

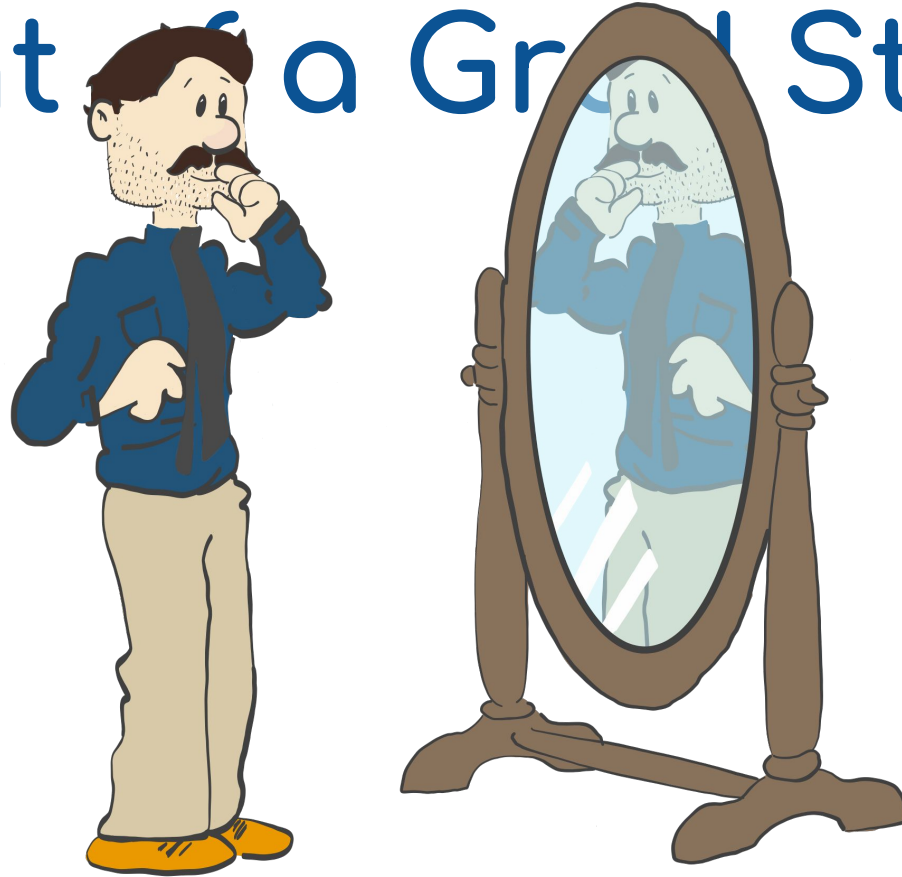
Insight of a Grad Student

Robert Vandermolen



Insight for a Graduate Student

Robert Vandermolen

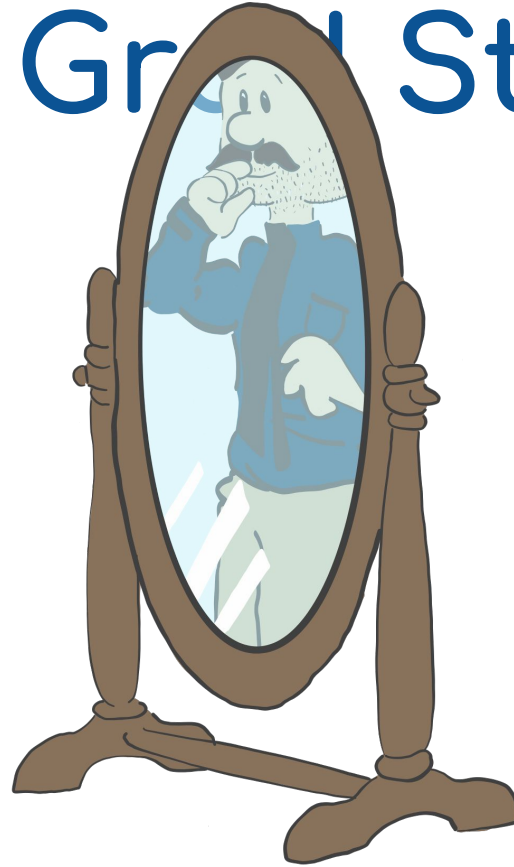


A Cycle of Reflection

ARE MY STUDENTS
UNDERSTANDING?

Thought of a Great Student

Robert Vandermolén



A Cycle of Reflection

ARE MY STUDENTS UNDERSTANDING?

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Student

Robert Vandermolén



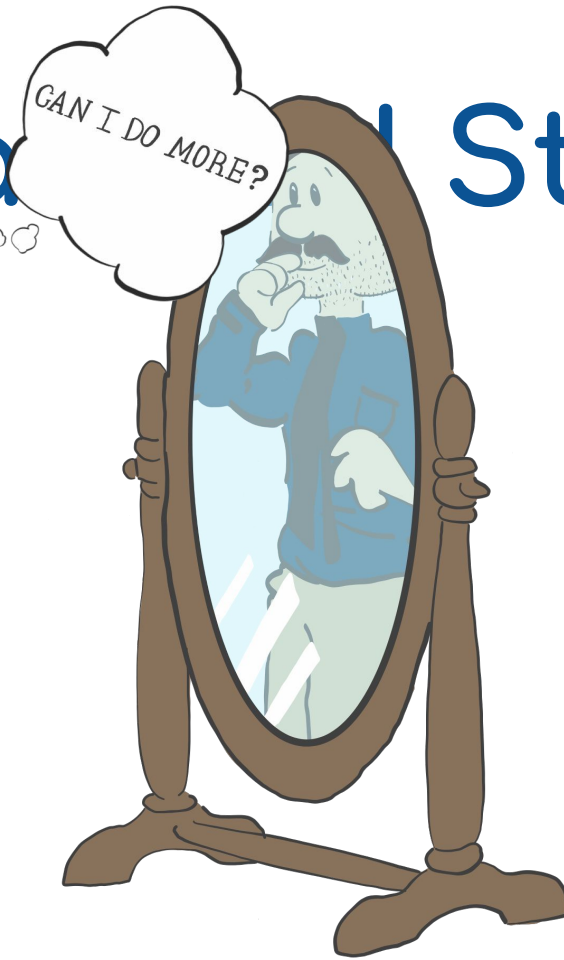
CAN I DO MORE?

A Cycle of Reflection



ght
CAN I DO MORE?
ARE MY STUDENTS UNDERSTANDING?

ARE MY STUDENTS GROWING?



Student

Robert Vandermolén

A Cycle of Reflection



Right for All Student

Robert Vandermolén

ARE MY STUDENTS UNDERSTANDING?

ARE MY STUDENTS GROWING?



CAN I DO MORE?

ARE MY STUDENTS COMMUNICATING?



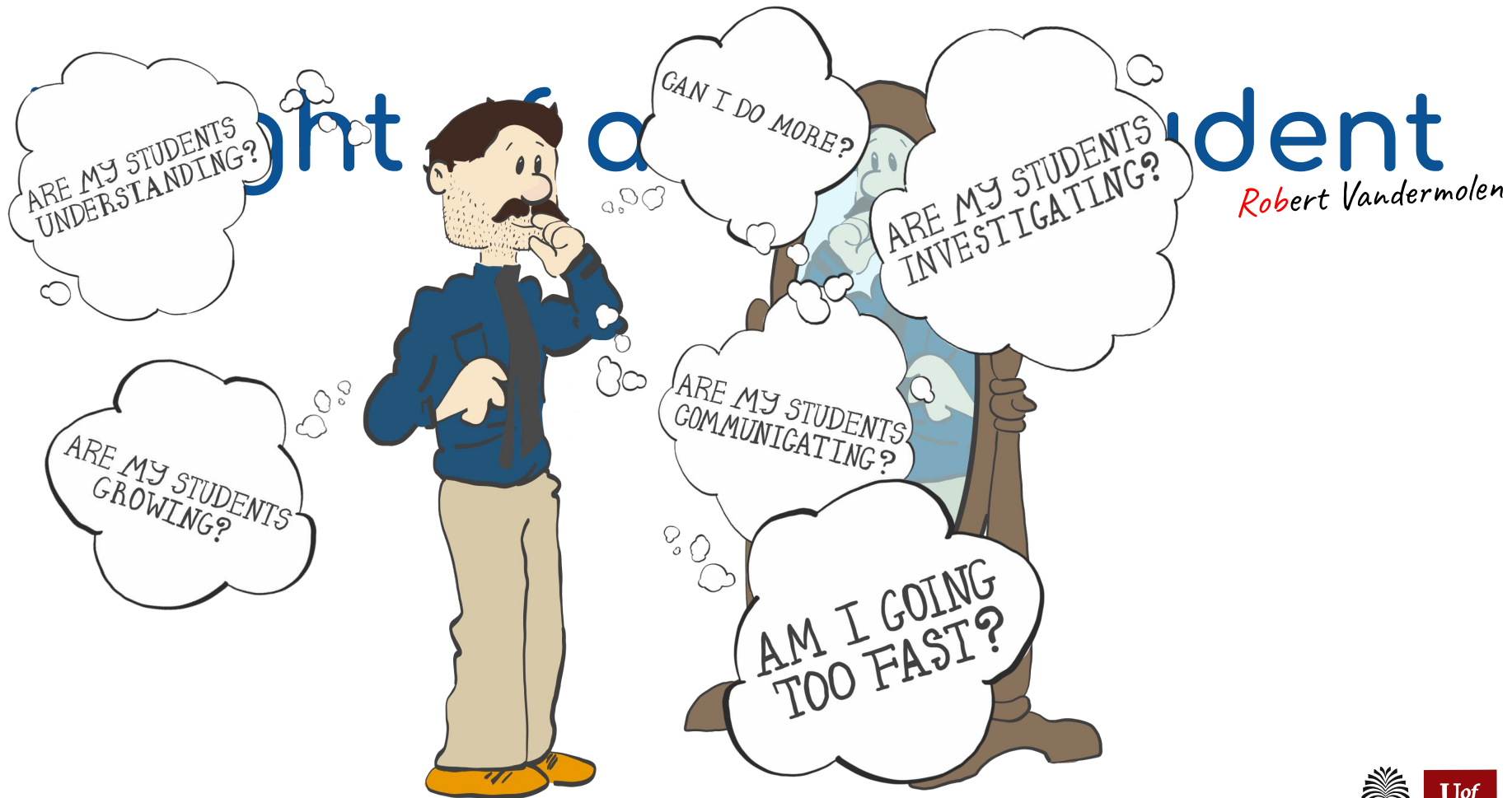
A Cycle of Reflection

Right for a Good Student

Robert Vandermolén



A Cycle of Reflection



ARE MY STUDENTS UNDERSTANDING?

CAN I DO MORE?

ARE MY STUDENTS INVESTIGATING?

ARE MY STUDENTS GROWING?

ARE MY STUDENTS COMMUNICATING?

AM I GOING TOO FAST?

