback Schedule	3 minutes
• Tracking Feedback	4 minutes
Conclusion	**4 minutes**
• Wrap-Up	2 minutes
• Next Steps	2 minutes
Total Time	**88 minutes**

* The listed times are approximate based on individual reading and note taking.

Before You Begin

A FEW THINGS TO NOTE

All data collected will be kept confidential and will only be used for purposes to validate the Behavioral Analysis Feedback Model.

Throughout this guide, you will see the words supervisor and performer. For purposes of this guide, the terms supervisor and nursing educator will be interchangeable while the terms performer and nursing student will be interchangeable.

Any documents collected will require the nursing student's university identification number as well as a unique identification number for the nursing educators. The unique identification number for you, the nursing educator, will be made up of the following:

1. The first two initials of your high school's name.
2. The day of the month you were born.
3. The last letter of your first name.

e.g. BR19E

Please use this same unique identifier on all surveys, questionnaires, and trackers that require the nursing educator's identification number.

Please ensure you have completed the *Nursing Educator Pre-Perception Survey* to capture your attitudes and feelings about how you currently deliver feedback before moving to the next section of the facilitator guide.

Course Instruction

COURSE INTRODUCTION

Estimated Time: 1 minute

	1 minute
KEY POINTS	
• **Welcome**	1 minute

Welcome

Welcome to the self-paced instructional guide for the Behavioral Analysis Feedback Model. This guide is designed to provide you the knowledge and skills for delivering behavior-specific feedback to invoke performance changes among your nursing students.

Topics

1. Introduction to Feedback
2. The Behavioral Analysis Feedback Model
3. Behavior Factors
4. The Four Step Approach
5. Debriefing Script
6. Job Performance Analysis Questionnaire & Tracking Feedback

INTRODUCTION TO FEEDBACK

Estimated Time: 10 minutes

	10 minutes
KEY POINTS	
• **How do you use feedback?**	2 minutes
• **Short-term or long-term?**	8 minutes

How Do You Use Feedback?

Think about the times you have received feedback. Was it beneficial? Did it influence how you performed?

Now think about the times you have delivered feedback. Were the nursing students receptive towards the feedback? Did it appear to be beneficial? Did it influence the nursing student's performance? If changes in performance did occur, did they last long-term?

Short-Term or Long-Term Performance Change

Chances are if performance has not been permanently changed, there are a number of factors that may have contributed to the short-term change. Some factors might include:

- Quality
- Timing
- Frequency
- Environmental and Individual Factors

Quality

Feedback quality leads to understanding the process and reaching the desired end result. Simply providing nursing students praise or the right answer does not allow learners to comprehend and process why or the effects of their performance.

To assist with providing quality feedback, it is beneficial to provide nursing students a list of performance standards that must be mastered in the performance environment. As the nursing students demonstrate each standard, feedback should be provided regarding their behavior towards achieving the standard. Any suggestions for improvement should be behavior-specific.

Delivering behavior-specific behavior is more beneficial than delivering surface-level feedback because it provides the performer the desired end result and the behaviors needed to achieve the desired end result.

Frequency

Although behavior-specific feedback is important in order for a performer to achieve the desired performance, too much or too little feedback can be detrimental. Providing too much feedback can cause a performer to lose the ability to self-reflect on their performance and correct any errors, as they know feedback will soon be given. Similarly, providing too little feedback may allow a performer to exhibit the wrong behavior far too long before correcting performance using behavior-specific suggestions.

Research has shown the frequency of feedback can affect a performer's attitudes and performance levels. Feedback should be delivered frequently enough for the performer to be afforded time to practice the standard as well as self-reflect upon the learning task and performance. Determining the appropriate number of times to deliver feedback in a given time period will be situation-dependent.

Timing

The timing in which feedback is delivered to performers is also an important factor to consider when delivering feedback. Although most performers prefer to receive feedback immediately, research has shown improvement tends to be temporary, and performers are less likely to retain the improvement over time.

Delaying feedback contributes to prolonged improvement over time, as it hinges on the performer's curiosity by encouraging them to anticipate the answer. This can ultimately increase their attention when feedback is received.

Environmental & Individual Factors

Environmental factors include the variables that make up the performance environment while the individual factors pertain to a person's repertory of behavior. Individual factors are secondary to the environmental factors when it comes to performance issues. Once all of the environmental factors are accounted for and provided, any performance issues will be due to the person's repertory of behavior. Environmental and individual factors will be discussed more in detail in the *Behavior Factors* section.

THE BEHAVIORAL ANALYSIS FEEDBACK MODEL

Estimated Time: Less than 15 minutes

	13 minutes
KEY POINTS	
• **Overview**	3 minutes
• **When to Use the Model**	1 minute
• **Model Strategy**	1 minute
• **The Design of the BAF Model**	0 minutes
• **The Design Explained**	8 minutes

Overview

The Behavioral Analysis Feedback (BAF) Model is a feedback model that utilizes behavior-specific feedback to influence an individual's performance. To account for the elements that have the potential to influence behavior, the model incorporates Thomas Gilbert's three environmental (data, resources, and incentives) elements and three individual (knowledge, capacity, and motives) elements.

The BAF Model signifies a feedback loop to demonstrate how it works as a system for improving performance through aggregating, analyzing, and interpreting the assessed information to make decisions. In order to reach the desired behavior, it is necessary for frequent communication surrounding each of the six components to occur between the supervisor and performer. The BAF Model emphasizes the need for nursing educators to communicate with nursing students while reinforcing positive behavior or redirecting and correcting behavior through behavior-specific feedback.

When to Use the Model

The BAF Model should be used when you want to:

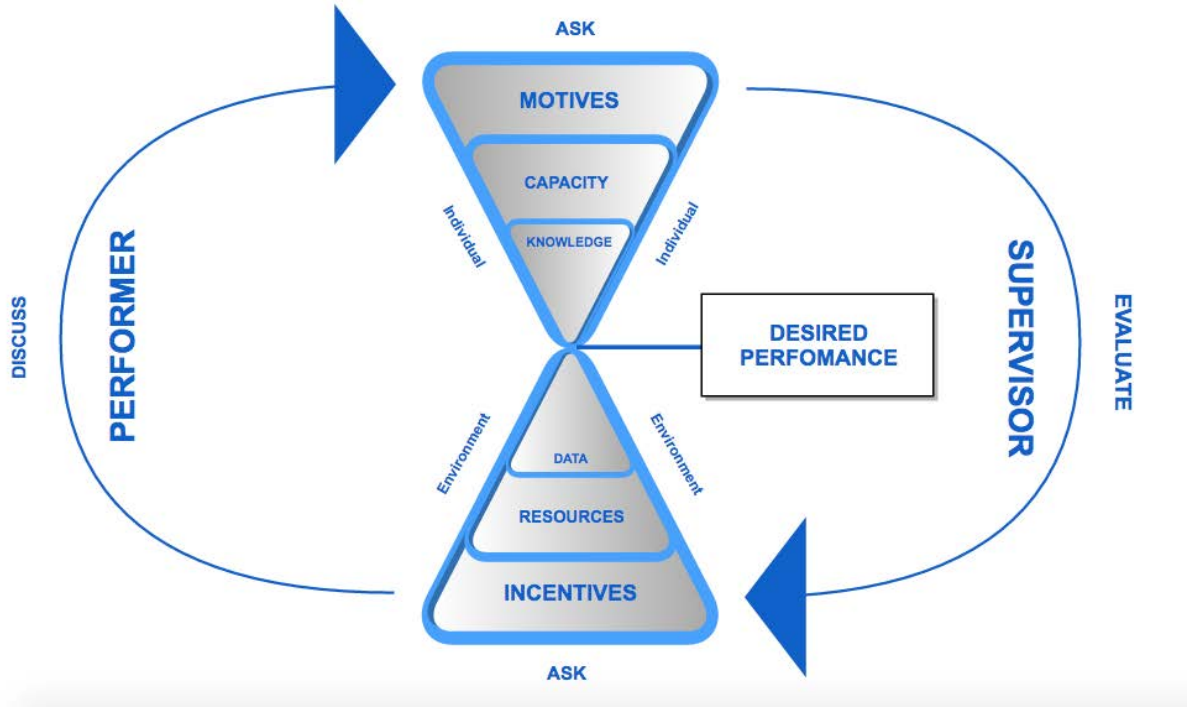
- Invoke a permanent change in a nursing student's behavior.
- Provide nursing student's feedback that targets specific behaviors.
- Have continuous dialogue about current and future performance.
- Learn from nursing students what resources and tools are needed to achieve desired goals.

