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Physical Therapy Students' Perspectives on Disability

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Abstract

Purpose: The purpose of this qualitative study was to examine physical therapy students' learning about disability through an Exploring Perspectives on Disability (EPOD) learning event that was developed by the School of Rehabilitation Science, McMaster University. EPOD consists of two scheduled classes discussing disability, a shadowing experience with an individual with a disability living in the community, and writing a reflective summary assignment about their learning. The EPOD was developed to broaden students' perspectives regarding disability, promote a positive attitude about disability, and facilitate best practice approaches in community-based care. **Method:** Fifty-seven students in the first semester of a Master's entry level physical therapy program completed the EPOD event. In the reflective summary, they were asked to describe and reflect on their experiences and observations about the individual they shadowed. The summaries were transcribed into NUD*IST, a computerized software program for qualitative data management. Each summary was read by two of four investigators who independently read, coded, and categorized the entries, and then worked together to identify themes. **Results:** Three major themes were identified: (1) students' assumptions about disability were challenged; (2) their understanding about supports and barriers for people with disability was enhanced; and (3) they acknowledged the professional growth and learning that occurred. **Conclusions:** Through the EPOD learning event, students gained new knowledge about disability and their attitudes about people with disability were influenced. The EPOD was important in broadening their perspectives concerning disability and promoting a positive attitude about disability.

Introduction

An attitude is a disposition or feeling directed toward a person or a thing.¹⁻³ The attitudes of health care professionals towards people with disability can have a significant impact in their rehabilitation.³⁻⁵ Negative attitudes toward disability by health care professionals may affect successful rehabilitation outcomes and reintegration into the community, and may unduly restrict the options and alternatives that health professionals generate for their clients.⁵⁻⁷ Health professionals' attitudes about people with disability also may be influenced by other factors such as their age, gender, nationality, marital status, educational grade level, socioeconomic status, and previous experience with disability.^{4,7-9} Incorporating student learning events that

cultivate positive attitudes about people with disability into the curricula of health care professionals is essential in their education. Such opportunities may enable students to gain an enhanced understanding about disability, assist with promoting positive attitudes concerning disability and ultimately improve their effectiveness as clinicians.

Very little has been written about health care student learning regarding disability and their perceptions about disability during their educational program. Borchering and Baldwin described a course in disability awareness in an occupational therapy program that integrated academic content with community-based level one fieldwork experience.¹⁰ The instructors found that the

course provided the students with an opportunity to recognize the impact of dysfunction in participating in everyday activities, and enabled them to gain an appreciation of each individual's ability and responsibility for self-determination. Block et al reported on a disability studies course in an occupational therapy graduate program that included readings, films, guest lectures, site visits, and the writing of a journal in which the students recorded their personal reactions and insights gained from these experiences.¹¹ The results showed that the students demonstrated a strong understanding of the importance of empowering individuals with a disability to become more independent. Stachura and Garven examined physical therapy and occupational therapy students' attitudes towards people with disability at the beginning and end of their respective programs.¹² The findings revealed that there were significant differences in attitudes towards people with disability between the students in both programs at the beginning but not at the end of their respective programs. Although these studies demonstrated that students' attitudes concerning disability changed during their course of study, the investigators did not specify if the students' behaviors changed as a result of these experiences.

Exploring Perspective on Disability

The Exploring Perspectives on Disability (EPOD) learning event was developed by faculty at the School of Rehabilitation Science, McMaster University to promote a positive attitude about disability by prompting students to reflect on their attitudes about disability and broaden their overall perspective. There were three components to the EPOD learning event. During the first introductory, in-class session, students were introduced to an historical perspective on how disability has been viewed over time, and to social theories about disability. The students were given a variety of health care scenarios that described disability experiences and they discussed their responses and reactions to these scenarios. The students were then given the name and contact information of a volunteer and were asked to contact the volunteer and set up a time to meet. The volunteers were a group of approximately 50 community individuals with a disability who agreed to meet with the students and share with them their personal experiences and the strategies they use to deal with disability on a day-to-day basis. The majority of the volunteers were adults with neurological conditions and/or physical limitations, although some had cognitive, sensory, and/or developmental disabilities.