Thoughtful Student

Robert Vandermolén

A Cycle of Reflection



ght
a
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ARE MY STUDENTS UNDERSTANDING?

ARE MY STUDENTS GROWING?



CAN I DO MORE?

ARE MY STUDENTS INVESTIGATING?

ARE MY STUDENTS COMMUNICATING?

AM I GOING TOO FAST?

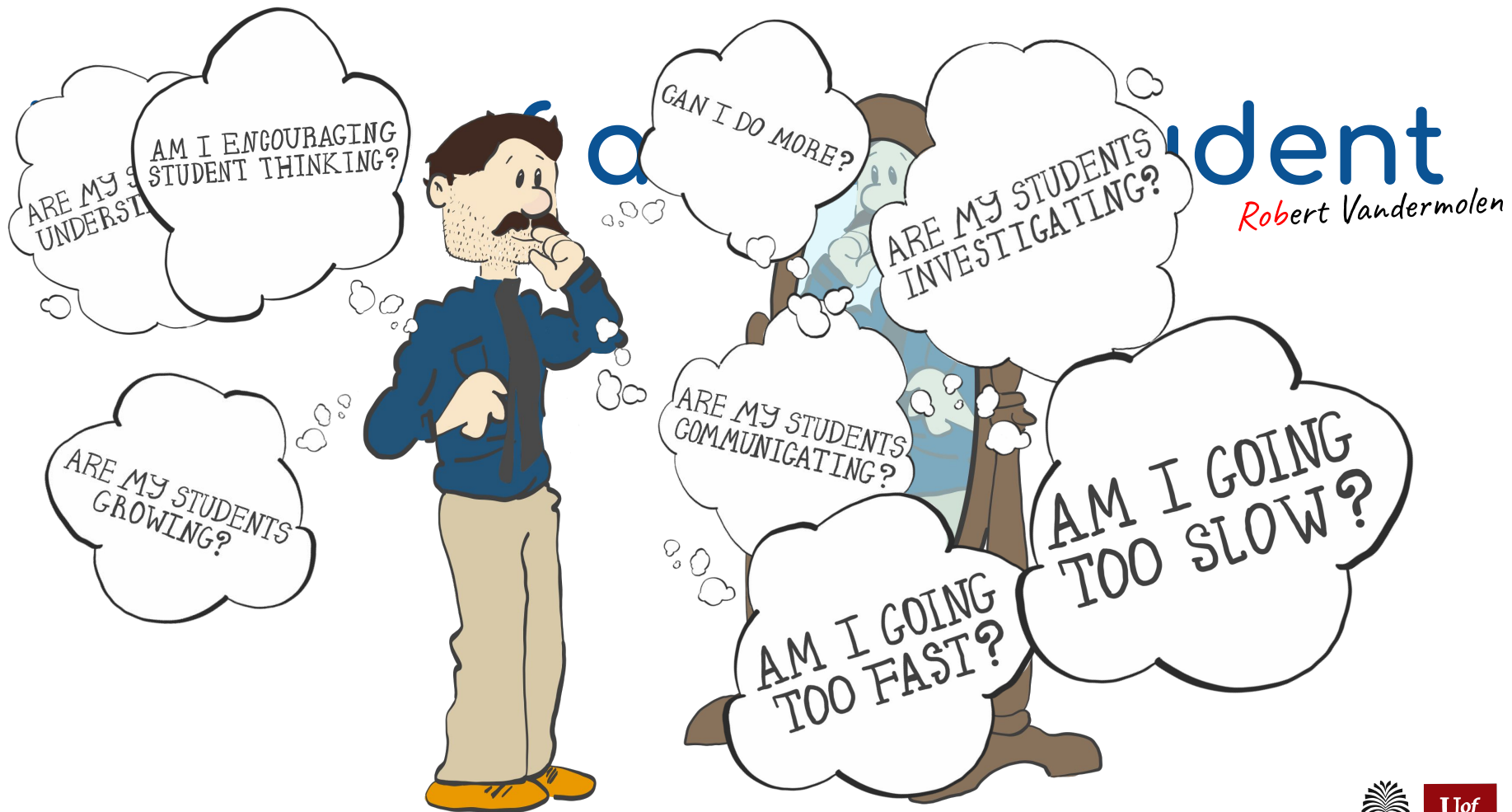
AM I GOING TOO SLOW?

A Cycle of Reflection

Robert Vandermolén



Uof SC



A Cycle of Reflection

AM I ENCOURAGING STUDENT THINKING?
ARE MY STUDENTS UNDERSTANDING?



a

CAN I DO MORE?

ARE MY STUDENTS INVESTIGATING?

ARE MY STUDENTS GROWING?

ARE MY STUDENTS COMMUNICATING?

AM I GOING TOO FAST?

AM I GOING TOO SLOW?

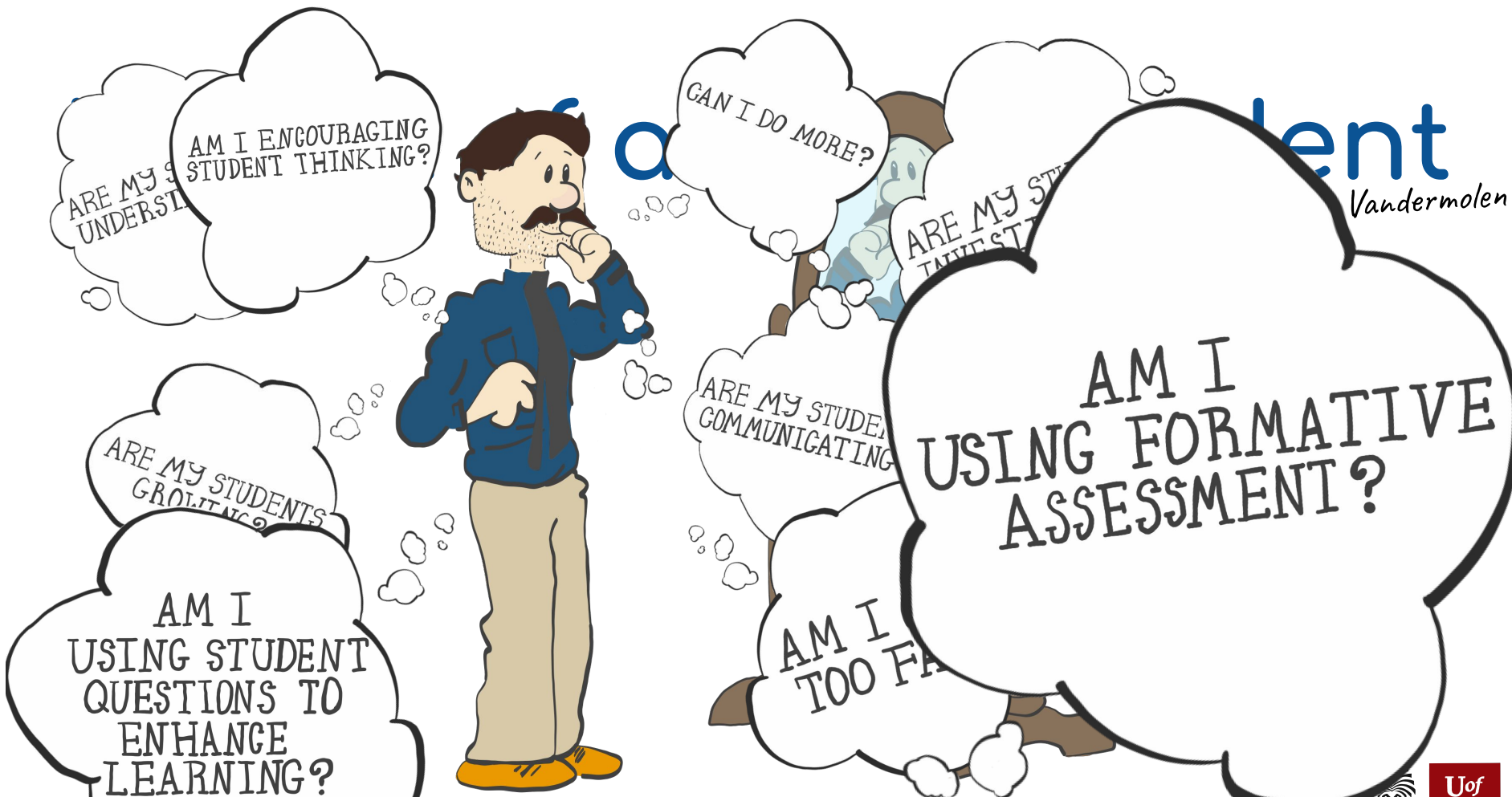
AM I USING STUDENT QUESTIONS TO ENHANCE LEARNING?

udent

Robert Vandermolén

A Cycle of Reflection





A Cycle of Reflection

AM I
USING FORMATIVE
ASSESSMENT
EFFECTIVELY?

AM I
USING FORMATIVE
ASSESSMENT?

AM I ENCOURAGING
STUDENT THOUGHTS
AND UNDERSTANDING?

ARE MY STUDENTS
GROWING?

AM I
USING STUDENT
QUESTIONS TO
ENHANCE
LEARNING?

A Cycle of Reflection

Introducing



IARRA

A Structure for Self Reflection

Based on my participation in the [P.M.P.](#) funded by NSF

Step #1:



Step #1:

Identify



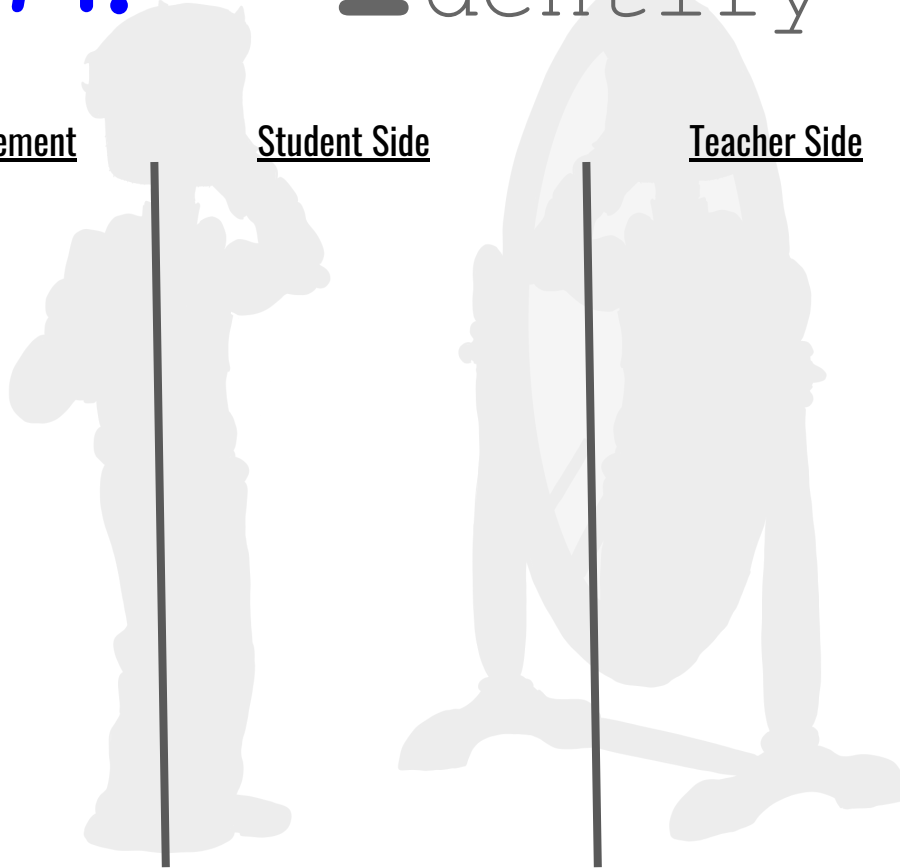
Step #1: Identify

Basic Organization and Management

Student Side

Teacher Side

Lesson Goals



Step #1: Identify

Basic Organization and Management

Student Side

Teacher Side

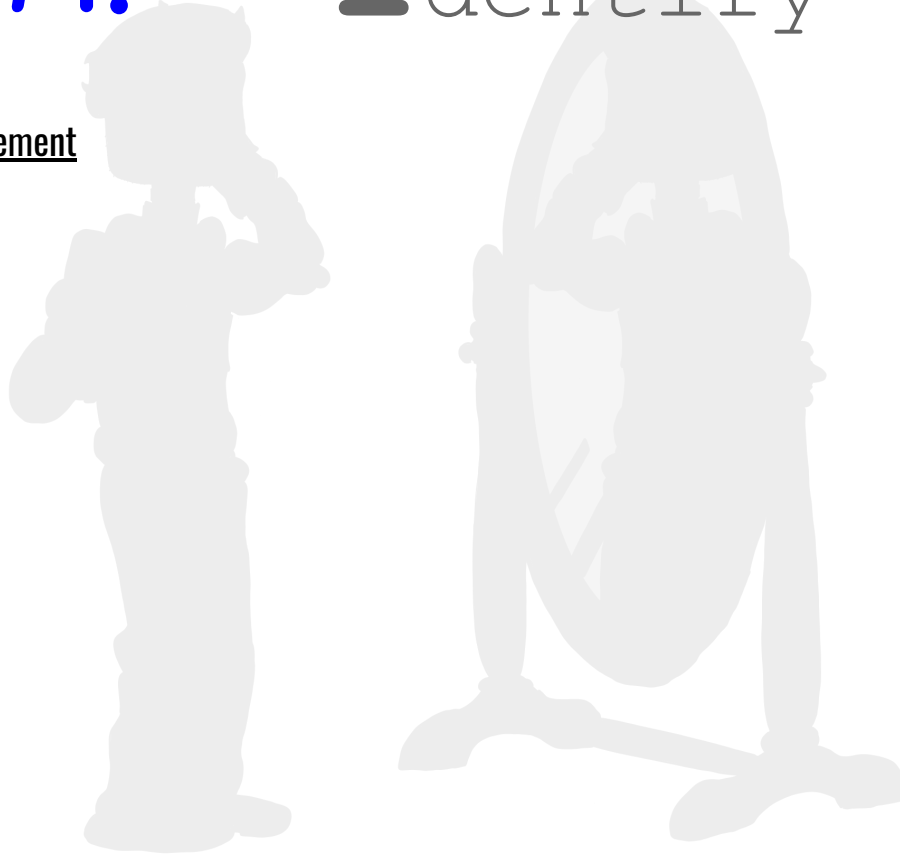
Lesson Goals

(use a notecard to write what you would put in each column)

Step #1:

I identify

Basic Organization and Management



Step #1:

I

dentify

Basic Organization and Management

- Verbal Articulation
- Clear Presented Work

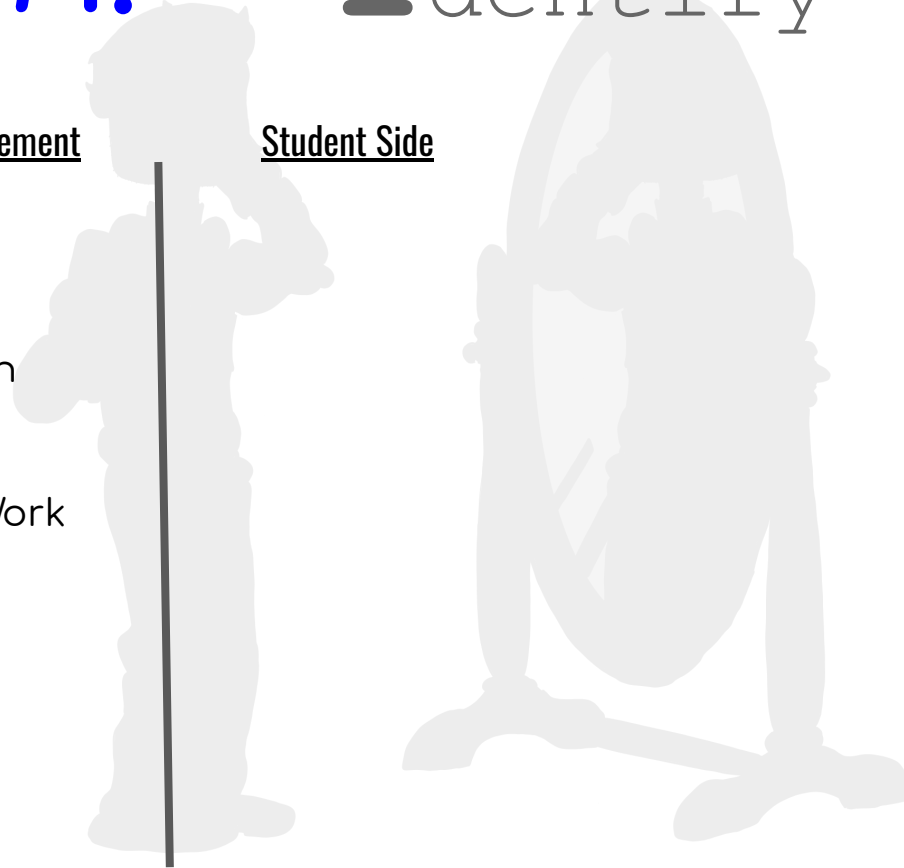


Step #1: Identify

Basic Organization and Management

Student Side

- Verbal Articulation
- Clear Presented Work



Step #1: Identify

Basic Organization and Management

Student Side

- Verbal Articulation
- Clear Presented Work
- Critical Assessment
- Involved in Communicating Ideas/Concepts

Step #1: Identify

Basic Organization and Management

- Verbal Articulation
- Clear Presented Work

Student Side

- Critical Assessment
- Involved in Communicating Ideas/Concepts

Teacher Side

Step #1: Identify

Basic Organization and Management

- Verbal Articulation
- Clear Presented Work

Student Side

- Critical Assessment
- Involved in Communicating Ideas/Concepts

Teacher Side

- Questions Encouraged Student Thinking
- Wait Time

Step #1: Identify

Basic Organization and Management

- Verbal Articulation
- Clear Presented Work

Student Side

- Critical Assessment
- Involved in Communicating Ideas/Concepts

Teacher Side

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- Wait Time

Lesson Goals

Step #1: Identify

Basic Organization and Management

- Verbal Articulation
- Clear Presented Work

Student Side

- Critical Assessment
- Involved in Communicating Ideas/Concepts

Teacher Side

- Questions Encouraged Student Thinking
- Wait Time

Lesson Goals

- Explicit Learning Goals?
- Was Lesson Effective?

Step #2:



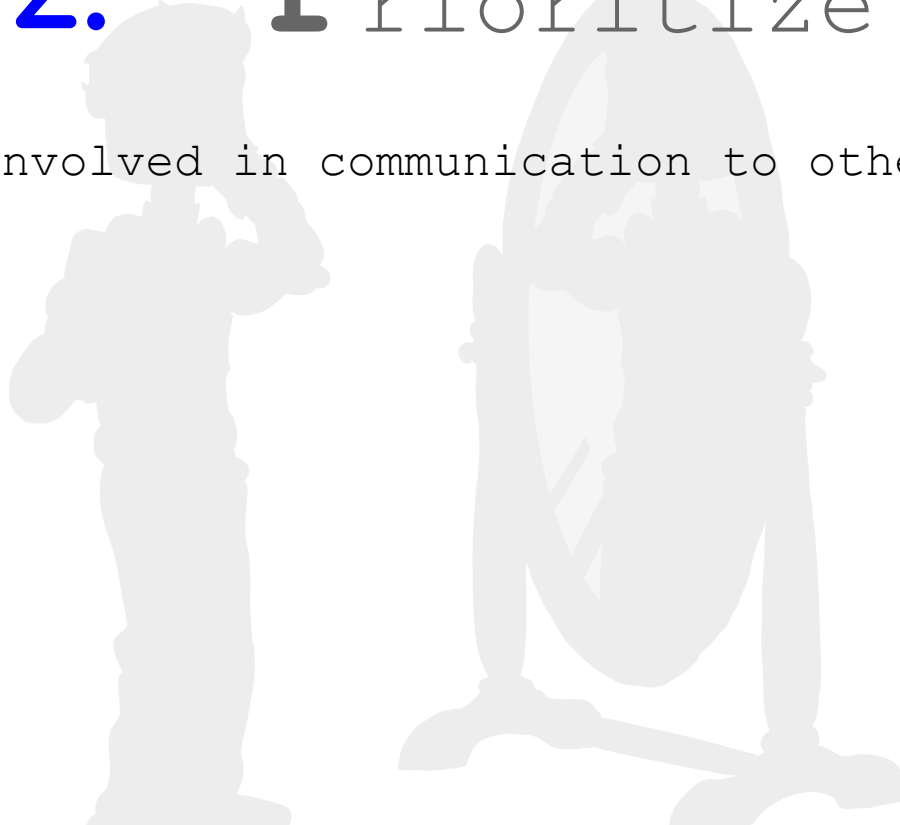
Step #2: **P**rioritize



Step #2: Prioritize

Student Side:

Students were involved in communication to others (peer-to-peer)



(Think of the last class you taught, where would you have prioritized this?)