Model Strategy

The BAF Model strengthens communication skills for delivering effective feedback to nursing students through:

- Behavior-specific feedback
- Continuous communication
- Analyzing and assessing individual components
- Analyzing and assessing environmental components
- Using a four-step approach
- Aggregating, analyzing, and interpreting the assessed information to make decisions

The Design of the BAF Model



The Design Explained

The BAF Model was conceptualized based on the importance of providing feedback to performers while focusing on the elements that have the potential to influence behavior. Since feedback serves as an essential concept for orienting behavior, the design of the BAF Model places an emphasis on the different elements that can influence a performer's behavior.

As mentioned before, the BAF Model utilizes a continuous circle signifying a feedback loop to demonstrate how it works as a system for improving performance through aggregating, analyzing, and interpreting the assessed information to make decisions. More importantly,

the design of the loop emphasizes the need for nursing educators to continuously communicate with nursing students to reinforce positive behavior or redirect and correct behavior through behavior-specific feedback.

As mentioned before, Thomas Gilbert, known as the father of Human Performance Technology, developed the Behavior Engineering Model to analyze an individual's performance by describing six aspects of behavior divided into two levels that can be manipulated to affect performance. The first level includes environmental elements made up of data, resources, and incentives. The second level includes individual elements made up of knowledge, capacity, and motives. Due to the significance of these six aspects and the potential to influence behavior, the BAF Model incorporates Gilbert's six aspects that have the ability to influence performance.

In the center of the model, there are two pyramids facing one another; the top pyramid facing downward accounts for the individual aspects – knowledge, capacity, and motives – that potentially influence behavior while the bottom pyramid facing upward accounts for the environmental aspects – data, resources, and incentives – that potentially influence behavior. The two pyramids facing each other signify that all components of the individual and environmental elements need to be addressed and accounted for in order for performers to reach the desired behavior; feedback needs to be provided for each of the individual and environmental components.

Around the outside of the BAF Model includes the words Ask, Discuss, Ask, and Evaluate. These four words make up the four-step approach embedded into the model. The purpose of the four-step approach is to facilitate conversation between the supervisor and performer.

Ask

- Ask about current performance and desired future goals.

Discuss

- Future specific behaviors
- Provide behavior-specific suggestions to reach the desired goals/performance

Ask / Evaluate

- Ask about resources and tools needed to achieve the desired performance prior to evaluating the performance through observation.

BEHAVIOR FACTORS

Estimated Time: 26 minutes

	26 minutes
KEY POINTS	
• **Factors that Influence Behavior**	2 minutes
• **Environment** o **Data** o **Resources** o **Incentives**	12 minutes
• **Individual** o **Knowledge** o **Capacity** o **Motives**	12 minutes
• **Behavior Factors Rubric**	2 minutes

Factors That Influence Behavior

Earlier in this guide, we discussed factors that influence performance, to include the quality, frequency, and timing of feedback as well as the environmental and individual factors.

While many believe performance issues stem from a lack of knowledge or skills, performance issues tend to be because of a lack of performance support. Environmental factors include the data, resources, and incentives in the performance environment while individual factors include the knowledge, capacity, and motives in the performance environment.

According to Gilbert (2007), individual factors are secondary to the environmental factors when it comes to performance issues. Once all of the environmental factors are accounted for and provided, any performance issues will be due to the person's repertory of behavior.

Below, find specific questions to ask yourself and the nursing student before, during, and/or after debriefing sessions.

Environmental Factors

Data

Data refers to the information at the environment level. The focus of this element includes the relevancy and frequency of adequate performance, clear expectations, and clear guides and job aids for adequate performance. Some questions to ask nursing students and/or yourself include:

- Have clear performance expectations been communicated to performers?
- Do performers understand the various aspects of their roles and the priorities for doing them?
- Are there clear and relevant performance aids to guide the performers?
- Are performers given sufficient, timely behaviorally specific feedback regarding their performance?
- Does the performance management system assist the supervisor in describing expectations for both activities and results for the performer?

Resources

Resources refer to the instrumentation at the environment level. The focus of this element includes the tools, resources, time, and materials designed to match performance needs. Some questions to ask nursing students and/or yourself include:

- Do performers have the materials needed to do their jobs?
- Do performers have the equipment to do their jobs?
- Do performers have the time they need to do their jobs?
- Are the processes and procedures defined in such a way as to enhance performance?
- Is the work environment safe, clean, organized, and conducive to excellent performance?

Incentives

Incentives refer to the motivation at the environment level. The focus of this element includes the financial and non-financial incentives, opportunities for career development, and clear consequences for poor performance. Some questions to ask nursing students and/or yourself include:

- Are there sufficient financial incentives present to encourage excellent performance?
- Are there sufficient non-financial incentives present to encourage excellent performance?
- Do measurement and reporting systems track appropriate activities and results?
- Are jobs enriched to allow for fulfillment of higher level needs?
- Are there opportunities for career development?

Individual Factors

Knowledge

Knowledge refers to the information at the individual level. The focus of this element includes placement of the performance into an appropriate position and the training needed to match the requirements to enable exemplary performance. Some questions to ask nursing students and/or yourself include:

- Do the performers have the necessary knowledge to be successful at their jobs?
- Do the performers have the needed skills to be successful at their jobs?
- Do the performers have the needed experience to be successful at their jobs?
- Do performers have a systematic training program to enhance their knowledge and skills?
- Do performers understand how their roles impact organizational performance?

Capacity

Capacity refers to the instrumentation at the individual level. The focus of this element includes scheduling performance to match peak performance, required aids, physical shaping, adaptation, and selection. Some questions to ask nursing students and/or yourself include:

- Do the performers have the necessary strength to do the job?
- Do the performers have the necessary dexterity to do the job?
- Do the performers have the ability to learn what is expected for them to be successful on the job?
- Are performers free from any emotional limitations that impede performance?
- Are performers recruited, selected, and matched to the realities of the work situation?