The second component of the EPOD event consisted of a shadowing experience with the volunteer. The shadowing experience provided the students with an opportunity to observe the individual in the community and the strategies that he or she used to cope with the disability. The shadowing experience lasted for at least two hours during which time the students interviewed and observed the volunteer in his or her home or community environment. The students were asked to

reflect on their experience and to write a reflective summary assignment highlighting the following: (1) supports and barriers within the community which affect the volunteer's participation in activities, (2) reflections on what it means to live in the community with a disability, and (3) reflections on their perspectives as a student physical therapist who participated in the EPOD event. We incorporated reflective journal writing into the EPOD experience as a method of enhancing the students' learning about disability. Reflective journal writing has been used to facilitate self-reflection and enhance learning in health care professionals.¹³⁻²¹ Students not only record learning events and their reactions towards them, but they also reflect on the impact of that event and how it might affect their future behavior and learning. Schon suggested that reflective thinking is an integral aspect of professional practice.²² By writing about an event, writers return to the experience and become aware of new aspects of the situation.^{23,24} They reflect on the event, reevaluate it, relate the new information with what they already know, and as a result find new meaning about the experience.

During the third component, an in-class session, students were given an opportunity to discuss, share, and further reflect on their experiences with their classmates and a panel of individuals with a disability living in the community.

Program

The physical therapy program at McMaster University is 24 months in duration and follows a fully integrated, problem-based learning Master's curriculum. The program consists of six semesters/units of study, each with an academic and a clinical component. The first and last semesters have 14-week academic components, whereas units two to five have 8-week academic components. All units included 6 weeks of clinical practice, except the first unit, which had one week of clinical observation. The EPOD learning event occurred during the academic component of the first unit. In unit one, students examined acute musculoskeletal conditions of the upper quadrant (i.e., the upper extremity including the cervical and thoracic spines). There were three courses in the academic component of unit one: problem-based tutorials (5 hours per week), a clinical skills laboratory (6-7 hours per week), and professional issues (3 hours per week). In the problem-based tutorials, students worked in groups of six to seven to identify issues from health care scenarios, discussed the knowledge gained through self-study, and applied the knowledge to the scenario. In the laboratory course, students practiced the clinical skills needed to treat clients with the conditions discussed in the tutorials. The professional issues course occurred in large groups and used a variety of formats, such as guest lecturers, interactive discussions, visits by guest patients, and student-directed seminars. Students examined broad topics related to the profession of physical therapy practice.

Three faculty members who taught in the first unit and one graduate student were the investigators that were involved in the EPOD qualitative research project. One faculty member was the instructor for the EPOD learning event; the other two faculty members were the course instructors for the problem-based tutorial course and the professional issues course, respectively, while the graduate student was the teaching assistant in the semester.

Purpose

The purpose of this qualitative study was to examine students' learning about disability through the EPOD learning event. We wanted to find out how students responded to the EPOD event, and whether this opportunity was effective in broadening their own perspectives and awareness regarding disability and promoting a positive attitude about people with disability. The primary goal of the project was to explore students' perceptions about the shadowing experience with individuals with a disability living in the community through the reflective summary assignment. The secondary goal was to obtain feedback about the impact of the EPOD event in order to improve the experience for future classes.

Methods

Students

Fifty-seven students (41 females, 16 males) in a Master's entry level physical therapy class of 2006 participated in the study. The mean age was 25.5 years (SD 3.1; range 22 – 37). Before entry into the program, the students had completed baccalaureate degrees in kinesiology (n = 22), science and health related (e.g., biology) (n = 30), medicine (n = 2), or other (n = 3). As a requirement for admission into the program, potential candidates needed observational or volunteer experiences in a health care setting. Before the start of the study, the EPOD project was approved by the university's Research Ethics Board, and students provided consent for the use of their reflective summary assignments for the study.

Reflective Summary Assignment

This was the first reflective summary assignment that the students were exposed to in the program. The students were asked to write a reflective summary assignment for the EPOD learning event. The instructions for the assignment were: *"At the end of the shadowing experience each student will prepare a 4 to 5 page reflective summary report about his/her experience. Reflective summaries should include the type of experience and personal observations about: (1) supports and barriers within the community that both impede and enhance an individual's participation; (2) reflections on the experience of living in the community with a disability; and (3) reflections on the student's perspectives as a student physical therapist. Grading will be based on the quality of the reflections and the ability to synthesize learning from the experience. The EPOD*

learning event is worth 15 marks (10 marks for the problem-based tutorial course and 5 marks for the professional issues course)."