Step #2: Prioritize

Student Side:

Students were involved in communication to others (peer-to-peer)



SHOULD
ADDRESS

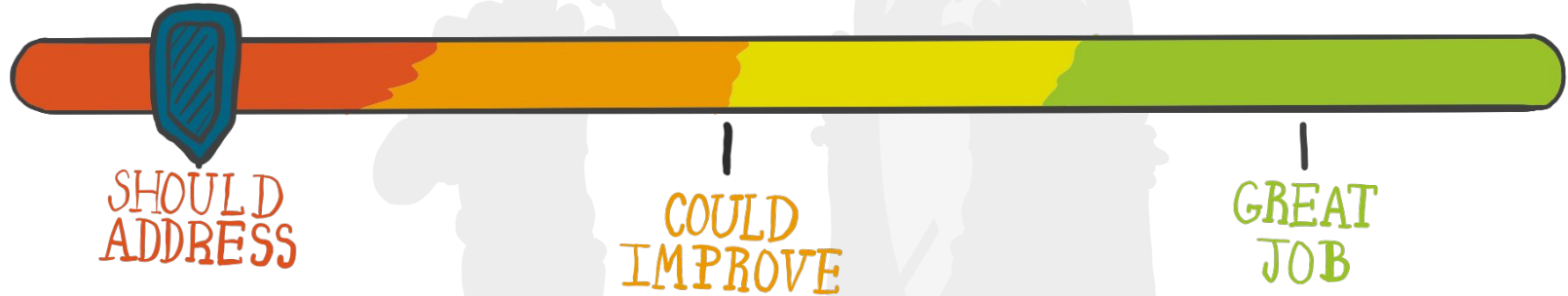
COULD
IMPROVE

GREAT
JOB

Step #2: Prioritize

Student Side:

Students were involved in communication to others (peer-to-peer)

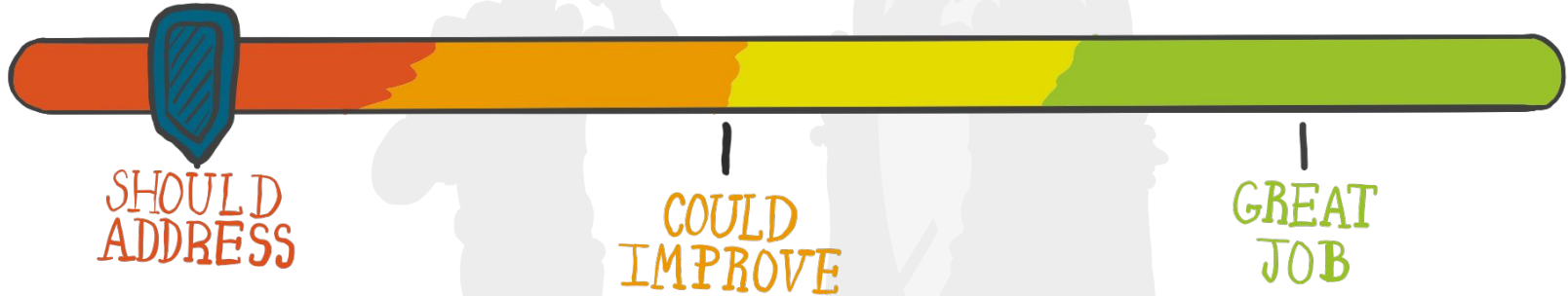


(Discuss what a classroom with troubling communication would look like)

Step #2: Prioritize

Student Side:

Students were involved in communication to others (peer-to-peer)

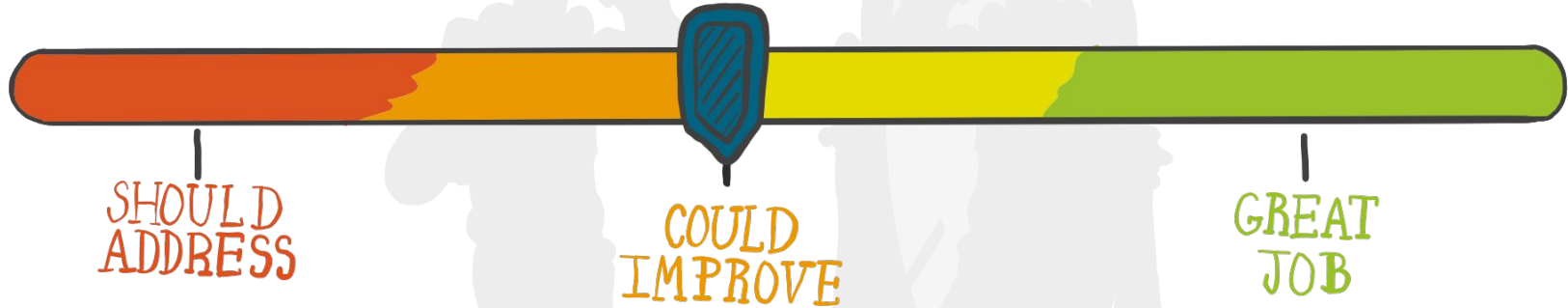


No peer-to-peer (pairs, groups, whole class) conversations occurred during the lesson.

Step #2: Prioritize

Student Side:

Students were involved in communication to others (peer-to-peer)

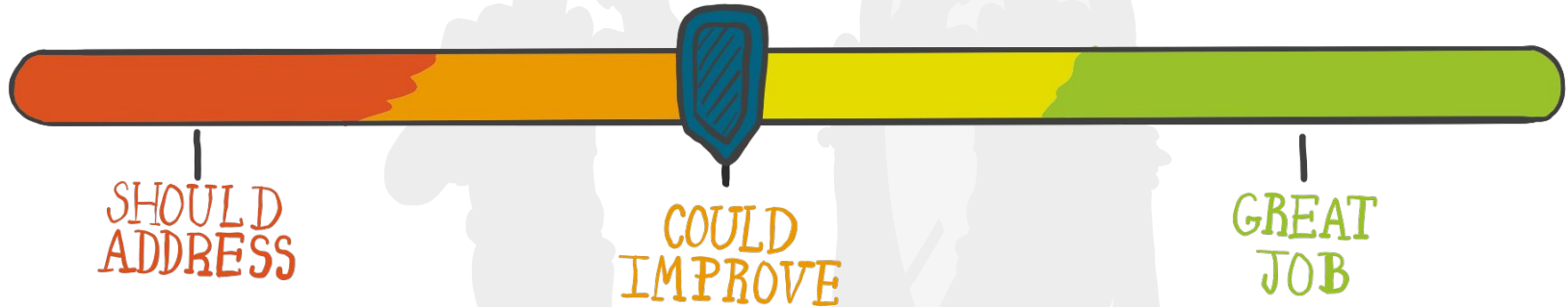


(Discuss what a classroom with "alright" communication would look like)

Step #2: Prioritize

Student Side:

Students were involved in communication to others (peer-to-peer)

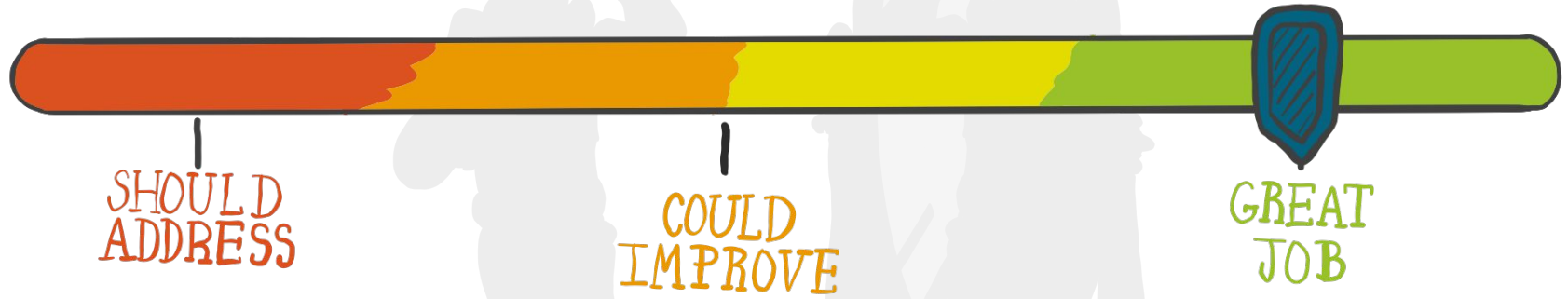


The lesson was primarily teacher directed and little opportunities were available for peer-to-peer (pairs, groups, whole class) conversations. A few instances developed where this occurred during the lesson but only lasted less than 5 min.

Step #2: Prioritize

Student Side:

Students were involved in communication to others (peer-to-peer)

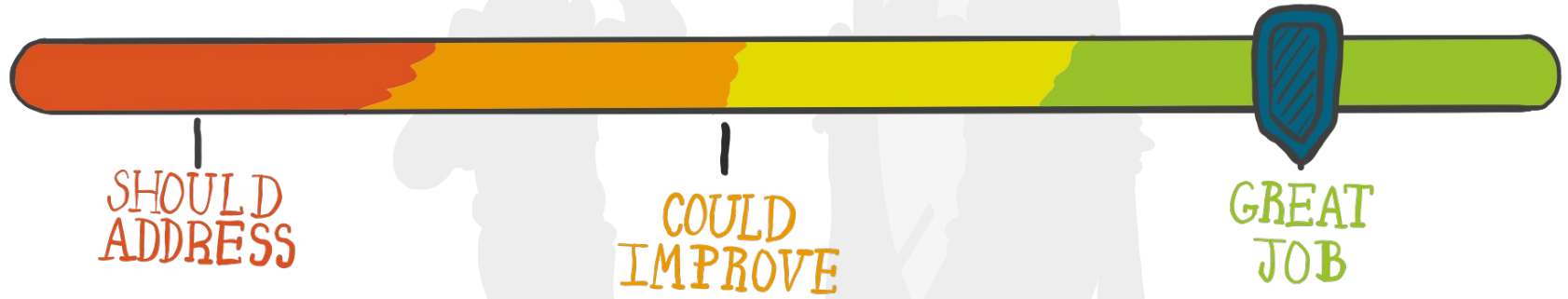


(Discuss what a classroom with "great" communication would look like)

Step #2: Prioritize

Student Side:

Students were involved in communication to others (peer-to-peer)



Most students engaged in conversations related to the lesson that were respectful, on task, and supportive.