Motives

Motives refer to the motivation at the individual level. The focus of this element includes the nursing student's motive to work and ensuring those recruited match the realities of the situation. Some questions to ask nursing students and/or yourself include:

- Are the motives of the performers aligned with the incentives in the environment?
- Do performers desire to do the job to the best of their abilities?
- Are performers recruited and selected to match the realities of the work environment?
- Are there any rewards that reinforce poor performance or negative consequences for good performance?
- Do performers view the work environment as positive?

Rubric

The Behavior Factors Rubric serves as a 'cheat sheet' that you can use during the debriefing sessions. It is broken down into the same six boxes as Gilbert's BEM to show the information (data/knowledge), instrumentation (resources/capacity), and motivation (incentives/motives) at the environmental and individual levels.

For every individual bullet point you want to discuss, find the corresponding environmental bullet point to also discuss. This will ensure all the information, instrumentation, and motivations are provided for at the environmental level before assessing whether or not it is available to the individual.

Behavior Factors Rubric

	Information	Instrumentation	Motivation
Environment	***Data*** • Communicate clear performance expectations. • Discuss roles and responsibilities; priority for doing them. • Reference any performance aids to guide the nursing student. • Provide behavior-specific feedback about performance. • Discuss the performance management system.	***Resources*** • Discuss materials, equipment, or time needed to do the job. • Define processes and procedures to enhance the student's performance. • Discuss the safety, cleanliness, and organization of the physical work environment.	***Incentives*** • Discuss the financial and non-financial incentives present to encourage excellent performance. • Tracking activities and results through the measurement and reporting system. • Discuss fulfillment of higher level needs. • Discuss opportunities for career development.
Individual	***Knowledge*** • Discuss the knowledge, skills, or experience needed to be successful at the job. • Reference any training programs needed to enhance knowledge and skills. • Communicate how student's role impacts the patient or hospital's performance.	***Capacity*** • Communicate the strength and/or dexterity to do the job. • Discuss ability to learn what is expected in order to be successful. • Communicate any emotional limitations that impedes performance. • Reference the realities of the work situation to determine if they are a good fit.	***Motives*** • Discuss nursing student's motives and see if they are aligned with environmental incentives. • Communicate level of desire to do the job to the best of their ability. • Reference the realities of the work situation to determine if they are a good fit. • Identify and discuss any rewards that reinforce poor performance or negative consequences that reinforce good performance. • Identify and discuss if the work environment is positive.

Do not create incompetence by:

Do not create incompetence by:

	Information	Instrumentation	Motivation
Environment	• Telling people how well they are doing. • Providing misleading information about how they are doing. • Hiding what is expected. • Guiding performance.	• Designing tools without consulting the users. • Keeping developers or engineers away from users, if applicable.	• Paying poor performers the same as good performers. • Punishing good performers in some way. • Not using non-monetary incentives.
Individual	• Leaving training to chance. • Letting unskilled supervisors train. • Making training irrelevant to the job. • Making training difficult to understand.	• Scheduling work times for when people aren't at their sharpest. • Selecting wrong people to do the job. • Not providing job aids.	• Designing futureless jobs. • Arranging unpleasant work conditions. • Giving pep talks instead of incentives.

Now that you've had a chance to view the rubric and the reference document to avoid creating incompetence, go ahead an open a copy of the rubric. Print one out if you are able to, as I want to walk you through using the rubric.

Example: Student A completes patient's chart incorrectly.

Please access the *Behavior Factors Rubric* here. Print one if you can or just follow along.

THE FOUR-STEP APPROACH

Estimated Time: 10 minutes

	10 minutes
KEY POINTS	
• **The Purpose**	2 minutes
• **The Four Steps** o **Ask** o **Discuss** o **Ask** o **Evaluate**	8 minutes

The Purpose

The purpose of using this four-step approach is to facilitate conversation between the nursing educator and nursing student about the different elements that affect performance. The four steps approach allows the supervisor to ask the performer about current performance and desired future goals as well as discuss specific behaviors and provides behavior-specific suggestions to reach the desired goals. It also allows the nursing educator to ask nursing students about resources and tools needed to achieve the desired performance prior to evaluating the performance through observation.

The Four Steps

The four steps will guide the conversation of the feedback session. The four steps are explained in detail below.

Ask

- Select one individual or one environmental element to discuss.
- Ask the performer to think about where they are in terms of their current performance.
- Ask performers where they would like to go in terms of that particular element.

Discuss

- Using the factors for the individual or environmental element, identify specific behaviors that need to be reinforced or corrected based on direct observation.
- Provide behavior-specific suggestions for improvement.

Ask

- Ask performers what tools and/or resources they need to reach the desired performance.
- Develop a plan of action to reach the desired performance including a proposed timeline.
- Reiterate the tools and/or resources needed as well as the plan of action.
- Check the performer's understanding.

Evaluate

- Continuously evaluate each nursing student's performance based on the established plan of action.
- Revisit each step as needed, and evaluate performance again.

DEBRIEFING SCRIPT

Estimated Time: 14 minutes

	14 minutes
KEY POINTS	
• **Debriefing Defined**	2 minutes
• **What is the Debriefing Script?**	2 minutes
• **Using the Debriefing Script**	10 minutes

Debriefing Defined

In nurse education, feedback is often known as clinical evaluation or debriefing. Clinical evaluation is generally used for providing feedback in clinical settings where learner's care for patients during hands-on rotations while debriefing is generally used to provide learners structured, formative feedback during and/or after experiential learning opportunities that primarily occur in simulation-based settings. For purposes of this research study, we will use debriefing as the identified term although synonymous with the terms feedback and clinical evaluation.

Debriefing is situation-dependent, and is commonly used to correct errors, discuss different ways to handle similar events the next time, encourage self-assessment, and promote reflective thinking. Similar to the nature of the BAF Model, debriefing requires a two-way communication process between the educator and learner. Rather than just focusing on an individual's performance, debriefing draws out the explanations behind the performance and highlights progress while also enabling the learner to develop strategies to enhance future performance.

What is the Debriefing Script?

The BAF Model uses the aforementioned four-phase approach to facilitate conversation between the supervisor and performer. The debriefing script is a prescriptive course of action for how to deliver feedback during the debriefing session. The debriefing script will provide you the verbiage for delivering behavior-specific feedback while covering the four phases. More specifically, it discusses the purpose of the debriefing session, specific behaviors observed, clear and specific suggestions, and individual and environmental support as well as checks for understanding with follow-up.

Using the Debriefing Script

The debriefing script is the script that you will use to deliver feedback to your nursing students. It is divided into four sections to accommodate the four phases – Ask, Discuss, Ask, and Evaluate – of the BAF Model. Although it is unknown how a recipient will respond, it is imperative for you to deliver the feedback using the verbiage provided.

Click here to access the debriefing script complete with instructions for using it.

JOB PERFORMANCE ANALYSIS QUESTIONNAIRES & TRACKING FEEDBACK SESSIONS

Estimated Time: 10 minutes

	10 minutes
KEY POINTS	
• **Job Performance Analysis Questionnaire**	3 minutes
• **Feedback Schedule**	3 minutes
• **Tracking Feedback Sessions**	4 minutes

Job Performance Analysis Questionnaire

The Job Performance Analysis Questionnaire (JPAQ) is designed to gather data surrounding each nursing student's current performance with regards to environmental and individual elements that influence behavior. During this research study, you will fill out one JPAQ for each student at the baseline and final assessment (total of two JPAQ's per student) data collection points.