The students were provided with information on the levels of reflection as described by Williams et al.²⁵ Very briefly, these levels include describing the learning event, analyzing the event, verifying the learning, gaining a new understanding, and indicating future behavior. The levels of reflection are shown in the Appendix.

Analysis

Prior to the analysis, student names were removed from the reflective summaries and replaced with identification numbers by the program secretary who was not involved in the project. Fifty-seven summaries were entered into *NUD*IST*, a computerized software program for qualitative data management. The method described by Coffey and Atkinson was used to analyze and interpret the qualitative data in the summaries.²⁶ Analyzing the qualitative data in the summaries involved identifying and coding specific phenomena related to the students' learning about disability as well as their learning about people with a disability into content-related concepts and categories, and then examining and grouping the concepts and categories into themes.

To establish agreement on codes that would be used to describe the content in the reflective summaries, all four investigators independently read and coded the entries from five randomly selected summaries, then came together to establish a uniform codebook. The identification of possible codes and categories were discussed over three meetings. The remaining 52 reflective summaries were then randomly assigned to one of the six possible different pairs of evaluators. Each member of the pair independently read and coded the journal entries according to the established codebook, with new content descriptors added as needed. The pair of investigators who read the same summary checked to see that they had the same interpretation of each entry. If agreement on the coding could not be established, a third or fourth evaluator came in on the discussion until a consensus was reached. There was no attempt to force the content of an entry into a preset code, and new codes and categories were created as needed. The four evaluators then met again to establish agreement on the interpretation of the entries of these 52 summaries, to further categorize the data, and determine themes.

In this qualitative study, the criteria devised by Lincoln and Guba of credibility, transferability, dependability, and confirmability were used to establish the quality and trustworthiness of the research process and findings.²⁷ Credibility refers to the likelihood that the data truly represent the respondents' understanding of the phenomena being investigated.^{28,29} In this study, credibility through triangulation by investigators was used. Triangulation implies the use of multiple sources or investigators to verify the results; in this study, the

themes were identified by using different evaluators (e.g., faculty members and a teaching assistant who taught in the unit). Transferability enables the reader to consider whether the results can be transferred to similar situations or respondents, by the nature of the detail of the research that is provided which may enable that process to be repeated.^{28,29} In this study, detailed information about the program, the EPOD learning event, the courses in the unit, and the characteristics of the students also were provided. Dependability, another component of trustworthiness, is similar to the concept of reliability.^{28,29} Dependability was achieved in this study by providing a detailed audit trail of the analysis process which involved a description of the investigators working together to form and group codes into categories, and then into themes. This iterative process involved numerous discussions over several sessions about the meaning of the entries, grouping and regrouping of codes, and the ongoing discussions, development, and revisions of a codebook. Confirmability is another component of trustworthiness and implies neutrality.^{28,29} A study is confirmable when it is free from bias. In this study, attempts to reduce biases were

made by recording changes to the interpretation, categorizations, and re-categorizations of the codes and themes. This was an ongoing process that was discussed and documented in the development of the codebook. Thus, efforts were made to enhance the quality and trustworthiness of the study.

Results

The following themes were identified from the students' reflective summaries: (1) students' assumptions concerning disability were challenged, (2) students' understanding about supports and barriers for people with disability was enhanced, and (3) students acknowledged their professional growth and learning. These themes combined together demonstrated that the EPOD was beneficial in stimulating students' self-reflections concerning disability, leading to an enhanced understanding of the daily experience of individuals with a disability. The major codes and categories that were cited in the reflective summaries that were used to identify the themes are displayed in Table 1. The following are descriptions of the three identified themes.

