

Deliberate Practice Activity

Exit Slips - Formative Assessment of Instruction

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Instruction Improvement Through Deliberate Practice

“Deliberate practice involves more than just repetition; it requires activities that are designed to improve performance, challenge the learner, and provide feedback.” – **Robert J. Marzano**

Formative Assessment of Instruction

- **Provides good teaching-learning environment**
- **Models instructional strategies**
- **Helps improve immediate improvement of instructional practices -- present semester versus next semester.**
- **Opens the floor to hear students' voices**
- **Provides students with opportunity to contribute to their learning process**

Context and Concern

- **Improve teaching and model instruction**
- **Natural Science Education Courses**
 - **Three different classes**
 - **Students interested in teaching (Pre-service teachers) – hour requirement, minor, or getting a teaching credential**

Literature Review

- **Faculty self-evaluation has been hailed as one of the best practices that can transform higher education institutions (Rao, Kumar, and Aithal, 2015).**
- **Self-evaluation of lecturers is deemed to be a continuous strategy for professional development (Doney, 2004)**

Literature Review

- **Self-evaluation of lecturers not only helps in promoting a desirable teaching-learning environment, but also contributes in pedagogical communication (Glotova, & Wilhelm, 2014)**
- **Most universities require faculty members to fill out self-assessment forms when decision is being made for their promotion/ tenure (Prasand and Stella, 2006).**

Intervention

Exit Slips

- **Students write comments anonymously**
- **No particular prompt but open ended**
 - **Just ask them to give their critical feedback**
 - **To capture wide range of comments and suggestions**
- **Collected at the end of every class**
- **Student Survey**

Methodology

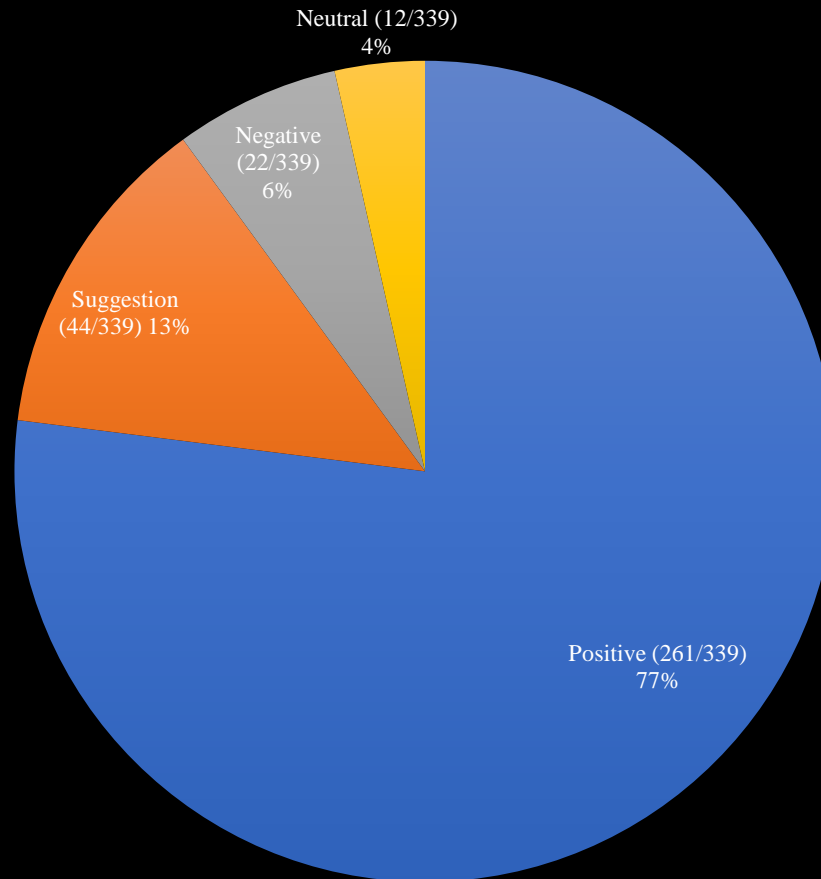
- **Direct Evidence: Exit Slips**
 - **Thematic analysis (to identify categories)**
- **Indirect Evidence:**
 - **Post survey (To collect students' perception on the intervention)**