The JPAQ is broken down into three sections:

General Information: Contains three questions about class level, length of enrollment, and length of time you have overseen the student.

Environmental Components: Contains three questions for each aspect – data, resources, and incentives – that influence performance.

Individual Components: Contains three questions for each aspect – knowledge, capacity, and motives – that influence performance.

Additional Comments: Option to leave additional feedback not captured in the survey.

Feedback Schedule

Formal feedback that is delivered to the nursing students will be delayed; it is understood that daily, on-the-spot feedback will be provided in order to mitigate risk and correct behaviors that could be harmful to patients. In addition, formal, face-to-face feedback (in person or media platform, such as Skype) will occur per your schedule; however, data collection will occur during the baseline and final assessments. This requires at least two face-to-face feedback/debriefing sessions. Specific dates for the baseline and final assessments will be based on class length, and will be communicated to you.

Sample Schedule

- Day 1: Student conducts clinical rotation.
- Day 2 – Day 3: Student completes their journal log (timeframe specified by educator)
- Day 4 – 7: Nursing educator schedules and completes the formal feedback session.

Tracking Feedback Sessions

You are required to track the feedback sessions during the baseline and final assessments only. Each feedback tracker can be found under the respective module – baseline and final assessment – on the website. By clicking the link, you will be taken to the online feedback tracker.

Throughout the study, you will complete a baseline and final feedback tracker for each student for a total of two feedback trackers per student.

Prior to the debriefing session, it is highly recommended that you print out a copy of the feedback tracker to serve as a guide for what you would like to discuss as well as to reference what you want to discuss and write down any additional information. You can download a Word version of the feedback tracker for your convenience should you wish to print it out or reference, and then fill out the online version at a later time. The Word version can be found under the baseline and final modules on the website.

During each of the data collection point debriefing sessions, you will fill out the following information:

- **Course Title:** Provide the name of the course and whether it is accelerated or traditional.
- **Supervisor ID:** Please use the first two initials of your high school, the two-digit day of the month you were born, and the last letter of your first name to create your unique identifier.
- **Nursing Student's ID:** Student's University Identification Number (UIN).
- **Date:** Date the feedback session occurs.
- **Time:** Time the feedback session begins.
- **Behavioral Element:** Select all options for the data, resources, and incentives aspects at the environmental level and knowledge, capacity, and motives at the individual level you will be discussing during the debriefing session. Taken from the ***Behavior Factors Rubric***.
- **Current Behavior:** Describe the nursing student's current behavior.
- **Target Behavior:** Describe the behavior you want to see from the nursing student.
- **Additional Comments:** You can provide additional comments, if needed.

Please fill out the feedback tracker for each student here.

Remember, if you would like, print out a copy of the feedback tracker to take notes and/or to remember what you want to discuss during the feedback session. This will also serve as a later reference so you do not have to remember exactly what was discussed during each debriefing session as you fill out the online version.

CONCLUSION

Estimated Time: 4 minutes

	4 minutes
KEY POINTS	
• **Wrap-Up**	2 minutes
• **What's Next**	2 minutes

Wrap-Up

There is a lot to consider when conducting formal debriefing sessions. The BAF Model is designed to standardize the way feedback is delivered while targeting specific behaviors to assist with improving performance.

If at any point you have questions about the model, how to use the model, or need clarification about something, please feel free to reach out to the researcher, Melanie Ross, at mross018@odu.edu. Emails will be responded to within 24 hours of receipt.

Next Steps

At each of the specified data collection points, you will be required to complete all required surveys, questionnaires, and trackers. Please remember to add the nursing student's UIN and/or your unique identification number on all required documents.

You have now completed the facilitator guide.

Thank you for participating in the training, and I look forward to your participation in the research study.

Appendix B

Debriefing Script

Directions: During each debriefing session, you will be responsible for completing each of the three steps – ask, discuss, ask – below. At the conclusion of the debriefing session, you will be responsible for evaluating the nursing students based on the established plan of action.

INTRODUCTION	
Topic of Conversation	**What to Say**
Greet performer.	*"Good morning/afternoon, NAME. We're here today for our weekly debriefing session to discuss your performance during your clinical rotation on DAY."*

Step One: **ASK**	
Topic of Conversation	**What to Say**
Select the behavior to be evaluated.	*Today, I'd like to focus our debriefing session on TASK.*
Ask the nursing student to think about where they are in terms of their current performance. Relate it to a specific time, if needed.	*Take a moment and reflect upon your performance. Share with me your performance in terms of the TASK.*
Allow nursing student to respond.	
Ask the nursing student where they would like to go in terms of that particular element.	*How would you like to see your performance improve? Where would you like to go in terms of the TASK?*

Step Two: **DISCUSS**	
Topic of Conversation	**What to Say**
Share behavior-specific feedback from observations. Reinforce some or all behaviors or correct some or all behaviors.	*This past week while you were conducting TASK, I noticed you DESCRIBE BEHAVIOR.* *The way you BEHAVIOR IN TERMS OF TASK is (not) the proper way to handle the situation.*
If reinforcing the behavior…	*I really like the way you LIST BEHAVIOR during the TASK.*

If correcting the behavior…	*Can you share with me what you think caused your performance?*
Allow the nursing student to respond.	
Based on the nursing student's response, use the specific factors for each environmental and/or individual element to identify what to address. Focus on the environmental factors first and then the individual factors. *You can access the list of behavior factors here.*	*Environment* *a) Data: Lack of communicating expectations or roles/priorities.* *b) Resources: Materials, equipment, time.* *c) Incentives: Non-financial and reporting systems.* *Individual* *a) Knowledge: Knowledge, skills, experience, training, and impact of performance.* *b) Capacity: Strength, dexterity, and ability.* *c) Motives: Motives, desire, rewards and consequences, and positive environment.*
Once the element(s) that need to be addressed are selected, provide behavior-specific feedback that provides suggestions for improvement. ***Provide behavior-specific suggestions for improvement.***	*The proper way to handle the TASK is to DESCRIBE DESIRED BEHAVIOR.* *In order to reach the desired behavior, you need to:* • *Describe the desired behavior in relation to one of the six elements; may use more than one.* *Examples:* *The proper way to a handle central line dressing change is to DESCRIBE CORRECT BEHAVIOR. Please listen to/watch the recorded lecture to learn the procedures for changing the central line dressing. See me if you have any questions.* • *Environment/Data: Describes expectations* • *Environment/Resources: Provides materials* *The proper way to handle administering medication is to DESCRIBE DESIRED BEHAVIOR. Please use the computer-generated system to track the patient's medication to ensure they get the proper dose of their medication. If they do not receive the proper dose of medication on time, they may DESCRIBE IMPACT.* • *Environment/Incentives: Reporting system.*

	• *Individual/Knowledge: Impact of performance.*

Step Three: ASK	
Topic of Conversation	**What to Say**
Ask performers what tools and/or resources they need to reach the desired performance.	*What tools or resources do you need to be able to perform the TASK appropriately?*
Allow nursing student to respond.	
Develop a plan of action to reach the desired performance.	*Based on everything we spoke about, I would like to DISCUSS DEVELOPED PLAN OF ACTION.*
Reiterate the tools and/or resources needed and the plan of action; check the performer's understanding.	*Based on our discussion, you need TOOLS/RESOURCES to properly perform the task. After we meet, I would like for you to DESCRIBE PLAN OF ACTION.* *Name, do you know the procedure for properly handling the TASK? Can you go over the procedure to be sure I covered everything?*

End

See below for Step Four: Evaluation

Directions: Upon completing the debriefing script, you will be responsible for evaluating the nursing students to determine if performance has improved and feedback has turned into skills transferred to the performance environment. Use the observation tracker to track your observations during the evaluation periods.