Table 1. Major Codes and Categories Cited in the Students' Reflective Summaries That Were Used To Identify the Themes

Themes	Major Codes and Categories	Definitions
Theme 1 – Students' assumptions concerning disability were challenged	Impressions of people with disability	Students' assumptions about disability in general; Students' comments about their enhanced understanding regarding disability and people with disability, and how EPOD changed/influenced their perspectives of disability.
	Emotional responses to disability	Students' emotional responses to EPOD <i>before</i> and <i>after</i> meeting the volunteer.
Theme 2 – Students' understanding about supports and barriers was enhanced	Physical environment	Students' reflections about volunteer's accessibility such as facilities or amenities to assist people with disability to physically enter buildings and rooms; Students' reflections about volunteer's physical environment <i>inside</i> buildings such as dimensions and arrangements of living spaces and furniture, lighting, ventilation, temperature, noise, and other characteristics related to inside physical environment; Students' reflections about volunteer's physical environment <i>outside</i> buildings such as sidewalks, crosswalks, textures, surfaces, or other characteristics related to outside physical environment; Students' reflections about volunteer's adaptive equipment such as devices and technology which can allow active engagement in activities; and Students' reflections about volunteer's transportation such as traveling from one place to another using private or public transportation.
	Social environment	Students' reflections about volunteer's attendant care such as services provided by caregivers including family members and friends; and Students' reflections about volunteer's beliefs and ideas about society's view of disability.
	Systems environment	Students' reflections about volunteer's finances; Students' reflections about volunteer's finances that are provided by government, health care system, and insurance companies; and Students' reflections about volunteer's eligibility for adaptive devices, accommodations, etc.
	Physical and cognitive variations among people with disability	Students' reflections about volunteer's ability to communicate and process information; Students' reflections about volunteer's ability to cope with pain and fatigue; Students' reflections about volunteer's ability to participate in employment (paid and unpaid); Students' reflections about volunteer's ability to perform self-care activities including intimacy; and Students' reflections about volunteer's ability to take on various roles (e.g., father, daughter).
Theme 3 – Students acknowledged their professional growth and learning	Intra-professional learning	Students' reflections about establishing rapport with clients (e.g., communication, holistic approach).
	Inter-professional learning	Students' reflections about establishing rapport with colleagues from the same or different discipline.

(1) Students' assumptions concerning disability were challenged.

The students stated that before the EPOD learning event they had certain assumptions about disability. For example, many students said that people with disability, rather than society, had to change. Some students said that persons with a disability were different than people who do not have a disability; other students assumed that having a disability was a negative experience. Still others stated that the disability defined the person. The following is an example of a quotation of an entry in the reflective summaries before the shadowing experience that illustrates how the students' assumptions about disability were challenged.

"While listening to [the volunteer] I was surprised to hear of her level of independence. Through analysis of my reaction, I discovered I [had] believed individuals with disabilities are dependent on others."

After the EPOD event, the students started to think differently about disability. The stereotypical attitudes or assumptions about persons with a disability that the students held prior to meeting them had changed. The following quotations demonstrated this change. *"After meeting them [the volunteers], I realized that they are two ordinary people with their share of everyday joys, sorrows, challenges, likes, dislikes... not much different than anyone else... To me, this was the most unexpected."*

"When initially informed about this assignment, I thought I understood disability. But upon developing my learning objectives, I realized that I had a rather superficial understanding of disability, and that I was plagued by stereotypes... I was disappointed with myself for having such a limited view... It was my shared visit with [name of volunteer] that allowed me to learn more about this topic, and an opportunity to learn a little more about myself through [name] and his life experience."

(2) Students' understanding about supports and barriers for people with disability was enhanced.

The students identified a wide range of supports and barriers that affected peoples' ability to participate in their daily activities. Some examples that the students cited pertained to the physical environment. For instance, *"wheelchair accessibility both inside and outside of buildings can make it difficult to navigate"*. Transportation was also cited as a barrier for people with a disability. For example, *"taxis are expensive to use"*; and *"a long waiting time is needed when one uses government funded travel arrangements"*. The following student quotation illustrates the students' enhanced understanding about supports and barriers for people with disability. *"[My volunteer] is a wheelchair user and therefore is presented with many architectural challenges. The barriers include curbs, stairs, interlocking bricks (they can make for a bumpy ride!) and doors without electronic wheelchair access... I had not thought about the angle of a wheelchair ramp and that it might actually take someone fifteen minutes to climb it,*

or that a wheelchair accessible washroom is of no use if the door opens the wrong way."