Step #3:



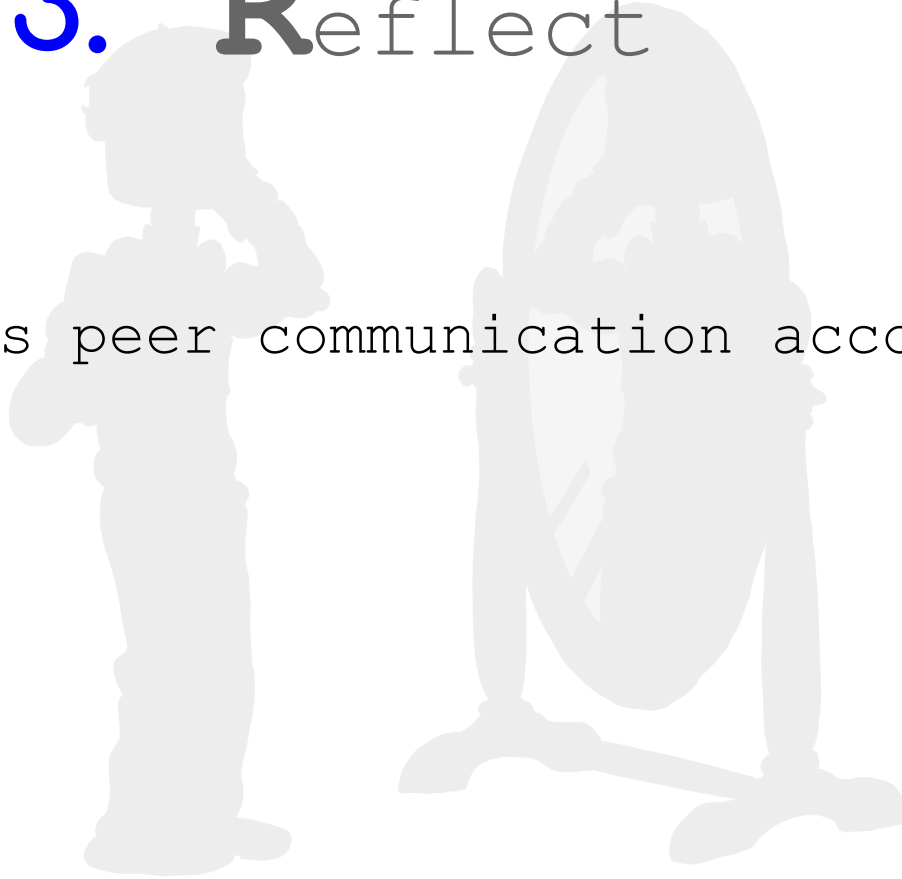
Step #3: Reflect



(Discuss amongst yourselves what you reflect on)

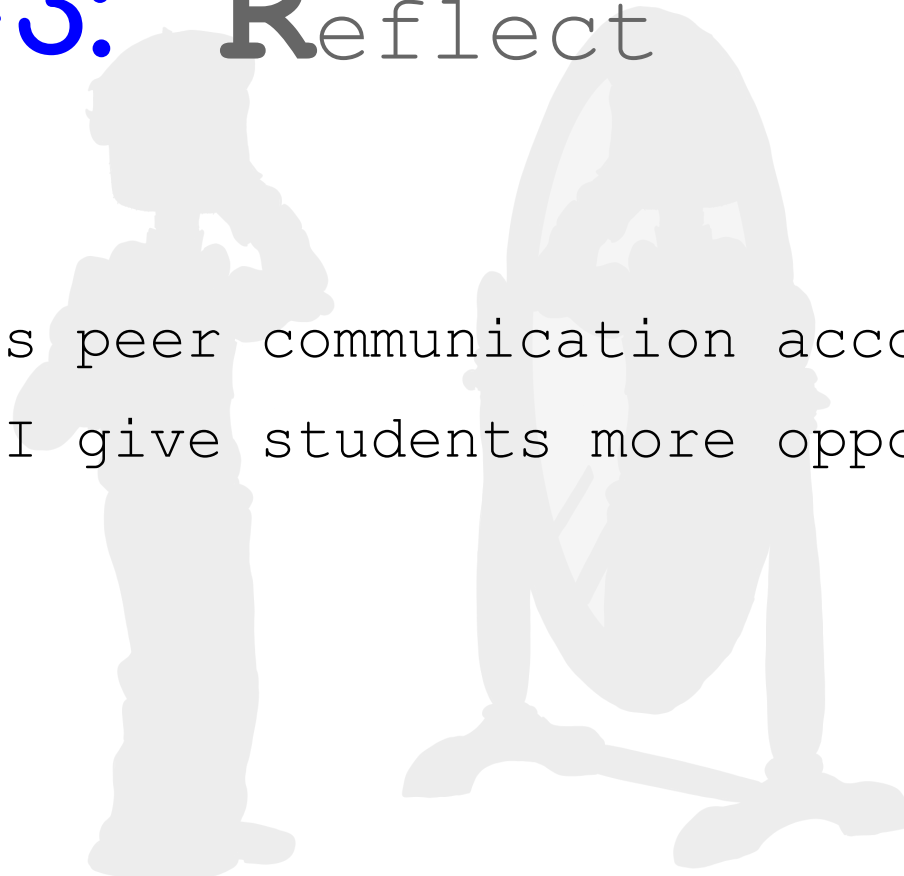
Step #3: Reflect

- What does peer communication accomplish?



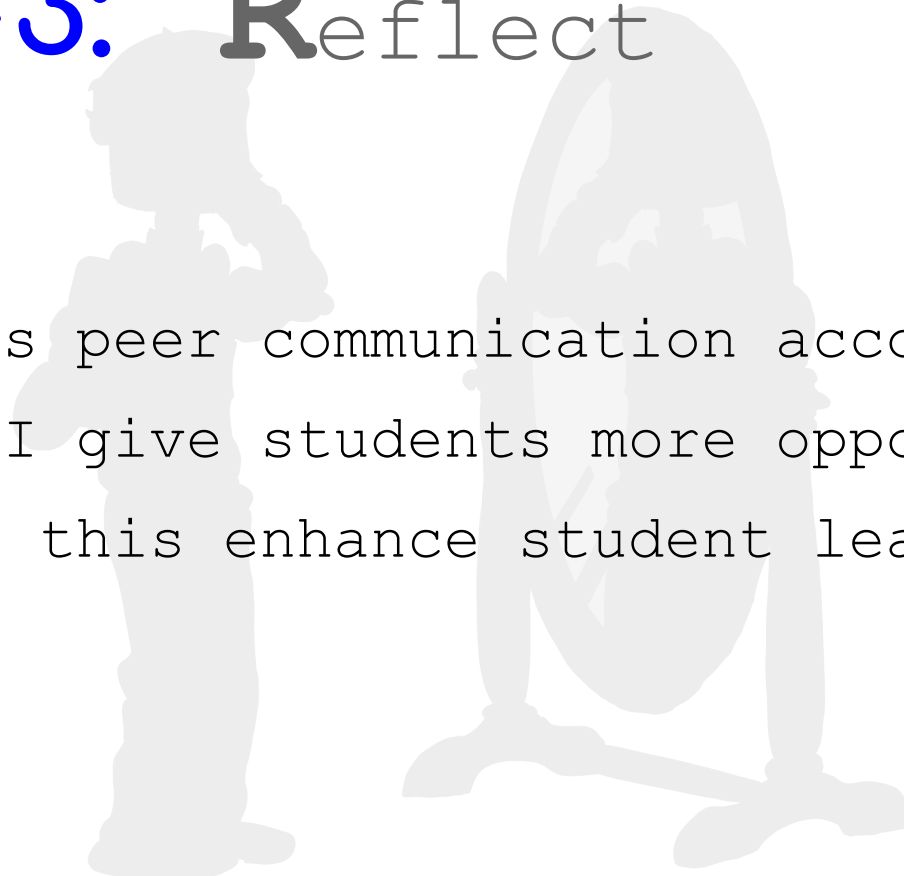
Step #3: Reflect

- What does peer communication accomplish?
- How can I give students more opportunities?



Step #3: Reflect

- What does peer communication accomplish?
- How can I give students more opportunities?
- How will this enhance student learning?



Step #4:



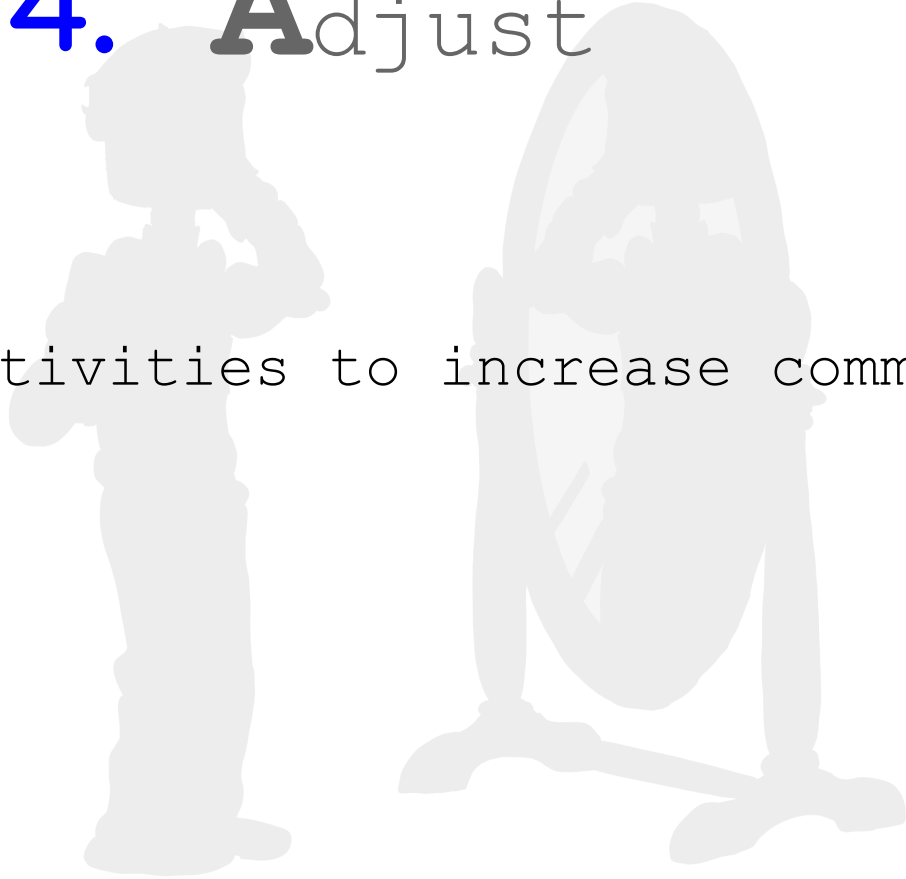
Step #4: Adjust



(Discuss amongst yourselves how you could improve communication)

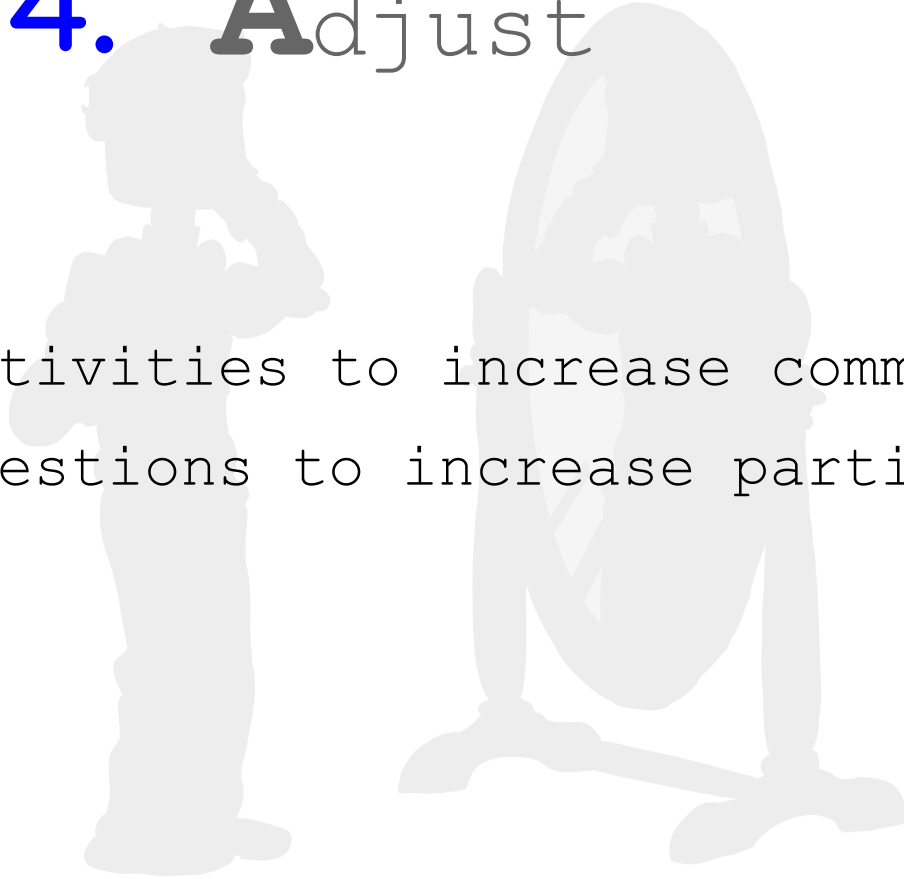
Step #4: Adjust

- Design activities to increase communication.



