Exit Tickets Open the Door to University Learning

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Four instructors from a mid-western university implemented exit tickets in their university courses. The exit tickets were based on Marzano's (2012) four types of exit tickets and were analyzed for patterns. Faculty completed a journal to reflect on what was learned examining the exit tickets. A survey was completed by both instructors and university students to determine the benefits of the use of exit tickets as a formative assessment at the university. Researchers share the processes used for implementing exit tickets and the results of the data collected along with implications for the use of exit tickets at the university.

Changing the culture of the university classroom from one of passivity to active engagement requires purposeful planning by the university professor (Kuh, 2005). One way to plan purposely is to use formative assessments. Formative assessments are used to monitor student learning and provide valuable information to both the student and the instructor. By implementing formative assessments, the instructor is able to refine teaching practices based on the needs of the students (National Council of Teachers of English, 2013). An example of a formative assessment is an exit ticket.

Exit tickets offer easy, quick, and informative assessments that help encourage student connections to content, self-reflection, and a purpose for future learning (Marzano, 2012; Owen & Sarles, 2012). In an age of accountability, exit tickets inform the professor of misconceptions, attitudes, and knowledge of content learned during the class period (Soto & Anand, 2009).

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Exit tickets have been used in different contexts and content areas as a formative assessment for learning (Robb, 2003; Sosa 2013). Exit tickets are prompts given to students at the end of a lesson or class period, and they are an easy way to assess student learning. They can provide evidence of mastered content or misunderstandings as well as help students to self-reflect on their understanding of content. They can be used for student self-evaluation or as a means for the student to clarify learning. Exit tickets allow for teachers to understand what the student is thinking and informs them of misconceptions and needed areas to instruct (Brookhart, 2013).

The lack of research on the use of exit tickets at the university level and the need for university faculty to become more knowledgeable about formative assessment was the basis for the design of this study. This research project will add to the existing literature on formative assessments at the university level and *open the door* for university instructors to implement exit tickets as a means for gaining information about the learning of their students.

Four Kinds of Exit Ticket Prompts

Formative assessment provides the information needed to adjust teaching in a timely manner. Marzano (2012) identifies four kinds of prompts used in exit tickets, which can serve as a means to formatively assess. The first prompt provides formative assessment data that gives information about the students' understanding.

How would you rate your current level of understanding of what we did today? Score yourself a 3 if you understand everything we did and can even think of ways to use this learning. Score yourself a 2 if you understand everything we did but can't think of how you would use this information right now. Score yourself a 1 if you understand some of what we did today but are confused about some important parts. Put a 0 if you understand very little of what we did today or are completely lost. (Marzano, 2012, para. 5)

The second prompt is used to stimulate student self-analysis: "How hard did you work today? Explain why you think you worked at the level you did" (Marzano, 2012, para. 8). This type of prompt asks students to reflect on effort used during class rather than on the content learned. The third prompt focuses on gaining information about instructional strategies used during the class period. For example, if the instructor used cooperative learning groups, the prompt may be: "How did the group work help you understand the content? What are some things you would like to see in group work in the future (Marzano, 2012, para. 11)?" This allows the instructor to see if and how the strategies used were effective or meaningful to students. The fourth and least common prompt allows students to openly communicate to the teacher: "What is something I should be doing to help you understand the content (Marzano, 2012, para. 13)?" This kind of prompt is powerful in that it allows students to partner in shared learning (see Appendix A).

Implementing Exit Ticket Prompts

For this research study, four instructors participated in implementing the exit tickets in one designated 16-week course they taught. Faculty members represented three departments at the university, all a part of the Teacher Education Faculty (TEC). Two of the faculty members were from the elementary education department, one faculty member was from the art department, and another faculty member was from the math department. During the spring 2014 semester, the four instructors selected four consecutive weeks during which each would administer the exit tickets to the students. During this 4-week timeframe, instructors agreed to administer the same prompts for consistency when collecting student responses. The Marzano prompts used are included in the appendix. Fifty-four university students participated in this study of exit tickets. Participating university students completed one of the four exit tickets at the end of each class period over a 4-week time frame. Exit tickets were read to determine if there were similar responses.