Results

- Total students (N) = 84
- Total Comments 339
 - Positive Comments = 261
 - Suggestion Comments = 44
 - Negative Comments = 22
 - Neutral Comments = 12

Result

Student (N=84) Comments



Positive Comments Themes (261/339 or 77%)

- Organization and Structure of Class (86/261 or 33%)
- Students' professional preparation (76/261 or 29%)
- Activities (52/261 or 20%)
- Specific Topics (35/261 or 13%)
- Assignment Support (12/261 or 5%)

Positive Comments Theme 1

Organization and Structure of Class (86/261 or 33%)

- *The structure of today's class was good.*
- *I liked today because we were able to collaborate and work on our group lesson plan. Overall good!*
- *What I liked about today's class was the sharing about others' experiences with their lessons b/c that makes us aware of circumstances we can be prepared for.*
- *I really enjoyed today's class very much. I really like working in groups. It really helps to problem solve and think outside the box. I like that we were encouraged to talk to each other and work w/ hands on activity materials. I like working with my peers and I like watching an introductory video.*

Positive Comments Theme 2

Students' professional preparation (76/261 or 29%)

- *I am glad that we are applying knowledge by developing a lesson plan. This will help me in the future.*
- *I was happy I got to learn what my teachers learned.*
- *As someone looking to teach science, it was refreshing to learn more about how to teach and engage in math. I loved how we set-up our dream list of things to do in a lesson. It was really helpful.*
- *Today's class went very well, I learn new things every class. When this class started I thought maybe teaching isn't for me, but after I taught and created my lesson I feel like teaching is for me. I try to hold onto all this information for the future.*

Positive Comments Theme 3

Activities (52/261 or 20%)

- *All of the activities and discussions were really helpful to understand the science process skills.*
- *I believe that the activity we did today is a great activity for inquiry learning as I assume that previous lessons were taught about the mathematical process.*
- *The activities that were done in class today were good. It kept the group engaged and was relevant enough to apply it to a class scenarios.*
- *This was a nice experiment, one, that I would like to do with my student! Really fun!*

Positive Comments Theme 4

Specific Topics (35/261 or 13%)

- *Today's class was interesting. I learned about NGSS, and the importance of it. I enjoyed working in groups.*
- *Bloom's taxonomy helped in the understanding of 5E*
- *I learned the difference between formative and summative assessment.*
- *I learned today there are many components of scientific inquiry. It is very important for students to be able to come up with their own questions, classrooms where students are given "cookbook" labs are not teaching scientific inquiry.*

Positive Comments Theme 5

Assignment Support (12/261 or 5%)

- *Class was very nice. i like how we got to work in our future projects.*
- *Great class! I like that we are focusing on the portfolio part of our class assignment.*
- *The lesson given by the tier 2 students was interactive and fun! The time given in class to talk about the oncoming assignments was helpful plus I got to work on them!*
- *It was helpful having time to work on our hw assignments for this class.*

Constructive Comments (22/339 or 6%)

- Confusing statements (7/22 or 32%)
- Distracting peer behaviors (5/22 or 23%)
- Unnecessary use of papers (4/22 or 18%)
- Unorganized class (3/22 or 14%)
- Uninteresting activities (2/22 or 9%)
- Low audibility (1/22 or 4%)

Constructive Comments

Confusing statements (7/22 or 32%)

- *The class today was helpful in learning about science inquiry however the topic was a little confusing. It was hard knowing what questions were being asked.*
- *The workshops experiments were interesting, but at the same time confusing.*
- *I had a little hard time understanding the question about making the connection between the concept of elaboration with the class itself. I did like the creation and discussion of a lesson plan.*
- *Still confused on backward Designed and lesson planning ABCD rule...*

Constructive Comments

Distracting peer behaviors (5/22 or 23%)

- *It's hard to do group work when some groups members don't agree with my ideas at all.*
- *I think the groups should be smaller in the portfolio. Some people are doing more work than others and some people's inputs aren't being considered.*
- *Not all group members present/ participating.*