Step Four: EVALUATE
Supervisor Action
Continuously evaluate each nursing student's performance based on the established plan of action.
Revisit each step as needed; evaluate performance again.

Appendix C

Feedback Tracker

Directions: Please complete this *Baseline/Midpoint/Final Feedback Session Tracker.* It is recommended to fill out as much as you can prior to the feedback session and to save it until after the feedback session is completed in case anything needs to be amended. Once complete, please save and submit via the online survey tool.

1. **Course Title: Please provide the name of the course, and select whether it is traditional or accelerated.**

   Click here to enter text.

   ☐ Traditional ☐ Accelerated

2. **Supervisor ID:** Please use the first two initials of your high school, the two-digit day of the month you were born, and the last letter of your first name to create your unique identifier.

   Example: First two initials of high school: BR / Day of the month you were born: 19 / Last letter of your first name: E
   Identifier: BR19E

   Click here to enter text.

3. **Nursing Student ID:** Please use the student's university identification number.

   Click here to enter text.

4. **Date:** Please select the date you completed the feedback session.

   Click here to enter a date.

5. **Time:** Please fill in the time the feedback session began. Please include AM or PM. i.e. 12:30pm

   Click here to enter text.

Directions: Select one behavior that needs improvement that you wish to discuss during the feedback session.

Environment

Directions: For the next three questions, you are being asked to select the options for the data, resources, and incentives aspects at the environmental level you will be discussing during the debriefing session for the identified behavior. Select all options you plan to discuss for each aspect in regards to the identified behavior. Taken from the ***Behavior Factors Rubric***.

6. ***Data***

Please select the element(s) you are focusing on during the debriefing session for the data aspect. Check all that apply.

- ☐ Communicate clear performance expectations
- ☐ Discuss roles and responsibilities; priority for doing them
- ☐ Reference any performance aids to guide the nursing student.
- ☐ Provide behavior-specific feedback about performance.
- ☐ Discuss the performance management system.

7. ***Resources***

Please select the element(s) you are focusing on during the debriefing session for the resources aspect. Check all that apply.

- ☐ Discuss materials, equipment, or time needed to do the job.
- ☐ Define processes and/or procedures to enhance the student's performance
- ☐ Discuss the safety, cleanliness, and organization of the physical work environment.

8. ***Incentives***

Please select the element(s) you are focusing on during the debriefing session for the incentives aspect. Check all that apply.

- ☐ Discuss the financial and non-financial incentives present to encourage excellent performance.
- ☐ Discuss tracking activities and results through the measurement and reporting system.
- ☐ Discuss fulfillment of higher level needs.
- ☐ Discuss the opportunities for career development.

Individual

Directions: For the next three questions, you are being asked to select the options for the knowledge, capacity, and motives aspects at the individual level you will be discussing during the debriefing session for the identified behavior. Select all options you plan to discuss for each aspect in regards to the identified behavior. Taken from the ***Behavior Factors Rubric***.

9. ***Knowledge***
Please select the element(s) you are focusing on during the debriefing session for the knowledge aspect. Check all that apply.

- ☐ Discuss the knowledge, skills, or experience needed to be successful at the job.
- ☐ Reference any training programs needed to enhance knowledge and skills.
- ☐ Communicate how the student's role impacts the patient or hospital's performance.

10. ***Capacity***
Please select the element(s) you are focusing on during the debriefing session for the capacity aspect. Check all that apply.

- ☐ Communicate the strength and/or dexterity to do the job.
- ☐ Discuss the ability to learn what is expected in order to be successful.
- ☐ Communicate any emotional limitations that impedes performance.
- ☐ Reference the realities of the work situation to determine if they are a good fit.

11. ***Motives***
Please select the element(s) you are focusing on during the debriefing session for the motives aspect. Check all that apply.

- ☐ Discuss nursing student's motives and see if they are aligned with environmental incentives.
- ☐ Communicate level of desire to do the job to the best of their ability.
- ☐ Reference the realities of the work situation to determine if they are a good fit.
- ☐ Identify and discuss any rewards that reinforce poor performance or negative consequences that reinforce good performance.
- ☐ Identify and discuss if the work environment is positive.

12. Please describe the nursing student’s current behavior.
Click here to enter text.

13. Please describe the nursing student’s targeted behavior.
Click here to enter text.

14. Please use this space to provide additional comments, if necessary.
Click here to enter text.

Appendix D

Behavior Factors

(Obtained from Elizabeth Bailey's PROBE Model (2007))

Environment

Data

- Have clear performance expectations been communicated to employees?
- Do employees understand the various aspects of their roles and the priorities for doing them?
- Are there clear and relevant performance aids to guide the employees?
- Are employees given sufficient, timely behaviorally specific feedback regarding their performance?
- Does the performance management system assist the supervisor in describing expectations for both activities and results for the employee?

Resources

- Do employees have the materials needed to do their jobs?
- Do employees have the equipment to do their jobs?
- Do employees have the time they need to do their jobs?
- Are the processes and procedures defined in such a way as to enhance employee performance?
- Is the work environment safe, clean, organized, and conducive to excellent performance?

Incentives

- Are there sufficient financial incentives present to encourage excellent performance?
- Are there sufficient non-financial incentives present to encourage excellent performance?
- Do measurement and reporting systems track appropriate activities and results?
- Are jobs enriched to allow for fulfillment of higher level needs?
- Are there opportunities for career development?

Individual

Knowledge

- Do the employees have the necessary knowledge to be successful at their jobs?
- Do the employees have the needed skills to be successful at their jobs?
- Do the employees have the needed experience to be successful at their jobs?
- Do employees have a systematic training program to enhance their knowledge and skills?
- Do employees understand how their roles impact organizational performance?

Capacity

- Do the employees have the necessary strength to do the job?
- Do the employees have the necessary dexterity to do the job?
- Do the employees have the ability to learn what is expected for them to be successful on the job?

- Are employees free from any emotional limitations that impede performance?
- Are employees recruited, selected, and matched to the realities of the work situation?

Motives

- Are the motives of the employees aligned with the incentives in the environment?
- Do employees desire to do the job to the best of their abilities?
- Are employees recruited and selected to match the realities of the work environment?
- Are there any rewards that reinforce poor performance or negative consequences for good performance?
- Do employees view the work environment as positive?

Appendix E

Nursing Educator Pre-Perception Survey

Supervisor's ID:

Survey Instructions: Please select the response that best answers the question based on your general experiences with delivering feedback to nursing students.