Other examples of supports and barriers that were discussed in the reflective summaries had to do with finances. For example, some students stated how difficult it was for some volunteers to find employment, which is a financial barrier while other students mentioned that some volunteers relied on family support for their financial needs. Other students stated that funding practices, such as government funding only covers very basic services and equipment. For example, *"With all the advancements in technology there are many useful gadgets to aid in [the volunteer's] daily life. Yet at times they are difficult to purchase due to the lack of financial resources as not all of the equipment is covered by health insurance. It is very important for [the volunteer] to pick and choose the appropriate equipment and devices that will be suitable for her over a long period of time."* Government funding also was identified as a support for people with disability. The following student quotation further illustrates this. *"The government's financial subsidies and society's tolerance for people with disability have made living in the community easier. The government provides funds for the care and support that [the volunteer] needed."*

Issues about societal attitudes and individual attitudes also were raised as supports and barriers in the reflective summaries. The students discussed how some volunteers had mixed feelings about societal and individual attitudes about disability. For example, the students stated that some volunteers felt that they were viewed as "others" and were discriminated against, while other students said that the volunteers felt that people [without a disability] were generally supportive and understanding. The following quotation further supports this perception. *"Society's non-discriminative attitude has removed a huge emotional barrier for [him]. He is no longer called mentally retarded, teased and discriminated when he goes to public places. I am grateful for this opportunity because it provides me with a chance to reevaluate and mediate on equality and prejudice."*

Some students noted that there were differences in the volunteers' own attitudes about disability. They discussed how some volunteers demonstrated a positive, upbeat attitude about life and did not view the difficulties they were having as barriers. The following quotation illustrates this perception. *"She has been in a wheelchair for her whole life, yet she has adapted very well to her way of life and she is a happy and content young woman. She is not a negative person who dwells on not being able to go somewhere due to the lack of accessibility. Whenever possible, she just asks for changes and in her experiences most places have been very accommodating to her needs."*

(3) Students acknowledged their professional growth and learning.

The students explored the meaning of client-centered practice. Components of client-centered practice were identified as: communication (e.g., active listening), a holistic approach (e.g., incorporation of both physical and psychosocial aspects), and active engagement of clients and their significant others in the therapeutic relationship (e.g., taking into account the client's own desired outcomes in rehabilitation). Students felt that the learning through this assignment would translate into improved skills in a clinical setting. The following quotations from the summaries support the students' acknowledgement about their professional growth and learning. "As a physical therapist I will try to have patients focus on their abilities and motivate them to actively participate in their own rehabilitation. As well [this EPOD] experience taught me how important it is to help people to retain as much independence as possible and to help them participate in the activities they wish to take part in."

"[My volunteer] provided me with a lot of knowledge that I can incorporate into becoming the best physical therapist I can be. I have learned how to communicate with a patient, some barriers that one with physical disabilities may encounter, the emotional stresses they experience and how to ease their anxiety and stress."

Discussion

The EPOD learning event provided the Master's entry level physical therapy students with an opportunity to establish a rapport with the volunteers and to gain an enhanced understanding regarding disability from the viewpoint of people with disability living in the community. The students' reactions and insights concerning disability and their interactions with the volunteers assisted with broadening their perspectives about disability and promoting more positive attitudes about disability. Our findings are similar to others.¹⁰⁻¹² These studies appear to demonstrate that an educational philosophy that involves both the provision of accurate information about disability and close contact with persons with disability complements the goals of rehabilitation. Gething emphasized that it is not the contact per se that is the critical factor in this process, but the nature and dynamics of that contact.³⁰

Although the EPOD experience varied from student to student, overall the students believed their enhanced knowledge about disability enabled them to be more competent, proactive, and assertive in their role as a student physical therapist. They valued the opportunity to reflect and become more aware of their learning about disability. One student stated: "As a student physical therapist, this experience has taught me a great deal that I can take with me to my future practice. [My volunteer's] experience with his disability taught me to remember the power of motivation, encouragement and keeping a positive attitude."

Of surprise to the investigators was the students' negative attitude about disability prior to meeting the volunteers. Many students were of the opinion that people with a disability may "be dependent upon others," "miss out in society," "have difficulty participating without assistance," and "feel cheated out of life". One may have expected that as physical therapy students who have chosen a health-related program, their attitudes would have been more positive than those who had not selected such a program. One possible explanation for this finding may be that although a requirement for admission into the physical therapy program was observational or volunteer experiences in health care settings, these opportunities may have varied considerably. It also could be that since the majority of the students had backgrounds and interests in the management of sports-related injuries which may mostly require short-term rehabilitation, they were not as familiar with disabilities requiring long-term rehabilitation.