Data Collection

Exit ticket prompts. The four faculty members used each of the types of exit ticket prompts (Marzano, 2012) weekly for four weeks during the semester. The instructors followed a timeline set by the research team for distributing the exit ticket prompt types for each week. For example, the Instructional Strategies prompt used in week 1 read, "How did the group work help you understand the content? What are some things you would like to see in group work in the future (Marzano, 2012, para. 11)?" The exit ticket was given to students at the end of the class period. The students filled out the tickets anonymously and the instructor collected the completed tickets. Additionally, three more exit tickets were given to

students over a four week time period, which were collected by the instructor. The instructors recorded responses from the exit tickets in Google Docs. This allowed for the instructors to share the student responses in an organized system. Using Google Docs provided the instructors an opportunity to create a portable document profile (PDF) file of the responses and share electronically when reviewing the exit tickets.

Faculty journaling. After reviewing the exit tickets, the faculty members responded to an online survey reflecting on their perceptions of what students learned. Additionally, the instructors were asked to rate the overall benefit of the exit ticket information as well as the perceived rate of the overall effort of the students during the class period. They were also asked to report what they had learned from examining the exit tickets and the next steps, if any, that they would take in response to what they had learned.

End of experience survey: Faculty and student. At the end of the implementation, the instructors and university students participating in the study completed an end-of-experience survey created by the researchers based on Marzano's prompts (Marzano, 2012) (see Appendix A). The surveys consisted of 10 Likert-type items and included two items for each of the four types of exit ticket prompts and two questions that were considered general for both faculty and student. An open-ended question that allowed students and faculty/researchers to provide additional comments about the use of exit tickets was also included in the survey. The questions on the faculty member survey were designed to mirror those on the student survey. For example, the first question on the student survey asked students to rate their agreement with the statement, "The exit tickets were beneficial in holding me accountable for what I learned in class," while faculty responded to the statement, "The exit tickets were beneficial in holding students accountable for what they learned in class;" (see Appendices A, B, and C).

Results

Exit Tickets

The four faculty members collected and analyzed student responses to 31 different exit ticket prompts. Ten sets of exit tickets were collected for self-analysis, 8 sets of exit tickets for instructional strategies, 7 sets of exit tickets for open communication to the teacher, and 6 sets of formative assessment data. There were fifty-four total responses on the exit ticket surveys completed by university students and analyzed by the researchers.

Faculty Journaling

Benefit of the exit tickets. The first question on the online *Faculty Journal* asked the faculty to rate the benefit of the exit ticket (1=*strongly disagree*; 2= *disagree*; 3=*agree*; and 4= *strongly agree*). Faculty also explained their thinking about the perceived benefits of exit tickets. Overall, 88% of the time exit tickets were used, the faculty indicated that the exit tickets were beneficial, noting that they agreed or strongly agreed with the statement, "The exit tickets were beneficial to me as an instructor." The explanations that were given to explain the rating included affirmations from the students about their level of learning, misconceptions that surfaced in student comments that could be used to help the instructor plan "next steps" in instruction, and new information that could contribute to additional strategies and processes to use to improve instruction for the course. One instructor explained the benefits of using exit tickets by stating,

The data from the exit ticket confirmed that they [university students] saw the power of manipulatives as an instructional strategy designed to enhance learning. They [university students] made some suggestions on the exit tickets regarding the amount of time spent on various manipulatives that will help me improve what I do.

This comment was typical in addressing the benefits of using exit tickets.

Overall effort of students. The second item on the *Faculty Journal* asked faculty to rate the overall effort of their students for that class period (*1=strongly disagree; 2= disagree; 3=agree; 4= strongly agree*) in response to this statement, "The overall effort of my students today was high." The instructors were also asked to explain their rating. The instructors rated the effort of their students as very high with 100% of the rankings at the 3 level (32%) and 4 level (68%). The following comments from faculty members were typical of the explanations provided for the rankings, *"Students appeared engaged throughout and indicated excitement throughout the project,"* and *"The content of the class involved them doing activities they can use in their own classrooms, so they were quite engaged."*

Learning opportunity. Faculty were asked to report what they learned from examining the exit tickets. The instructors reported learnings that ranged from instructional strategies that seemed to support student learning to the relevancy of what was taught and practiced during the class period. One instructor stated,

The exit tickets affirmed that I was including a variety of instructional strategies. It also let me know that they were using the language of 'teaching' when they could identify that the cooperative groups could be used in their future classrooms. It also affirmed they were processing their own learning.