1. How long have you served as a nursing educator in the nursing program at ODU?

☐ 0 – 2 years ☐ 3 – 5 years ☐ 6 – 9 years ☐ 10 – 15 years ☐ 16+ years

2. How many nursing students do you currently have directly reporting to you?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10+

Additional Survey Instructions: For questions 3 - 14, please read each statement below and select the appropriate response that best reflects your experiences with delivering feedback as you do right now.

	DELIVERING FEEDBACK	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
3.	**I feel confident in my ability to provide effective feedback to nursing students.**	☐	☐	☐	☐	☐	☐	☐
4.	**I feel equipped to communicate clear and specific guidance for my nursing student's to achieve their goals.**	☐	☐	☐	☐	☐	☐	☐
5.	**I feel anxious when I have to provide feedback to nursing students.**	☐	☐	☐	☐	☐	☐	☐
6.	**I feel prepared to handle difficult feedback situations.**	☐	☐	☐	☐	☐	☐	☐

7.	**I feel less apprehensive when delivering feedback.**	☐	☐	☐	☐	☐	☐	☐
8.	**I feel knowledgeable in delivering behavior-specific feedback.**	☐	☐	☐	☐	☐	☐	☐
9.	**I feel the need for more feedback training in order to be successful for delivering behavior-specific feedback.**	☐	☐	☐	☐	☐	☐	☐
10.	**I have all of the necessary tools and resources to provide effective feedback.**	☐	☐	☐	☐	☐	☐	☐
11.	**Having a specific debriefing model to follow as a resource increases my motivation to provide feedback.**	☐	☐	☐	☐	☐	☐	☐
12.	**I feel the feedback I provide influences nursing student's behavior in the way I hoped.**	☐	☐	☐	☐	☐	☐	☐
13.	**Nursing students are receptive towards receiving the feedback I provide.**	☐	☐	☐	☐	☐	☐	☐
14.	**I will continue to deliver feedback to nursing students using my current methods.**	☐	☐	☐	☐	☐	☐	☐
15.	**What are some of the challenges you experience with delivering feedback?**							

16. **Are there any resources you need to overcome these challenges? If so, please explain.**
17. **Have you seen differences between best practice taught in school and actual practices seen on the clinical unit? If so please provide examples.**

18. **Other comments:** Please use this section to provide additional information about your experiences with delivering feedback that was not captured in this survey.

Appendix F

Nursing Educator Post-Perception Survey

Supervisor's ID:

Survey Instructions: Please select the response that best answers the question based on your general experiences with the facilitator guide, the BAF Model, and delivering behavior-specific feedback to nursing students.

1. **How long have you served as a nursing educator in the nursing program at ODU?**
   ☐ 0 – 2 years ☐ 3 – 5 years ☐ 6 – 9 years ☐ 10 – 15 years ☐ 16+ years

2. **How many nursing students do you currently have directly reporting to you?**
   ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10+

Additional Survey Instructions: For questions 3-14, please read each statement below and select the appropriate response that best reflects your experience with the facilitator guide.

FACILITATOR GUIDE	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
3. The facilitator guide was easy to navigate.	☐	☐	☐	☐	☐	☐	☐
4. The typeface, font size, and color were easy to read.	☐	☐	☐	☐	☐	☐	☐
5. Course goals and objectives were clearly identified.	☐	☐	☐	☐	☐	☐	☐
6. The activities and information presented were applicable and appropriate.	☐	☐	☐	☐	☐	☐	☐
7. The training assisted in developing skills to deliver effective behavior-specific feedback.	☐	☐	☐	☐	☐	☐	☐
8. Overall, the course content and activities were relevant to the topic.	☐	☐	☐	☐	☐	☐	☐
9. The training was delivered at a pace that I could	☐	☐	☐	☐	☐	☐	☐

understand the content.							
10. The facilitator guide used an effective delivery format.	☐	☐	☐	☐	☐	☐	☐
11. Although a guide, I was able to have my questions answered.	☐	☐	☐	☐	☐	☐	☐
12. I was provided reference materials for later use.	☐	☐	☐	☐	☐	☐	☐
13. Completing the training motivates me to provide behavior-specific feedback.	☐	☐	☐	☐	☐	☐	☐
14. My overall experience with the training has been positive.	☐	☐	☐	☐	☐	☐	☐
15. What did you like most about this course?							
16. What *w*ould improve this course and make learning more effective?							

Additional Survey Instructions: For questions 17 - 32, please read each statement below and select the appropriate response that best reflects your experience with the Behavioral Analysis Feedback Model.

BEHAVIORAL ANALYSIS FEEDBACK MODEL	**Strongly Disagree**	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**
17. The model made sense to me.	☐	☐	☐	☐	☐	☐	☐
18. The model was easy to follow.	☐	☐	☐	☐	☐	☐	☐
19. The model served as a guide for delivering behavior-specific feedback.	☐	☐	☐	☐	☐	☐	☐
20. The environmental components were clearly articulated.	☐	☐	☐	☐	☐	☐	☐
21. Examples of environmental factors were provided.	☐	☐	☐	☐	☐	☐	☐
22. The individual components were	☐	☐	☐	☐	☐	☐	☐

clearly articulated.							
23. Examples of individual factors were provided.	☐	☐	☐	☐	☐	☐	☐
24. The four steps for delivering behavior-specific feedback were clearly articulated.	☐	☐	☐	☐	☐	☐	☐
25. The actions in step one (ask) were appropriate for delivering behavior-specific feedback.	☐	☐	☐	☐	☐	☐	☐
26. The actions in step two (discuss) were appropriate for delivering behavior-specific feedback.	☐	☐	☐	☐	☐	☐	☐
27. The actions in step three (ask) were appropriate for delivering behavior-specific feedback.	☐	☐	☐	☐	☐	☐	☐
28. The actions in step four (evaluate) were appropriate for delivering behavior-specific feedback.	☐	☐	☐	☐	☐	☐	☐
29. The model encouraged feedback to be behavior-specific.	☐	☐	☐	☐	☐	☐	☐
30. The model led to frequent communication between the nursing student and myself.	☐	☐	☐	☐	☐	☐	☐
31. This feedback model assisted with increasing comfort levels for delivering	☐	☐	☐	☐	☐	☐	☐

behavior-specific feedback.							
32. Implementing the model assisted with influencing the nursing student's behavior in a positive way.	☐	☐	☐	☐	☐	☐	☐
33. What did you like most about this feedback model?							
34. Is there anything you did not particularly care for with this model? If so, please explain.							

Additional Survey Instructions: For questions 35 - 46, please read each statement below and select the appropriate response that best reflects your experiences with delivering feedback since using the Behavioral Analysis Feedback Model.