It should be noted that the students in this study were in their first academic semester of the program. At this point in time they had not been exposed to a clinical placement or experience. It would be expected that the results would be different with students later in their program of study who have had some previous clinical placements. Although the students exhibited knowledge and skills in client-centered approach as well as reflection, students who are at a more advanced level would be better able to reflect on their learning experiences. At this time in their training the students had reasonable knowledge of body structures and function, and musculoskeletal conditions but little practice in integrating and applying the knowledge to clients.

The EPOD learning event promoted a mutual exchange in teaching and learning between the volunteers and the students. This experience enabled the volunteers the opportunity to provide the students a view of disability from the perspective of someone living with a disabling condition. As health care practice shifts towards being consumer-driven and community-based, an event such as this give students an appreciation of people with disability being in charge of their own lives, and assists students to view disability within the context of a lived experience.

The reflective summaries were valuable to the instructors in confirming that the objectives of the EPOD learning event had been met. While knowledge and skills can be examined by means of appropriate evaluations, attitudes are more difficult to determine. The reflective summaries provided important feedback from the students over and above feedback provided by traditional course evaluations.

There are some limitations to this study. Although this study provided information about the use of the EPOD learning event, it represents the impressions of only one

class. In addition, since the education processes in a problem-based program tend to increase the awareness of the learning process, the results may apply only to students in a problem-based program.³¹ Further investigations with future classes should be conducted to determine if similar or other themes are identified. In addition, further studies that examine the students' perceptions of the EPOD learning event from other problem-based educational programs as well as traditional programs are needed.

Another concern may be the content in the reflective summaries in that students may write what they think that the instructors want to hear. Because the summaries were graded, this is a possibility. Although there have been mixed views regarding the writing of reflective assignments,^{32,33} we found the students in our study were positive about how the assignment promoted critical analysis and thinking about the EPOD learning event.

The instructions that the students were given with regard to the reflective summary assignment may have affected their learning. If they followed the instructions it was possible that the majority of the students would achieve high marks for the assignment. This may explain why many of the students emphasized supports and barriers as opposed to other issues. Furthermore, the instructions may have encouraged the students to link the shadowing experience to future practice as a physical therapist. It is possible that without the instructions, the students may

not have been able to reflect to that level.

Another limitation may be that the faculty members may have been biased in their interpretation of the contents of the reflective summaries because of their involvement in the courses. However, it should be noted that the student identifiers were removed so that the summaries were reviewed anonymously. Member checking or verifying the findings with the students themselves is a method of assessing the credibility of the results.³⁴ Although we did not undertake member checking, we described in detail the steps that were taken in collecting, recording, and analyzing the data as well as the methods used to assess the rigor of the findings.

Conclusions

The EPOD learning event was useful for enhancing student learning about disability and influencing their attitudes concerning people with disability. Such events are beneficial as they enable students to gain a better understanding of the meaning of disability and the challenges that people with disability face on a daily basis. The use of the reflective summary assignments provided educators with an educational strategy to obtain student feedback and assisted with preparing the students to become reflective health professionals.

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Appendix. Criteria for Grading Reflective Journal Writing ²⁵

1. Describes the learning event, issue, or situation. Describes prior knowledge, feelings, or attitudes with new knowledge feelings, or attitudes. *What happened?*
2. Analyses the learning event, issue, or situation in relation to prior knowledge, feelings or attitudes. *What is your reaction to the learning event, issue, or situation? Your response may include cognitive and emotional reactions. Why did it happen?*
3. Verifies the learning event, issue, or situation in relation to prior knowledge, feelings, or attitudes. *What is the value of the learning event, issue, or situation that has occurred? Is the new knowledge, feeling, or attitude about the learning event, issue, or situation correct?*
4. Gains a new understanding of the learning event, issue, or situation. *What is your new understanding of the learning event, issue, or situation?*
5. Indicates how the new learning event, issue, or situation will affect future behavior. Determines the clarification of an issue, the development of a skill, or the resolution of a problem. *How will you approach the same or similar event, issue, or situation in the future?*