

Identifying the Taxonomy of Questions Used by Experienced

School-Based Agriculture Teachers

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Introduction

- Questioning in education is key for critical thinking, engagement, and assessment. (Lewis & Smith, 1993)
- Questioning enhances students' ability to think independently and learn effectively. (Wilén, 1991)

Methodology

- Quantitative approach to classroom observations of experienced school-based agricultural educators' questioning methods
- A priori coding

Theoretical Framework

- Bloom's Taxonomy (1956)
- Anderson & Krathwohl's Taxonomy of Questions (2013)



Participants' Experience

Teacher 1: 8 years
 Teacher 2: 4 years
 Teacher 3: 13 years
 Teacher 4: 7 years

Conclusion/Results

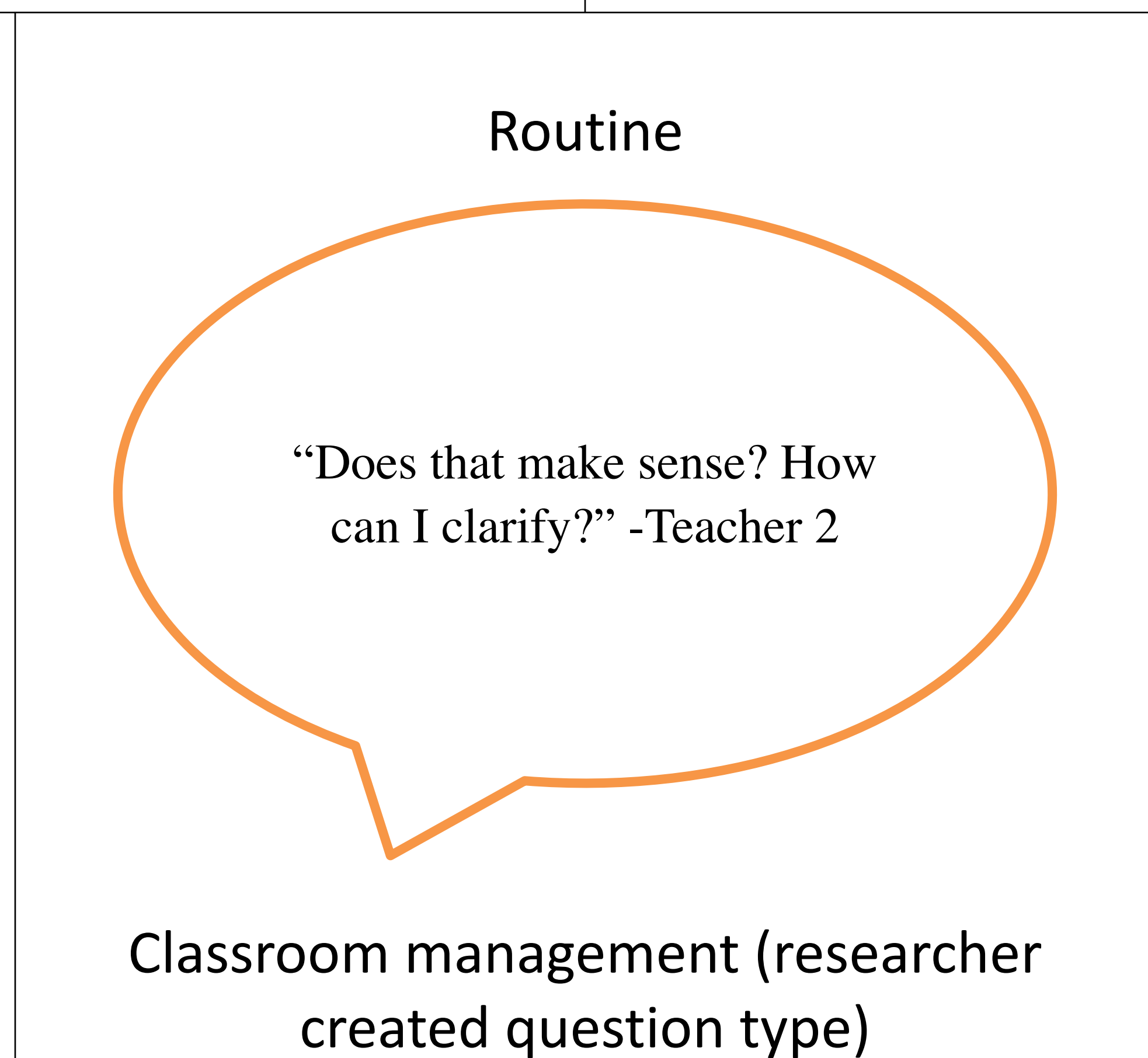
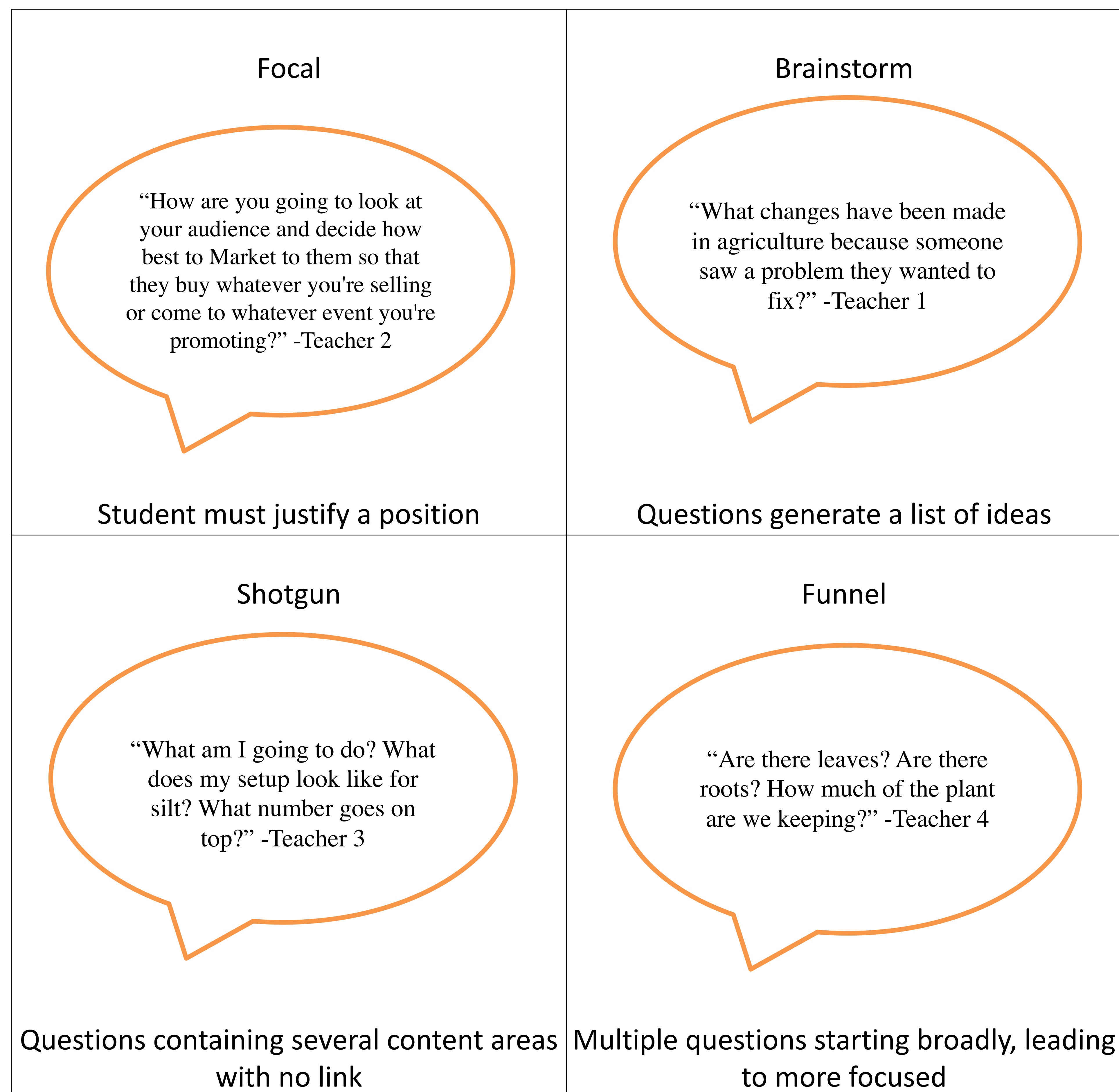
- All four teachers asked more convergent questions than divergent questions
- Questions ranged from yes/no to definition and terminology