Another instructor reported, "*I learned that I need to include a variety of instructional strategies and materials in order to engage my students in active learning.*"

Next steps. The last item on the *Faculty Journal* asked, "What are your next steps, if any?" This question allowed the faculty to reflect on what they had learned and make decisions for future action in their university classroom. The following comment by one instructor shows the depth and action-oriented thinking the exit tickets encouraged,

How can I continue to engage all students? One person mentioned that he/she wishes I would spend more time telling them how to use particular activities in their future classrooms. My preference is for them to think about this themselves, but perhaps, I need to be more direct in telling them this is what I want them to do.

A summary of the results for the online *Faculty Journal* reveals instructors indicate they benefited from the implementation of all four exit tickets as it gave them insights into effective instructional strategies that supported learning, identified additional needs of the university learner, served as a means for formative assessment, and supported reflection-for-action in future teaching. The instructors reported that the open communication prompt and the instructional strategies prompt provided the most beneficial information. It was suggested that the formative assessment prompt and the self-analysis prompts would offer more

...instructors reported that the open communication prompt and the instructional strategies prompt provided the most beneficial information.

evidence of learning or effort, if the instructors asked students to evidence their learning or effort with additional explanations.

End-of-Experience Survey for Faculty and Students

The End-of-Experience Surveys included 10 Likert-type items including two questions for each type of exit ticket prompt and two questions that were considered general for both faculty and student. Questions posed to the faculty/researcher mirrored those posed to the students. Because of this, the researchers were able to compare and contrast the question items to see if there were similar or dissimilar responses from students and faculty (see Appendices for graphs of responses to each question).

Overall, students and faculty/researchers found the exit tickets to be beneficial. One hundred percent of the faculty and 94% of the students responded with "Strongly Agree" or "Agree" to the statement "Exit tickets were beneficial to me as the instructor/student." Responses provided for the open-ended prompt indicate the positive response of faculty and students. For example, a student wrote, "*I really like liked the exit tickets. They helped me review what I learned that day in class, which helped me remember things. I recommend them for any class.*" A faculty member stated, "*I gained valuable information from the students regarding what they wanted and expected from the class, and was able to adapt my teaching accordingly.*"

Results on items from the End-of-Experience Survey that were designed to gather information about specific exit tickets provided additional evidence of the positive view of students and faculty regarding the use of exit tickets. Between 86% and 98% of students responded with "Strongly Agree" or "Agree" on each of the items. Faculty/researcher responses were a bit more varied with responses of "Strongly Agree" or "Agree" ranging from 75% to 100%.