Step #4: Adjust

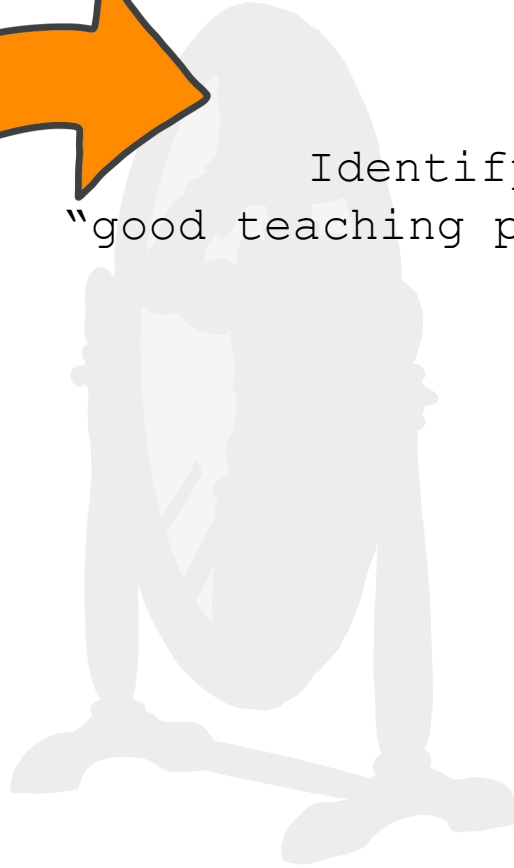
- Design activities to increase communication.
- Design questions to increase participation.



Teach



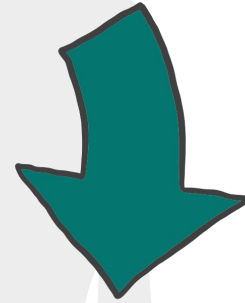
Identify
"good teaching practices"



Teach



Identify
"good teaching practices"

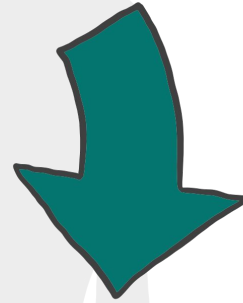


Prioritize

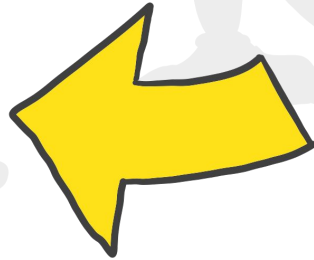
Teach



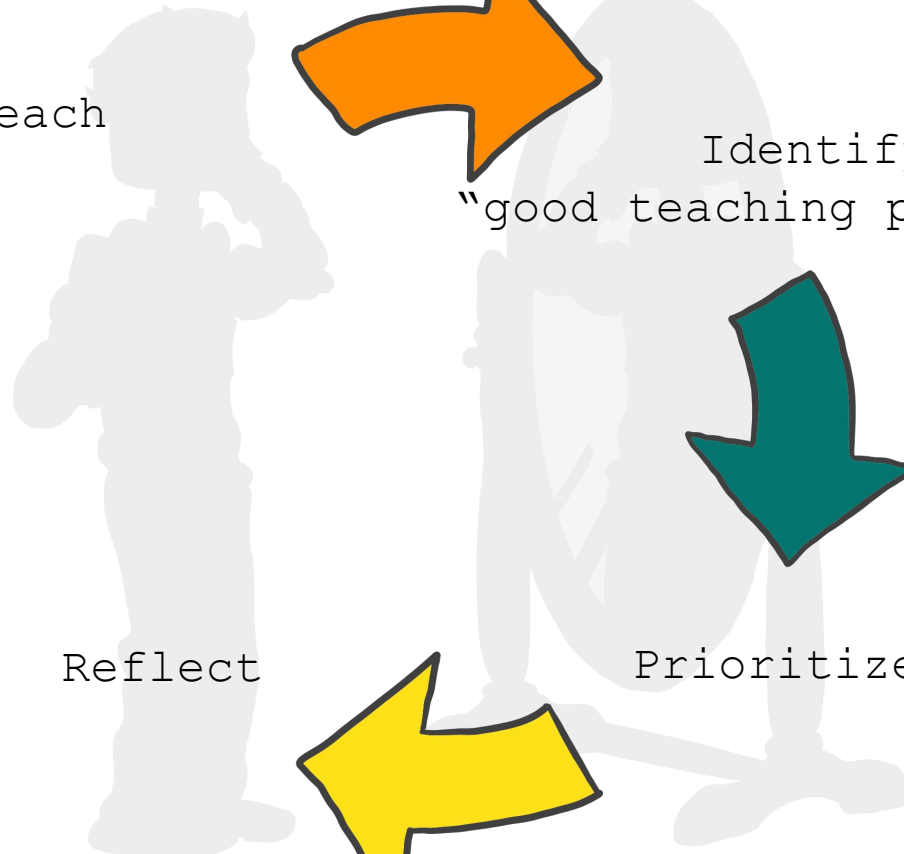
Identify
"good teaching practices"



Prioritize



Reflect

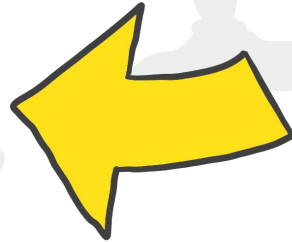
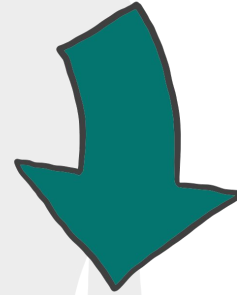
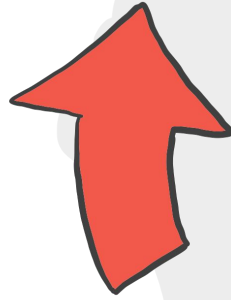


Adjust
then
teach again

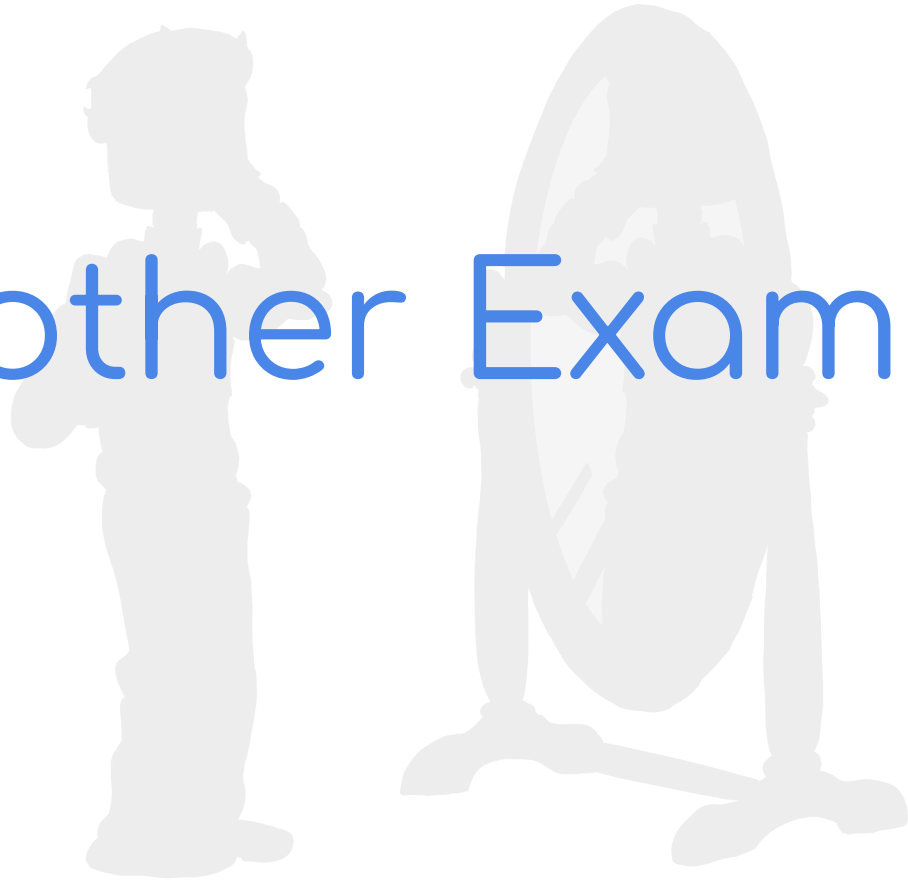
Identify
"good teaching practices"

Reflect

Prioritize



Another Example!

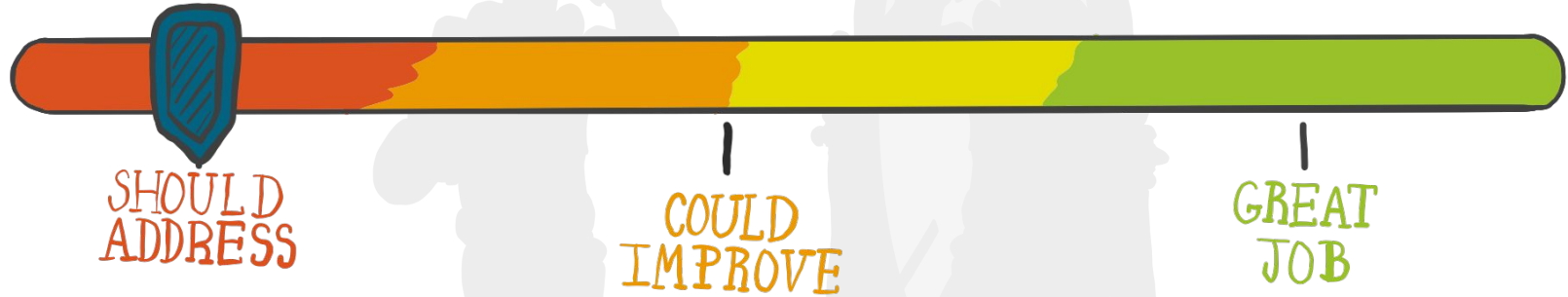


With a tiny advert...