Constructive Comments

- *TOO MUCH PAPER! We all have our laptops so digital copies on catcourses would be just as effective. (Unnecessary Use of Paper) (4/22 or 18%)*
- *This change of seats was not the best thing to spring on us. I personally did not communicate as much as I did with my old group. Aside from that with these examples I was able to fully understand scientific inquiry pretty well. (Unorganized Class) (3/22 or 14%)*
- *The class was good, however it would be helpful if people spoke louder. It's difficult to make out what people say sometimes (Low Audibility) (1/22 or 4%)*
- *Today I didn't feel engaged. Probably because I do not intend on teach math. (Uninteresting Activity) (2/22 or 9%)*

Suggestions Comments Themes

(44/339 or 13%)

- Instructional Strategy (14/44 or 32%)
- Classroom Organization/ Structure (13/44 or 29.5%)
- Time (7/44 or 16%)
- Specific Topic (3/44 or 7%)
- Explanation (2/44 or 4.5%)
- Videos (2/44 or 4.5%)
- Classroom rules (2/44 or 4.5%)
- Handouts (1/44 or 2%)

Suggestions Comments Theme 1

Instructional Strategy (14/44 or 32%)

- *Confuse on the lesson plan. Need more examples of what should go in each section.*
- *I would suggest more poster group work like today and gallery walks they are fun.*
- *I like the scenario of the 4th grade class and applying our lesson to that since it can be a real life scenario. More of those would be nice in the class.*