DELIVERING FEEDBACK	**Strongly Disagree**	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**
35. I feel more confident in my ability to provide effective feedback to nursing students.	☐	☐	☐	☐	☐	☐	☐
36. I feel better equipped to communicate clear and specific guidance for my nursing student's to achieve their goals.	☐	☐	☐	☐	☐	☐	☐
37. I still feel anxious when I have to provide feedback to nursing students.	☐	☐	☐	☐	☐	☐	☐
38. I feel more prepared to handle difficult feedback situations.	☐	☐	☐	☐	☐	☐	☐
39. I feel less apprehensive when delivering feedback.	☐	☐	☐	☐	☐	☐	☐
40. I feel more knowledgeable when delivering	☐	☐	☐	☐	☐	☐	☐

behavior-specific feedback.							
41. I feel the need for more feedback training in order to be successful.	☐	☐	☐	☐	☐	☐	☐
42. I have all of the necessary tools and resources to provide behavior-specific feedback.	☐	☐	☐	☐	☐	☐	☐
43. Having this model as a resource increases my motivation to provide feedback.	☐	☐	☐	☐	☐	☐	☐
44. The feedback I provided influenced the nursing student's behavior in a way I hoped.	☐	☐	☐	☐	☐	☐	☐
45. Nursing students were more receptive towards receiving feedback with this model.	☐	☐	☐	☐	☐	☐	☐
46. I will continue to use this model to deliver feedback to my nursing students.	☐	☐	☐	☐	☐	☐	☐
47. What are some of the challenges you experienced with delivering feedback using the BAF Model?							
48. Are there any resources that could help you overcome these challenges? If so, please explain.							
49. Have you seen differences between best practice taught in school and actual practices seen on the clinical unit? If so please provide examples.							

50. Other comments: Please use this section to provide additional information about your experiences with the facilitator guide, the BAF Model, and delivering behavior-specific feedback that was not captured in this survey.

Appendix G

Interview Protocol

Opening Script:

Thank you for talking with me today. Today we're going to talk about the Behavioral Analysis Feedback (BAF) Model that you used over the course of this past semester to deliver feedback to your students. In this interview, we will talk about your general experiences with the facilitator guide and the BAF Model as well as challenges and successes experience and improvements to the model for future use. This interview should last no more than 15 – 20 minutes and will consist of six questions.

The Human Subjects Review committee has reviewed this protocol, and nothing we're going to talk about is thought to be controversial; however, I understand you are here voluntarily. If at any time you feel uncomfortable or want to stop, please feel free to let me know. If there is anything you want to change after the interview is complete, whether you think about it immediately or several days later, please feel free to contact me. My contact information can be found on the information sheet.

Everything you say in this interview will be kept confidential. I will not use your name for any purpose, but would like to know if there is a pseudonym you would like to be referred to as? When I ask you to review the final report, this will serve to identify your information; no one else except you and I will be able to determine what you said. The information sheet goes over everything I spoke with you about – if you wish to stop at any point, all of your information will be kept confidential, etc. – Does this look good to you?

I would like to record this interview because I am not quick at taking notes. I want to focus my attention on speaking with you rather than spending my time looking down at paper and trying to capture what you say. Again, all responses will be kept confidential. Since all responses will be kept confidential, I ask for your complete honesty when answering the questions. Nothing you share will be used against you in your place of employment. The audio recording will only serve as my notes after the interview has been conducted. Would you be okay with me recording this interview?

I know this was a lot of information. At this point, do you have any questions for me? If you have questions throughout or later on, please feel free to ask me.

Do you feel as though you are ready to begin? Okay, let's get started.

Can you please describe your feelings with the self-paced facilitator guide?

- Do you think the guide included everything that was needed to be successful?
- What would you change about the facilitator guide to make it more effective?

Can you please describe your feelings using the Behavioral Analysis Feedback Model during the semester with your students?

- Can you recall any instances where you felt overwhelmed?
- Can you recall any instances where you felt this model really helped discuss specific points?
- Why do you think you felt this way?

What are some major challenges you experienced with implementing this feedback model?

- Can you please share any instances where you felt it was difficult to incorporate elements from the *Behavior Factors Rubric*?
    - This is the document that broke out experiences according to information, instrumentation, and motivation at the individual and environmental level. At the individual level, it focused on knowledge, capacity, and motives, and at the environmental level, it focused on the data, resources, and incentives.
- Why do you think you experienced these challenges?

What are some major successes you experienced with implementing this feedback model?

- Can you please share any instances where you felt it was easier to incorporate elements from the *Behavior Factors Rubric*?
    - This is the document that broke out experiences according to information, instrumentation, and motivation at the individual and environmental level. At the individual level, it focused on knowledge, capacity, and motives, and at the environmental level, it focused on the data, resources, and incentives.
- Why do you think you experienced these successes?

If you could alter this model in any way, what would you change to ensure it meets your needs as a supervisor?

Can you please share whether you feel this model is effective in your line of work? If not, please explain why.

Closing Script:

I want to take the time to thank you again for speaking with me today. I appreciate your willingness to spend time with me to discuss your experiences with the training you received to provide feedback to nursing students using the BAF Model as well as the challenges and successes experienced and suggestions for improving the model.

Please remember this effort is completely voluntary and if you should change your mind about anything you said or think there is something you forgot to add, please feel free to contact me. My information can be found on the information sheet.

Similarly, when I go back and listen to the recording, there may be additional questions that I have. Do you mind if I contact you? If not, what is your best contact information? After reviewing the interview and capturing the data, I would also like to conduct a member check with you. This will allow you to read over the final report and ensure that everything you said was captured accurately. Do you mind if I contact you for your review?

Before we go, do you have anything else you would like to say or want to add? Again, thank you so very much for your time today. It is greatly appreciated and I look forward to following up with you in a few short weeks.

Appendix H

Job Performance Analysis Questionnaire

Supervisor ID:

Nursing Student's UIN:

Directions: Please read each statement below and select the appropriate response that best represents the nursing student's experience.

1. **What is the nursing student's current class level?**
   ☐ Junior ☐ Senior

2. **How long has this nursing student been enrolled in the nursing program at ODU?**
   ☐ 2nd Semester Accelerated ☐ 6th Semester Traditional ☐ 6th Semester accelerated

3. **How long have you supervised this nursing student?**
   ☐ 0 – 6 months ☐ 6 – 12 months ☐ 1 – 2 years

Directions: For questions 4 – 21, please select the appropriate response that best represents the nursing student's performance at the environment and individual level.

ENVIRONMENT	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	Not Applicable
4. The nursing student demonstrates a clear understanding of performance expectations.	☐	☐	☐	☐	☐	☐	☐	☐
5. The nursing student demonstrates a clear understanding of their role and the priorities for doing them.	☐	☐	☐	☐	☐	☐	☐	☐
6. The nursing student utilizes the feedback provided to them to improve performance.	☐	☐	☐	☐	☐	☐	☐	☐

7.	**The nursing student uses materials and equipment appropriately to do their job.**	☐	☐	☐	☐	☐	☐	☐	☐
8.	**The nursing student demonstrates a clear understanding of the processes and procedures and uses them to enhance their performance.**	☐	☐	☐	☐	☐	☐	☐	☐
9.	**The nursing student uses their time appropriately to follow through with tasks and responsibilities in a timely manner.**	☐	☐	☐	☐	☐	☐	☐	☐
10.	**The nursing student is someone who would make an effective supervisor.**	☐	☐	☐	☐	☐	☐	☐	☐
11.	**The nursing student abides by the measurement and reporting systems in place to track appropriate tasks and/or results.**	☐	☐	☐	☐	☐	☐	☐	☐
12.	**The nursing student is interested in continuing to develop new skills and to grow as a professional.**	☐	☐	☐	☐	☐	☐	☐	☐