Step #2: Prioritize

Teaching Side:

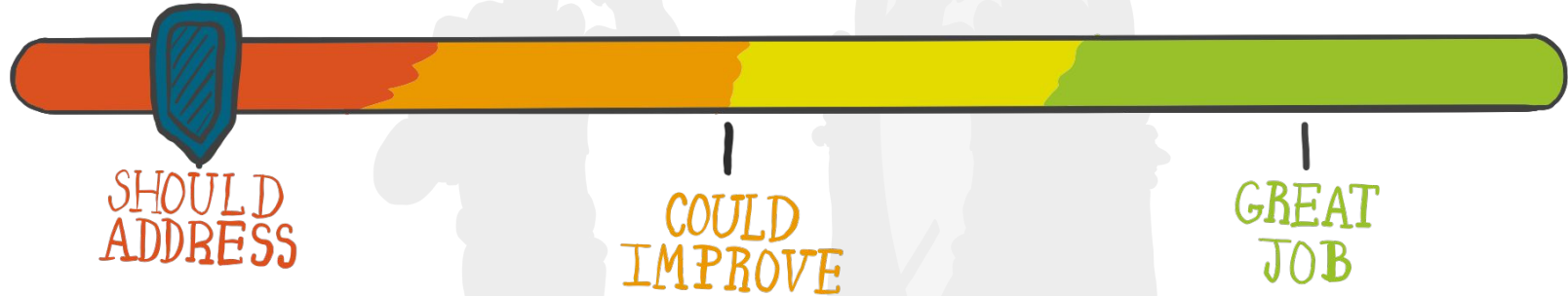
Provided sufficient WAIT TIME



Step #2: Prioritize

Teaching Side:

Provided sufficient WAIT TIME



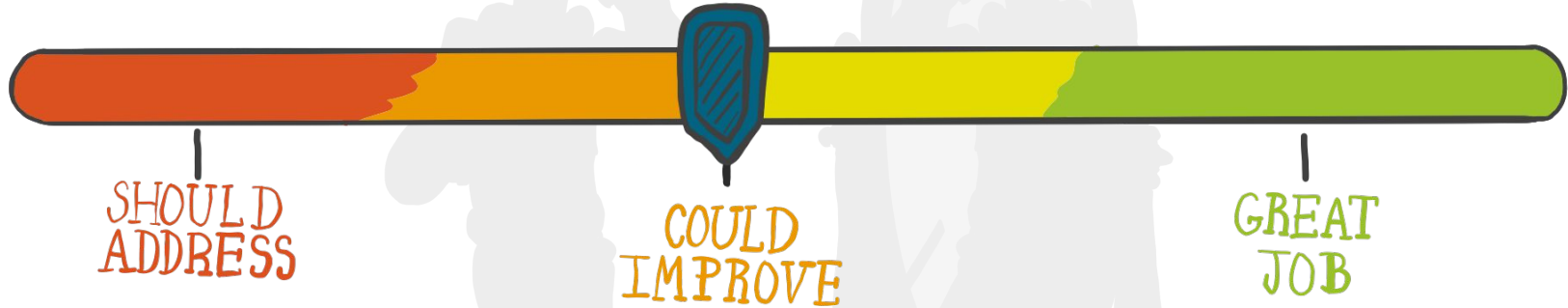
Any questions asked by the teacher were rhetorical in that there was no expectation of a response from the student.

Step #2: P

rioritize

Teaching Side:

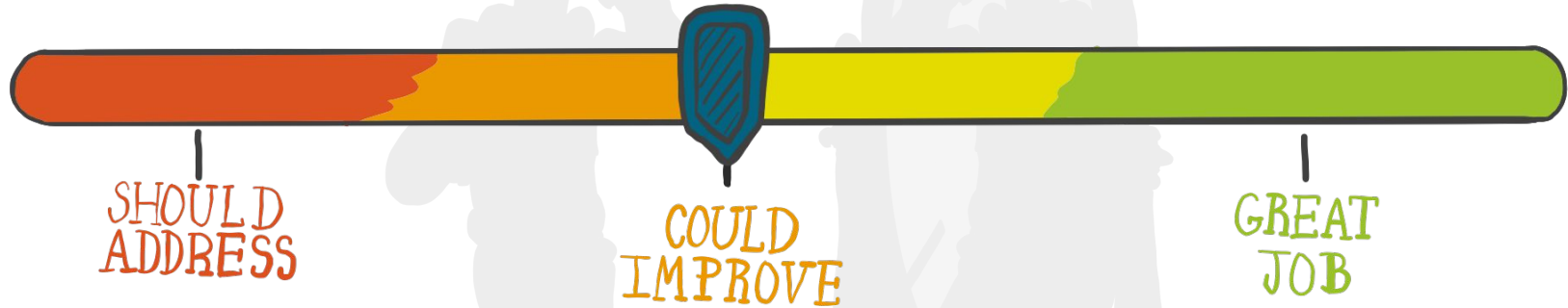
Provided sufficient WAIT TIME



Step #2: Prioritize

Teaching Side:

Provided sufficient WAIT TIME



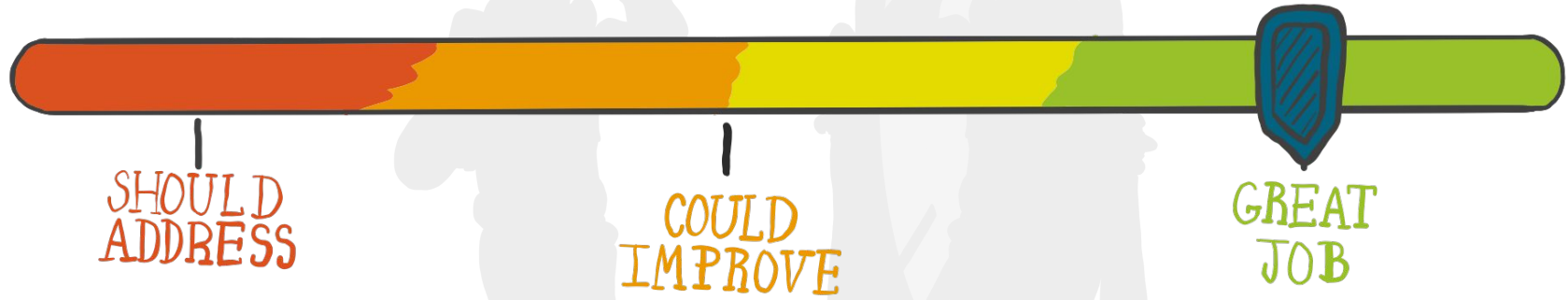
Teacher questions consist of “lower order” knowledge based questions and responses focusing on recalling facts.

Step #2: P

rioritize

Teaching Side:

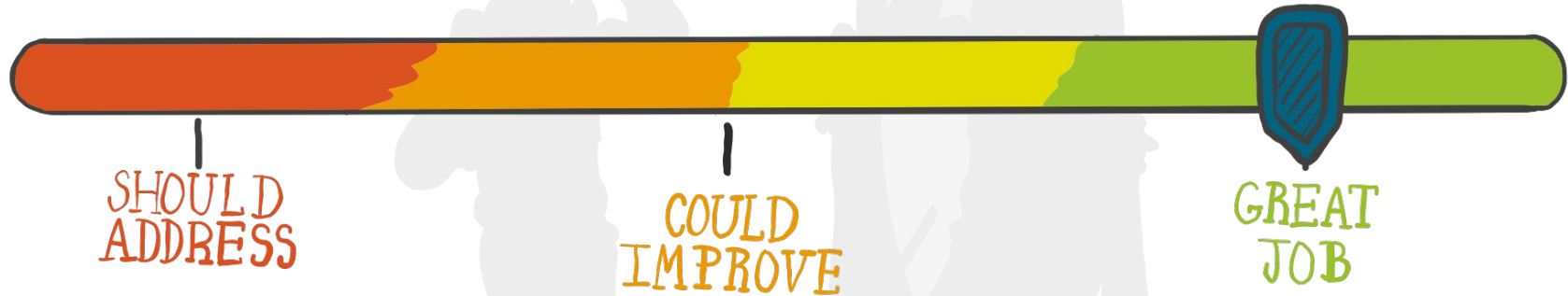
Provided sufficient WAIT TIME



Step #2: Prioritize

Teaching Side:

Provided sufficient WAIT TIME



Questions focused on high level thinking like:

Analysis: examines/interprets relationships or patterns.

Synthesis: requires original, creative thinking.

Evaluation: makes a judgement of good or bad, right or wrong, according to personal standards.

Step #2: Prioritize

Teaching Side:

Provided sufficient WAIT TIME

**How can you
tell how much
wait time you
are giving?**

 **GitHub**
Get From GitHub



CTE

STAR

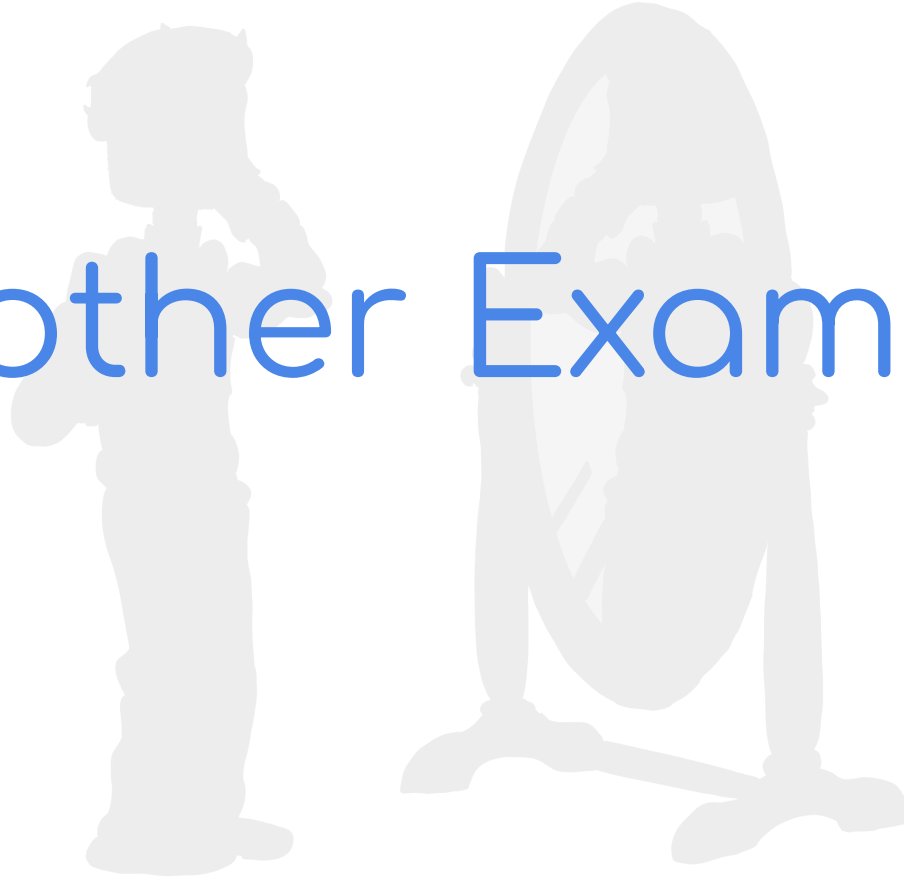
Speech -to- text

Analytic

Resource

An App by Robert Vandermolen and Dr. Hays Whitlatch

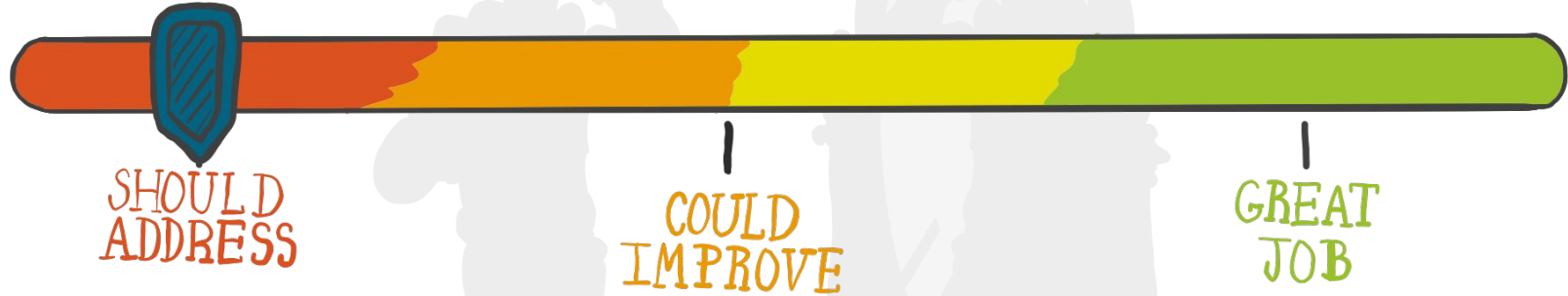
Another Example!



Step #2: Prioritize

Teaching Side:

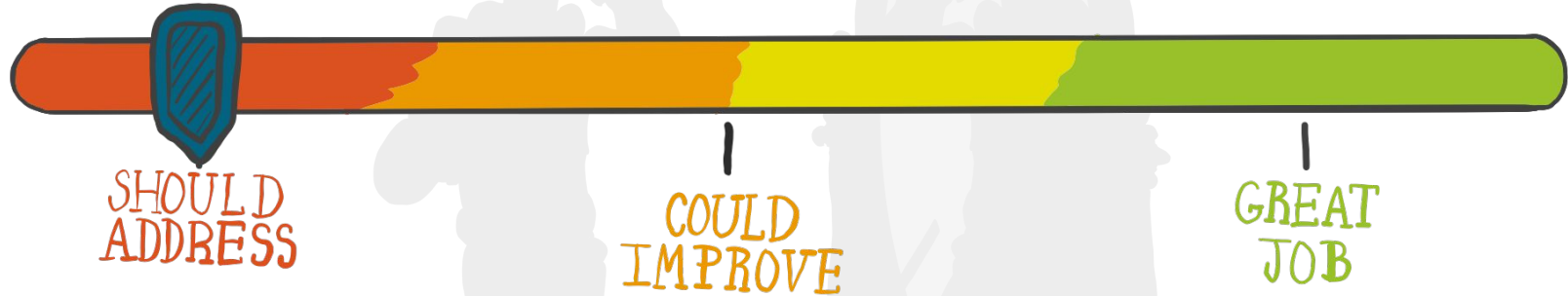
Questions Encouraged Student Thinking



Step #2: Prioritize

Teaching Side:

Questions Encouraged Student Thinking

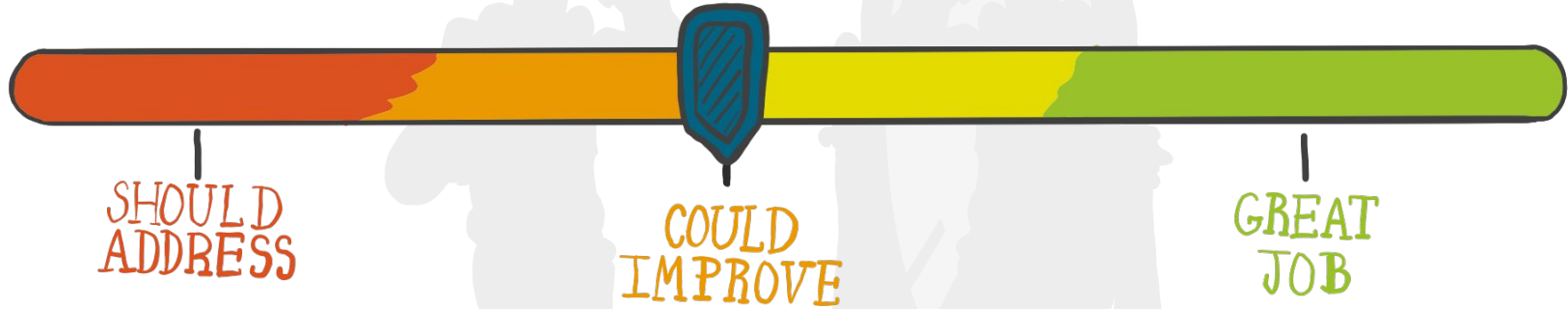


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Teaching Side:

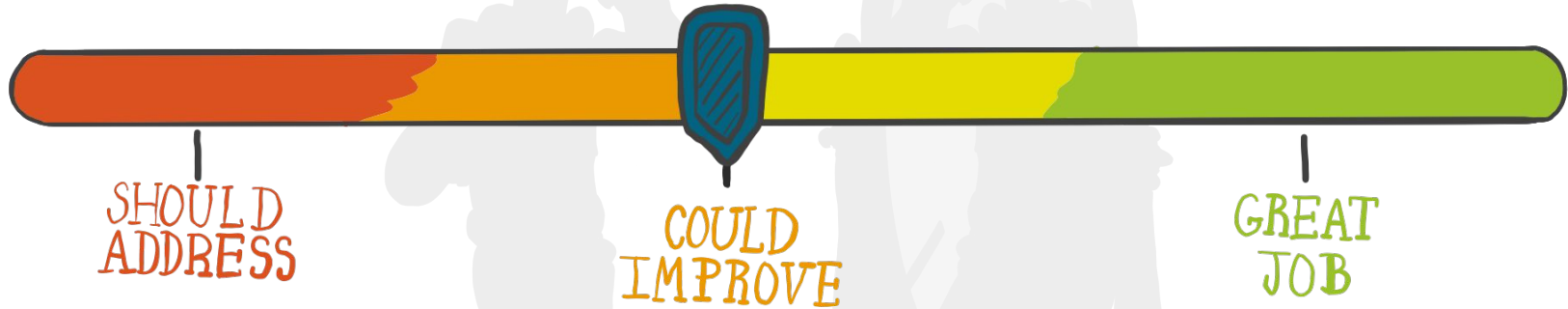
Questions Encouraged Student Thinking



Step #2: Prioritize

Teaching Side:

Questions Encouraged Student Thinking

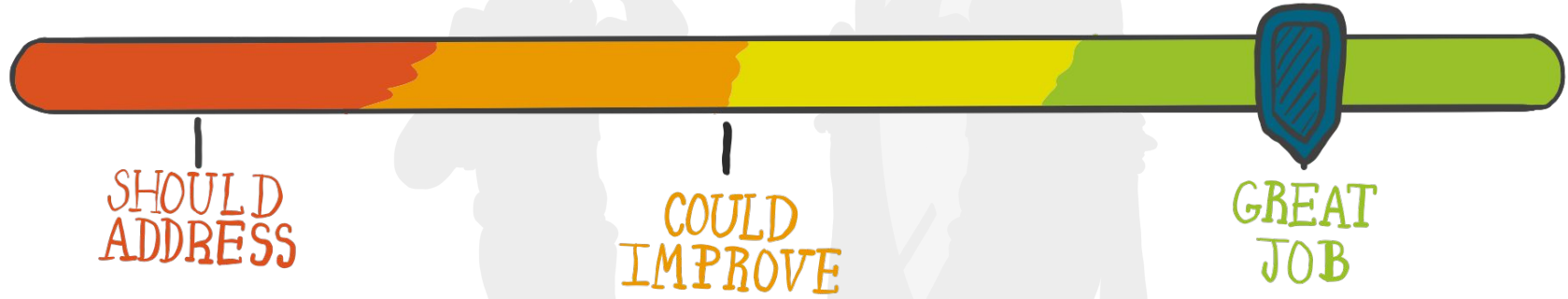


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Teaching Side:

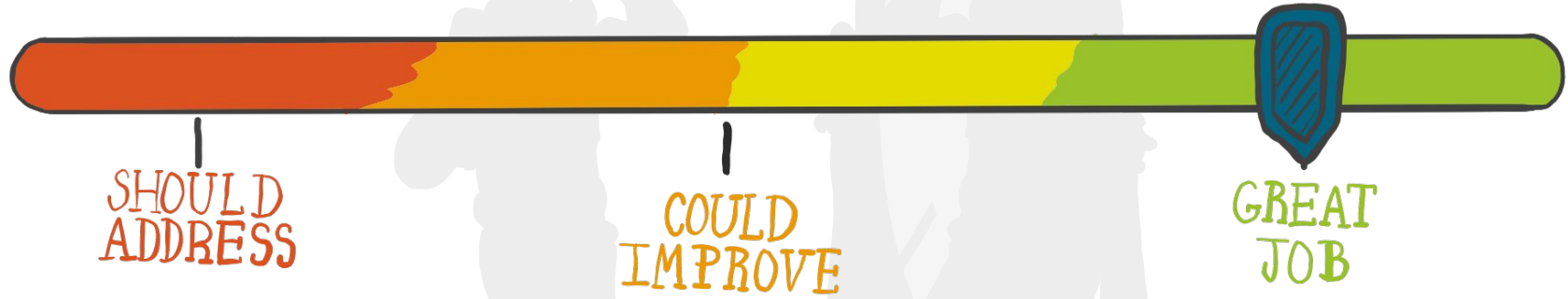
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Step #2: Prioritize

Teaching Side:

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Thanks