- *I like the different activities going on. They definitely make the class go by faster. For participation, I would recommend picking students to talk so that everyone is encouraged to participate.*

Suggestions Comments Theme 2

Classroom Organization/ Structure (13/44 or 29.5%)

- *I think that for presentations, try to fit in both of them because some are interesting, and they need to be finished.*
- *Maybe need more time to discuss things. Today felt rushed in the groups.*
- *Today's class was more reading from a worksheet. Which could have been done online outside of this class. I'd like to apply what we learn during class using hands on activities.*
- *The outdoor activity and groupwork made the activity fun. It would be good to have 1 ten minute break instead of two 5 mins, just an idea.*

Suggestions Comments Theme 3

Time (7/44 or 16%)

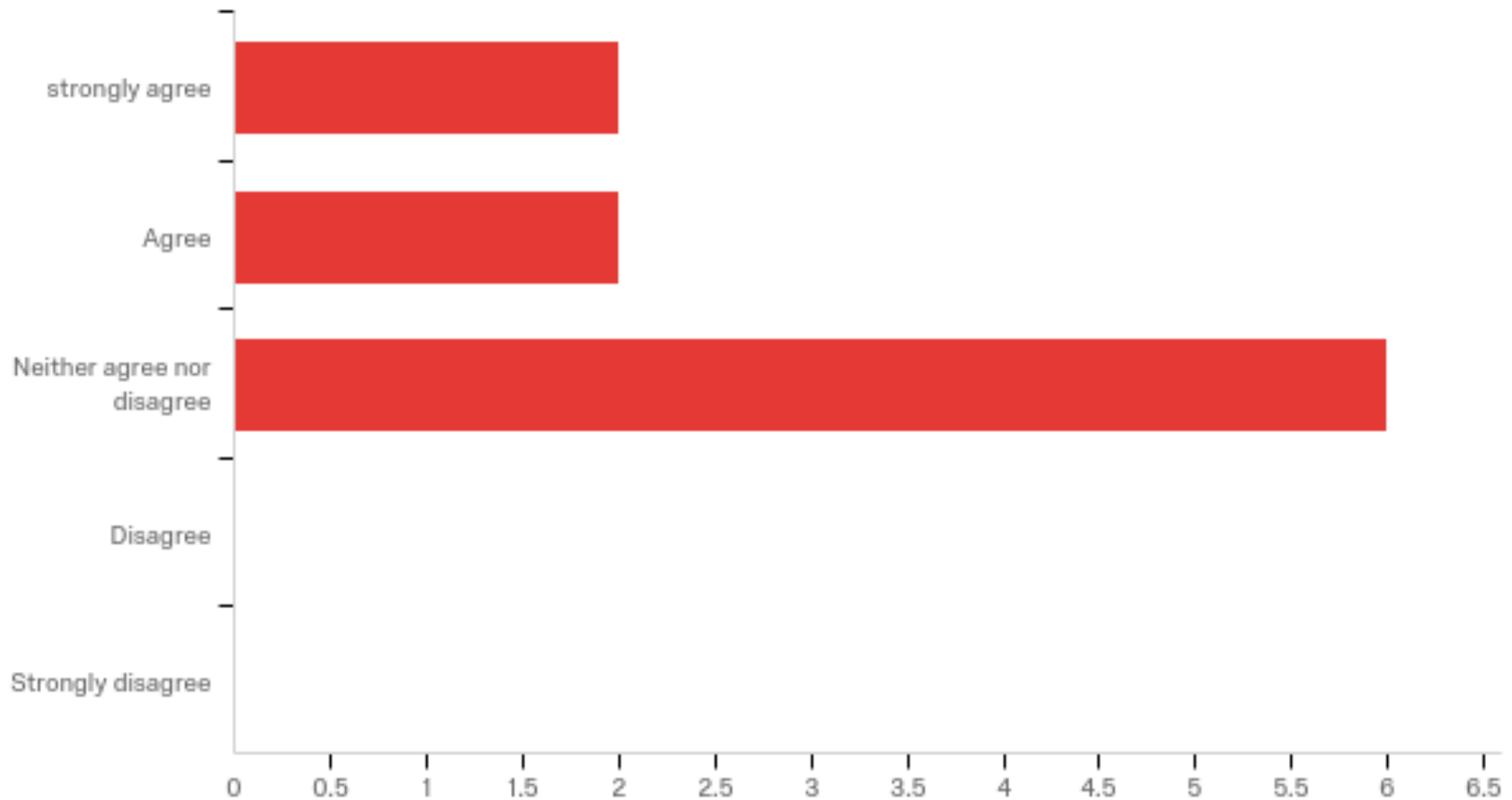
- *Please give more time to work on project.*
- *I like group work maybe give us more time to work on projects or have one on one discussion w/ you about the projects instead of normal class.*
- *I feel like for reading activities we should have a long time to read and discuss because I felt we were short on time. I took a bit to read and didn't have time to go through the questions as much as I would like.*