INDIVIDUAL	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	Not Applicable
13. The nursing student understands how their role impacts organizational performance.	☐	☐	☐	☐	☐	☐	☐	☐
14. The nursing student demonstrates appropriate knowledge to perform the job and takes responsibility for their actions.	☐	☐	☐	☐	☐	☐	☐	☐
15. The nursing student demonstrates a willingness to listen to what others have to say.	☐	☐	☐	☐	☐	☐	☐	☐
16. The nursing student demonstrates the necessary skills to perform the job adequately.	☐	☐	☐	☐	☐	☐	☐	☐
17. The nursing student always puts forth their best effort without the need for reminders.	☐	☐	☐	☐	☐	☐	☐	☐
18. The nursing student demonstrates the ability to learn what is expected to be successful on the job.	☐	☐	☐	☐	☐	☐	☐	☐
19. The nursing student was selected to match the realities of the work environment.	☐	☐	☐	☐	☐	☐	☐	☐

20. The nursing student is recognized with financial or non-financial rewards when great work is produced.	☐	☐	☐	☐	☐	☐	☐	☐
21. The nursing student demonstrates the desire to do their job without the need for rewards.	☐	☐	☐	☐	☐	☐	☐	☐

22. **Other comments:** Please use this section to provide additional information about the nursing student's performance that was not captured in this questionnaire.

Appendix I

Nursing Student Attitude Survey

Supervisor ID:

Nursing Student's UIN:

Directions: Please read each statement below and select the appropriate response that best describes you.

1. What is your current class level?
☐ Junior ☐ Senior

2. How long have you been enrolled in the nursing program at ODU?
☐ 2nd Semester ☐ 6th Semester Traditional ☐ 6th Semester Accelerated
Accelerated

3. How long have you been assigned to your current supervisor (total time throughout program)?
☐ 0 – 6 months ☐ 6 – 12 months ☐ 1 – 2 years

Directions: For questions 4 – 33, please read each statement below within each section and select the appropriate response that best represents how you feel receiving feedback from your supervisor.

		Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	Not Applicable
4.	**I am open to receiving feedback from my supervisor.**	☐	☐	☐	☐	☐	☐	☐	☐
5.	**I am excited to participate in feedback sessions with my supervisor.**	☐	☐	☐	☐	☐	☐	☐	☐
6.	**I listen to what my supervisor is saying.**	☐	☐	☐	☐	☐	☐	☐	☐
7.	**I utilize the feedback given to me in future situations.**	☐	☐	☐	☐	☐	☐	☐	☐
8.	**I feel comfortable when my supervisor gives me feedback.**	☐	☐	☐	☐	☐	☐	☐	☐

9.	**I often worry about future feedback sessions.**	☐	☐	☐	☐	☐	☐	☐	☐
10.	**I feel the feedback given to me is fair.**	☐	☐	☐	☐	☐	☐	☐	☐
11.	**I understand the feedback my supervisor gives me.**	☐	☐	☐	☐	☐	☐	☐	☐
12.	**I like the way my supervisor delivers feedback to me.**	☐	☐	☐	☐	☐	☐	☐	☐
13.	**I feel the way feedback is delivered to me is effective.**	☐	☐	☐	☐	☐	☐	☐	☐
14.	**I feel the feedback delivered to me is constructive.**	☐	☐	☐	☐	☐	☐	☐	☐
15.	**I perceive feedback as a positive thing.**	☐	☐	☐	☐	☐	☐	☐	☐
16.	**When I am about to receive feedback, I feel anxious.**	☐	☐	☐	☐	☐	☐	☐	☐
17.	**Before feedback sessions begin, I feel nervous for what is about to come.**	☐	☐	☐	☐	☐	☐	☐	☐
18.	**I often feel the feedback I receive is behavior-specific.**	☐	☐	☐	☐	☐	☐	☐	☐
19.	**I feel apprehensive prior to feedback sessions.**	☐	☐	☐	☐	☐	☐	☐	☐
20.	**I often fidget during feedback sessions.**	☐	☐	☐	☐	☐	☐	☐	☐

21. I feel feedback is only given to me when I am doing something wrong.	☐	☐	☐	☐	☐	☐	☐	☐
22. I keep feedback in perspective and do not over react.	☐	☐	☐	☐	☐	☐	☐	☐
23. I feel motivated to use the feedback delivered to me.	☐	☐	☐	☐	☐	☐	☐	☐
24. I am hopeful that I will take the feedback and apply it future situations.	☐	☐	☐	☐	☐	☐	☐	☐
25. I think about the feedback sessions long after they are given.	☐	☐	☐	☐	☐	☐	☐	☐
26. I often criticize myself after receiving negative feedback.	☐	☐	☐	☐	☐	☐	☐	☐
27. I perceive feedback as a negative thing.	☐	☐	☐	☐	☐	☐	☐	☐
28. I get angry if I receive negative feedback.	☐	☐	☐	☐	☐	☐	☐	☐
29. I become defensive when I receive negative feedback.	☐	☐	☐	☐	☐	☐	☐	☐
30. I feel the feedback I receive is clear and specific.	☐	☐	☐	☐	☐	☐	☐	☐
31. I feel anxious when I attend feedback sessions.	☐	☐	☐	☐	☐	☐	☐	☐
32. I feel excited when I receive	☐	☐	☐	☐	☐	☐	☐	☐

positive feedback.								
33. I feel disappointed if I receive negative feedback.	☐	☐	☐	☐	☐	☐	☒	☐

34. Have you seen differences between best practice taught in school and actual practices seen on the clinical unit? If so please provide examples.

35. Other comments: Please use this section to provide additional information about your feelings and attitudes towards receiving feedback from your supervisor that was not captured in this survey.

Curriculum Vitae

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EDUCATION

Doctor of Philosophy Instructional Design and Technology — *May 2018*
Old Dominion University – Norfolk, VA

Masters of Arts Instructional Technology — *May 2012*
Virginia Polytechnic Institute and State University – Blacksburg, VA

Bachelors of Science Liberal Arts, Cum Laude — *May 2007*
Longwood University – Farmville, VA

PROFESSIONAL EXPERIENCE

Janus Global Operations — *2018 – Present*
Worldwide Protective Services (WPS) High Threat Integrated Tracking System (HITS) Senior Specialist

Constellis (Formerly Triple Canopy) — *2016 – 2018*
WPS HITS Manager

Triple Canopy — *2011 – 2016*
WPS HITS Specialist

FedStar, LLC — *2010 – 2011*
Project Specialist

Morton Elementary School — *2008 – 2009*
Lead Pre-Kindergarten Teacher

PEER-REVIEWED PUBLICATIONS

Ross, M. E. & Stefaniak, J. E. (in press). An Exploration of Training Associated With the Delivery of Feedback. *Performance Improvement*

Ross, M. E. & Stefaniak, J. E. (2015). Organizational Analysis Leads to Dissection of Recurrent Training Issues. In J. E. Stefaniak (Ed.), *Cases on Human Performance Improvement Technologies* (pp.34-63). Hershey, PA: IGI Global.

PROFESSIONAL SOCIETY MEMBERSHIPS

International Society for Performance Improvement — *2018 – Present*

Association for Educational Communications & Technology — *2013 – Present*