The researchers compared and contrasted student and faculty responses on the *End-of-Experience Survey* to determine similarities and differences in responses. The very small number of faculty participants, n=4, led to a degree of caution in making these comparisons. In general, the faculty and student responses were quite similar. "Strongly Agree" or "Agree" was selected by at least 75% of the faculty and of the students for each item. This indicates a positive response to the use of exit tickets. Perhaps the greatest disparity in results was seen in question 7 in which participants were asked to rate the level to which the exit tickets were a true reflection of student learning. On this item, 25% of the faculty members disagreed with the statement, "Student responses on the exit tickets were a true reflection of their learning," and no faculty member strongly agreed with it. Conversely, of the students, 67% agree and 31% strongly agreed with the statement, "My responses on the exit tickets were a true reflection of my learning." See Figures 1 to 10 for graphical representations of the findings.
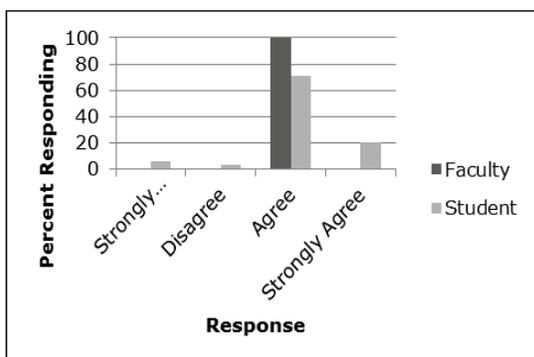
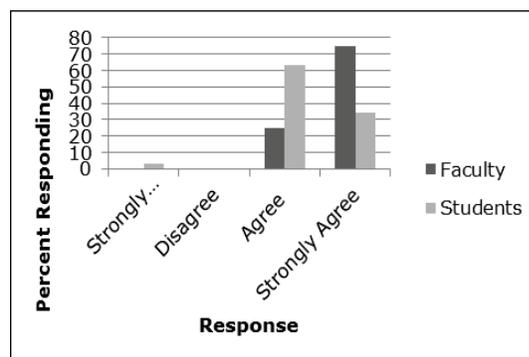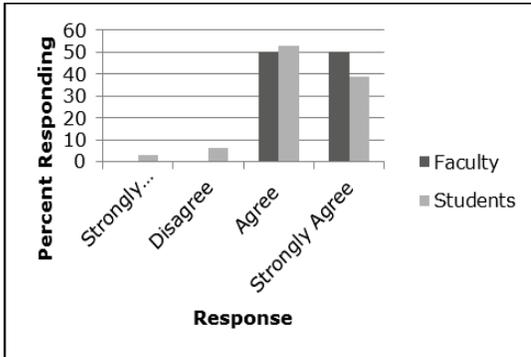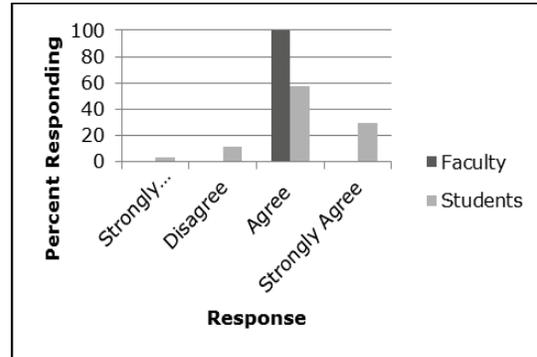**Figure 1 Responses to Item 1: "Accountability for Learning"**

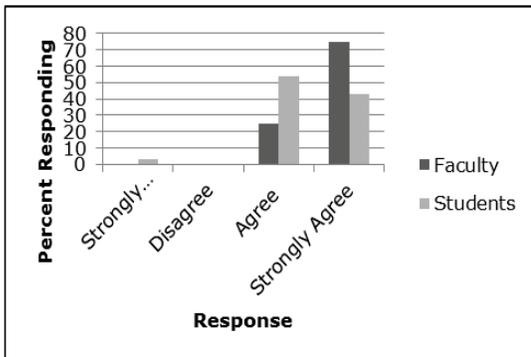**Figure 2 Responses to Item 2: "Reflect on Learning"**

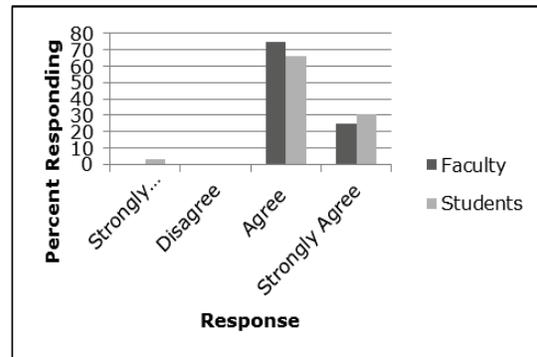**Figure 3 Responses to Item 3: "Instructor Adapted Based on Input"**

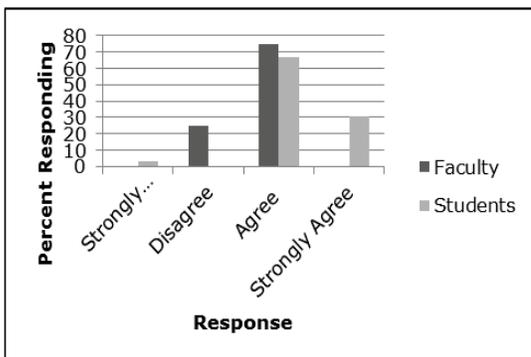**Figure 4 Responses to Item 4: "Apply Learning"**