Suggestions Comments

- *I would like more topics about how to teach students design lesson plans, students interest in high school, etc. (Specific Topic) (3/44 or 7%)*
- *You should try and make instructions more clear. Don't tell us after we already started. (Explanation) (2/44 or 4.5%)*
- *The NGSS videos were really interesting. We should watch more videos. (Videos) (2/44 or 4.5%)*
- *Today, even though there was a lot of group discussion, the same people kept offering for class discussion. Perhaps include a system where people cannot speak up until others have presented. Otherwise enjoyable- good pacing and information. (Classroom Rules) (2/44 or 4.5%)*
- *I liked how we learned about examples of styles that promote scientific inquiry. I would prefer if the handouts were online instead of getting passed out so much paper. (Handouts) (1/44 or 2%)*

Student Survey Report

The Exit Slips implementation was very helpful to my learning.



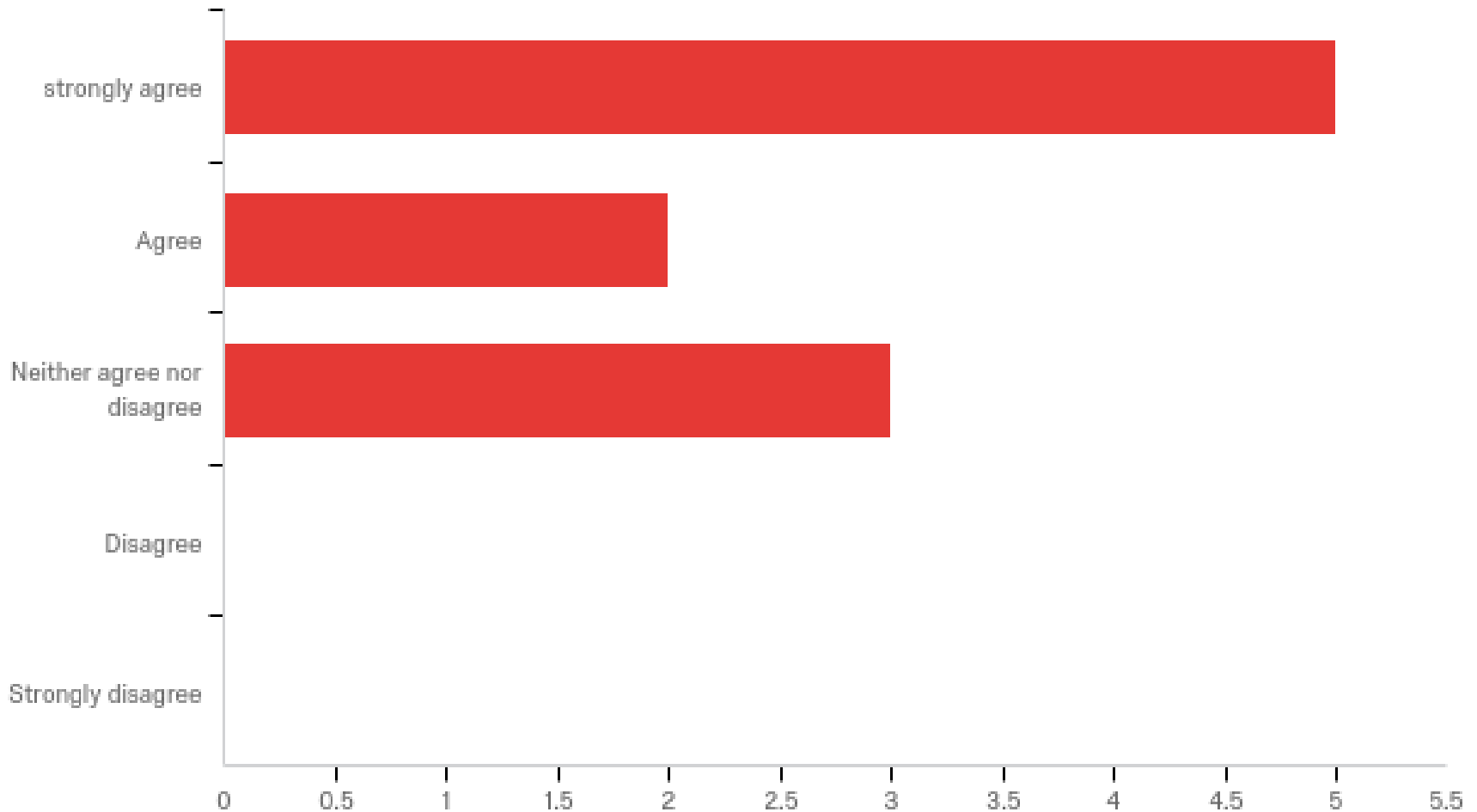
Student Survey Report

The Exit Slips implementation was very helpful to my learning - Explanation

- *In my opinion, the exit slips were valuable to my learning because they reinforced what I learned that day and challenged me to remember what I worked on and how I could improve. If the exit slip was not about the classroom work then it would not reinforce my learning.*
- *I liked because some of the things we said like wanting more hands on group activities was done in later class meetings.*
- *I believe it worked because when some classmates didn't like a certain part about the class they could write it and it would get altered.*
- *The exit slips did not directly impact my learning, but did require me to think back and reflect on the class period.*
- *It doesn't really affect my learning experience.*
- *Didn't help me learn anything. Just gave my opinion.*

Student Survey Report

The Exit Slips helped my voice to be heard in the classroom.