Recommendations

- Teachers utilize the Taxonomy of Questions when designing lessons
- Student teachers use this tool when learning about lesson planning
- Professional development and co-planning for question development

Frequency and percentage of questions asked during observation

	Total Questions	Focal f(%)	Brainstorming f(%)	Shotgun f(%)	Funnel f(%)	Routine f(%)
Teacher 1	91	15	39	35	48	5
Teacher 2	128	18	23	39	38	10
Teacher 3	97	6	13	9	39	30
Teacher 4	103	9	22	22	41	9



Question Type	Code Description	Question Example
Focal	Student must justify a position	“How are you going to look at your audience and decide how best to Market to them so that they buy whatever you're selling or come to whatever event you're promoting?” -Teacher 2
Brainstorm	Questions generate a list of ideas	“What changes have been made in agriculture because someone saw a problem they wanted to fix?” -Teacher 1
Shotgun	Questions containing several content areas with no link	“What am I going to do? What does my setup look like for silt? What number goes on top?” -Teacher 3
Funnel	Multiple questions starting broadly, leading to more focused	“Are there leaves? Are there roots? How much of the plant are we keeping?” -Teacher 4
Routine	Classroom management*	“Does that make sense? How can I clarify?” -Teacher 2
Anderson & Krathwohl’s Taxonomy of Questions (2013)		*researcher created question type