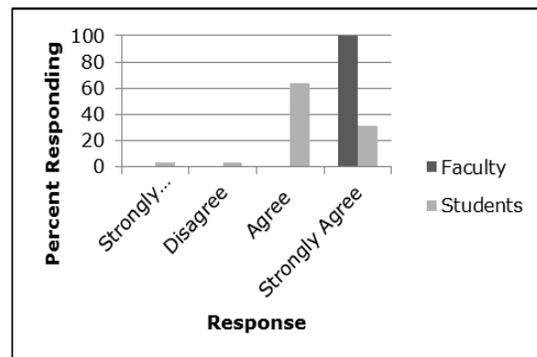**Figure 5 Responses to Item 5: "Communicate with Instructor"**

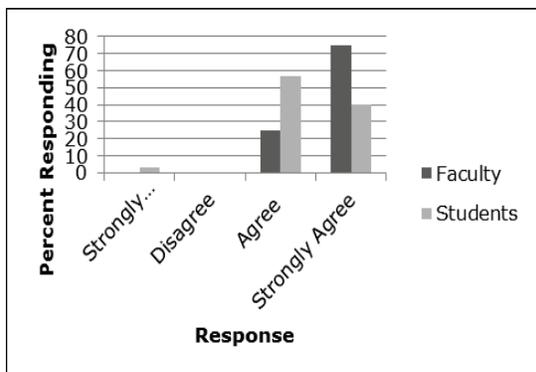**Figure 6 Responses to Item 6: "Reflection on Effort"**

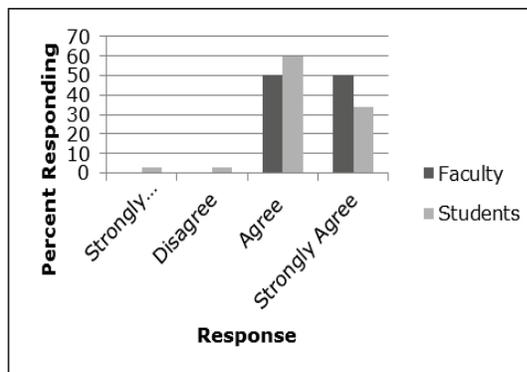**Figure 7 Responses to Item 7: "True Reflection of Learning"**

Figure 8 Responses to Item 8: "Helped Instructor Approve Approach"

**Figure 9 Responses to Item 9:
"Allowed for Feedback"**

**Figure 10 Responses to Item 10:
"Exit Tickets were Beneficial"**

Discussion

Limitations to the Study

Though the study provided the instructors with insights on the use of exit tickets, there were limitations to the study. There were only four instructors who participated in the study.   Additionally, there was a low number of student participation in the study. There was also a low response rate on the exit tickets during the four-week time frame. With these three limitations, this provided the instructors next steps when conducting another research project on the use of exit tickets.

Conclusions and Next Steps

The data from the *Faculty Journal* and the *End of Experience Surveys* in this study support that exit tickets gather purposeful information in order to target student learning, provide immediate feedback to the instructor of the course, and offer university students an opportunity to reflect on their learning. Exit tickets are a beneficial way of gathering student feedback, so the instructor can plan lessons and assignments based on the input provided by students. The faculty in this study encourages their colleagues to consider using exit tickets for formative assessment.

The review of literature shows that little has been published regarding the use of exit tickets at the university level. Though the study had a limited number of students and instructors, the findings in this study add to the limited knowledge, and indicate some directions for future research.

The exit ticket questions need to be revised to include a reflection on the cognitive processes relevant to certain content areas as well as processes used for learning. For example, when addressing student self-analysis in a course centered on teaching language arts, a prompt centered on that discipline could be, "What will you do as a teacher to ensure phonics instruction is taking place in your classroom?" The researchers found insufficient feedback from students made it difficult to make decisions for future instruction or learning. Writing prompts specific to the discipline may elicit the targeted feedback.

Future Research Directions

The researchers in the study are all education faculty, and the students surveyed were education students with content areas of math, art, and elementary and early childhood majors. Future research will focus on a more diverse group of faculty and students to broaden the scope of the investigation. Future research will also provide for more participants in the study. The university has a three-day workshop each August to train new university-wide faculty members, and

volunteers will be solicited from that group to participate in a follow-up study on exit tickets at the university level. Finally, the researchers would like to explore the benefits of integrating technology into the exit ticket response as this would allow for immediately aggregating responses to use for instructional decision-making.