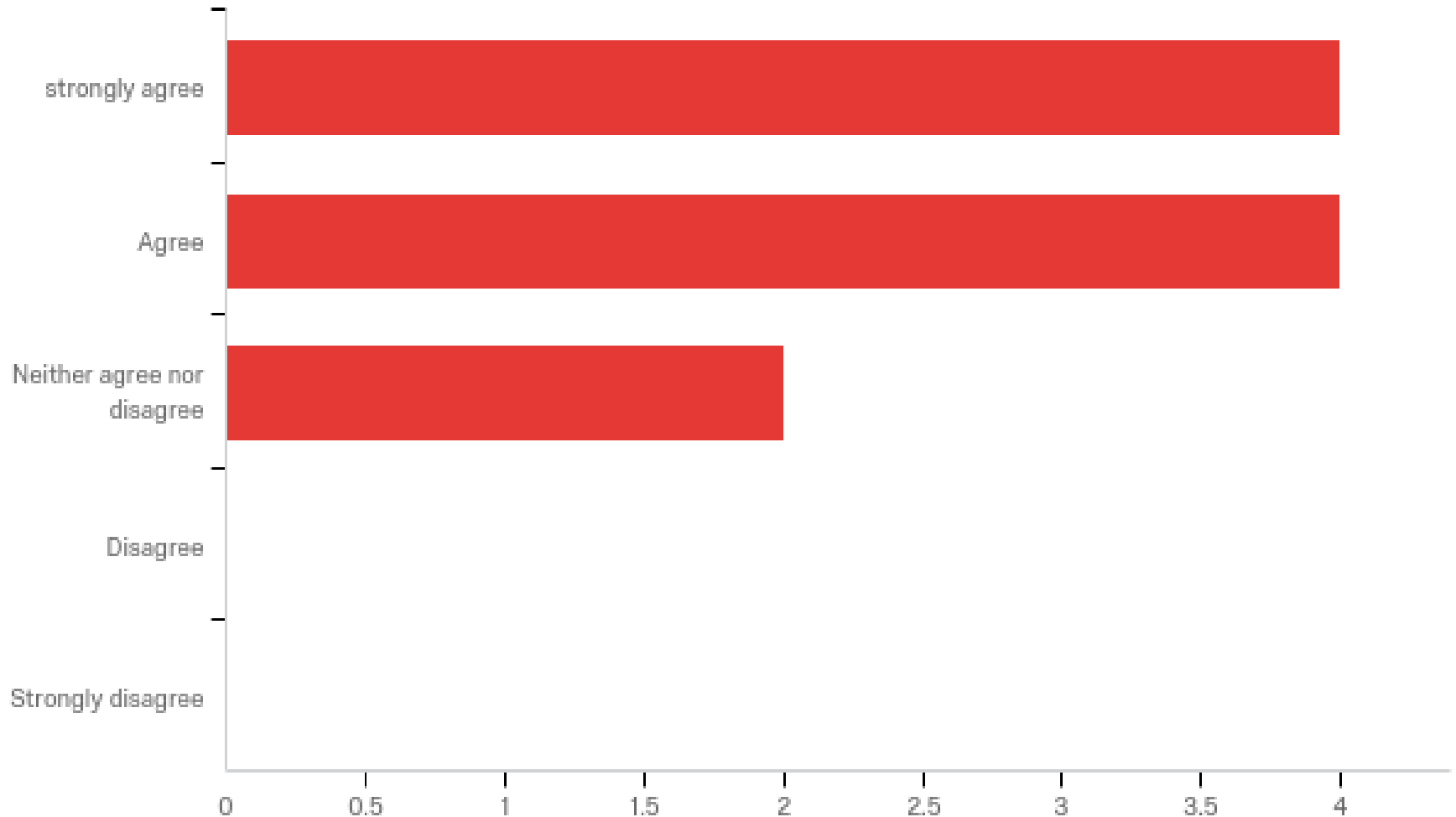
Student Survey Report

The Exit Slips helped my voice to be heard in the classroom – Explanation

- *Saw change in later lecture meeting times.*
- *It aided me in being able to put my take on the days work.*
- *The questions that i put on the exit slip did not get answer.*
- *The professor took our comments on the exit slip to heart and made adjusts accordingly. Sometimes the professor would even respond to a comment directly.*
- *It was disappointing to see students not being engaged in class and I expressed this so instructor started calling people at random.*
- *Suggestions that I made were listened to.*