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Appendices

Appendix A

1. The first prompt provides information about the students' understanding: *How would you rate your level of understanding? Rate yourself a 3 if you understand everything your learned and can apply your learning in other settings. Rate yourself a 2 if you understand everything you learned, but cannot think of ways to apply your learning. Rate yourself a 1 if you did not understand and need more clarification*.
2. The second prompt is used to stimulate student self-analysis: *How hard did you work today? Explain why you think you worked at that level*.
3. The third prompt focuses on gaining information about instructional strategies used during the class period. For example, if the instructor used cooperative learning groups, the prompt may be: *How did the group work help you understand the content? What are some things you would like to see in group work in the future?*
4. The fourth and least common prompt allows students to openly communicate to the teacher: *What is something I should be doing to help you understand the content?*

    Note. A description of Marzano's four kinds of prompts used in exit tickets.

Appendix B

Thank you for taking the time to provide feedback about the use of Exit Tickets in your course this semester. Your candid feedback will help us to make necessary adjustments and modifications to our work with university students. Please rate the following statements with 1=strongly disagree 2= disagree 3=agree 4= strongly agree

1. The exit tickets were beneficial in holding me accountable for what I learned in class (effort)
2. The exit tickets helped me reflect on my learning (rate your learning)
3. Based on the input I provided on the exit tickets, my instructor adapted lessons and instruction for the class (instructional strategies)
4. The exit tickets were a helpful tool to help me apply my learning (rate your learning)
5. The exit tickets were a way for me to communicate to my instructor (open communication)
6. The exit tickets were a useful tool for self -reflecting on my effort in class (effort)
7. My responses on the exit tickets were a true reflection of my learning (general)
8. Exit tickets helped my instructor improve on his/her approach in teaching

the content to the class (instructional strategies)

9. The exit ticket questions allowed me to provide feedback to the instructor about the materials and strategies used during class (open communication)

10. Exit tickets were beneficial to me as a learner (general)

11. What additional comments do you have about the use of exit tickets in this class?

   Note. End of experience student survey

Appendix C

Thank you for taking the time to provide feedback about the use of Exit Tickets in your course this semester. Please rate the following statements with
1=strongly disagree 2= disagree   3=agree
4= strongly agree

1. The exit tickets were beneficial in holding students accountable for what they learned in class   (effort)

2. The exit tickets helped students reflect on their learning (rate your learning)

3. Based on the input students provided on the exit tickets, I, as the instructor, adapted lessons and instruction for the class (instructional strategies)

4. The exit tickets were a helpful tool to help students apply their learning (rate your learning)

5. The exit tickets were a way for students to communicate to me, as the instructor (open communication)

6. The exit tickets were a useful tool for self -reflecting on student effort in class (effort)

7. Student responses on the exit tickets were a true reflection of their learning (general)

8. Exit tickets helped me, as the instructor, improve on my approach in teaching the content to the class (instructional strategies)

9. The exit ticket questions allowed the students to provide feedback to me, as the instructor, about the materials and strategies used during class (open communication)

10. Exit tickets were beneficial to me as the instructor. (general)

11. What additional comments do you have about the use of exit tickets in this class?

   Note. End of experience faculty survey

Dr. Danley is an assistant professor of elementary education. She teaches undergraduate and graduate courses in elementary education, supervised candidates in the elementary clinical pathway, and supervises student teachers. Dr. Danley's research focuses on formative assessments, pedagogical practices, and dispositions of teacher candidates.

Dr. McCoy is an associate professor and program coordinator for mathematics education. She teaches undergraduate and graduate courses in mathematics education, supervises candidates in the elementary clinical pathway, and supervises student teachers. Dr. McCoy's research focuses on the development of elementary mathematics specialists and the impact these specialists have on the mathematics achievement of elementary students. She is currently president-elect of the Missouri Council of Teachers of Mathematics.

Dr. Weed teaches art education and foundational art history courses, and studio bookbinding, as well as supervising student teachers. Her work is in the areas of art and autism, and co-teaching as best practice during student teaching. In addition, she is an active member of the Missouri Art Education Association and the National Art Education Association. Previously, she taught elementary art.