Student Survey Report

I will implement Exit Slips when teaching in my future classroom



Student Survey Report

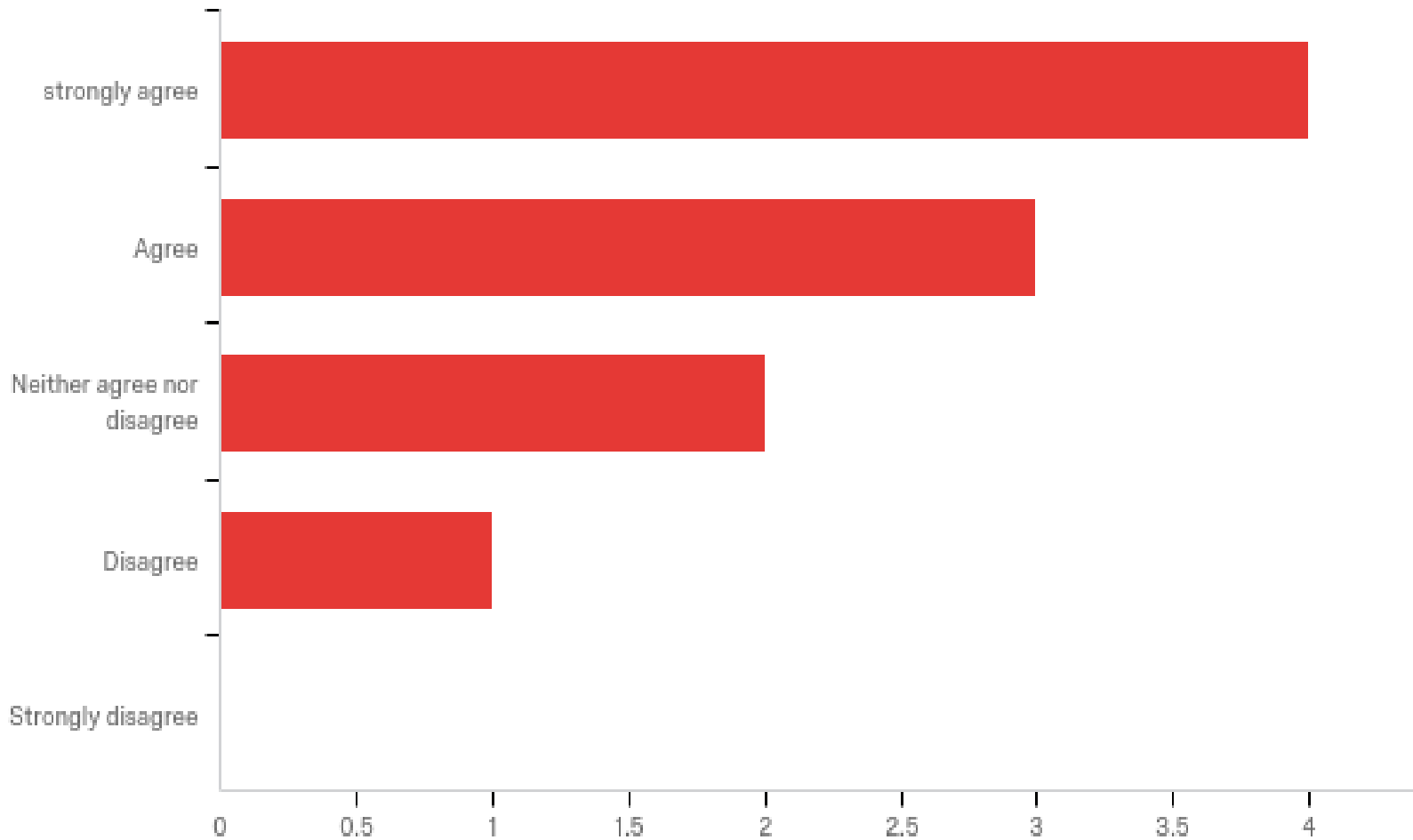
I will implement Exit Slips when teaching in my future classroom –

Explanation

- *Possibly*
- *I will use this method to get a picture of what my students still need help on.*
- *I thought it was a quick and simple process that provided a lot of information.*
- *I like to see what students liked or didn't like about the class. Also to see if they learned.*
- *This will depend on the grade I am teaching.*

Student Survey Report

Exit Slips should be implemented at the end of every class session



Student Survey Report

When completing the Exit Slips, what was your most common comment about the class?

- *Most common comment were the instruction models and how it work.*
- *I commented that the class was always fun and interactive and what I learned was valuable to improving my teaching methods.*
- *That is was a good class, but as a student who often talked, I commented that something should be done to make sure every student shares equally.*
- *Class engagement and it was too long.*
- *Mostly what we learned that day. Sometimes it felt redundant.*

Discussion

- Intervention (Exit slips) helped to improve teaching
 - I followed their suggestions and implemented them (e.g. change instructional strategy - 12/44; structure of class 15/44)
- Survey response rate was low
 - Administered after class ended

Conclusion

- Exit Slips helped me to improve my teaching practices by using students as partners in their learning
- The fact that I considered their views expressed in exit slips, empowered them and motivated their learning.
- Next Steps
 - Use students' views to build up a course curriculum
 - Schedule survey before end of semester to improve response rate

Questions?

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Reference

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