

Understanding Academic Language in edTPA: Supporting Learning and Language Development

Academic Language (AL) is the oral and written language used for academic purposes. AL is the “language of the discipline” used to engage students in learning and includes the means by which students develop and express content understandings.

When completing their edTPA, candidates must consider the AL (i.e., language demands) present throughout the learning segment in order to support student learning and language development. The language demands in *Secondary Science* include: **function, vocabulary, discourse, and syntax**.

As stated in the edTPA handbook:

- Candidates identify a key *language function* and one essential learning task within their learning segment lesson plans that allows students to practice the function (Task 1- Prompts 4a/b).
- Candidates are then asked to identify *vocabulary and one additional language demand* related to the language function and learning task (Task 1 – Prompt 4c).
- Finally, candidates must identify and describe the *instructional and/or language supports* they have planned to address the language demands (Task 1 - 4d). *Language supports* are scaffolds, representations, and instructional strategies teachers intentionally provide to help learners understand and use the language they need to learn within disciplines.

This AL handout provides definitions and a few examples of language demands and supports to help teacher candidates and Educator Preparation Programs understand edTPA Rubrics 4 and 14. See the edTPA Handbook glossary and the Understanding Rubric Level Progressions for Secondary Science for additional examples of language demands.

A Few Notes about Discourse and Syntax:

It is important to realize that not all learning tasks focus on **both** discourse and syntax. As candidates decide which additional language demands (i.e., syntax and/or discourse) are relevant to their identified function, they should examine the language understandings and use that are **most relevant** to the learning task they have chosen. Then, teacher candidates should plan to provide appropriate and targeted language supports for students to learn and practice the language demands within the chosen learning task.

LANGUAGE DEMANDS

I. Functions	
Definition	Examples (bolded and underlined within learning objectives)
<ul style="list-style-type: none"> Purposes for which language is used. Content and language focus of learning tasks often represented by the active verbs within the learning outcomes. 	<ul style="list-style-type: none"> Students will be able to <u>compare</u> the densities of various objects in the classroom. Students will be able to <u>explain</u> the difference between a food chain and a food web. Students will be able to <u>describe</u> processes and procedures used in an experiment.

II. Vocabulary - Includes words, phrases and symbols used within disciplines.	
Definition	Examples
<ul style="list-style-type: none"> Words and phrases with subject-specific meanings that differ from meanings used in everyday life 	<ul style="list-style-type: none"> table, control, alcohol, balance, cell, producer
<ul style="list-style-type: none"> General academic vocabulary used across disciplines 	<ul style="list-style-type: none"> compare, contrast, analyze, evaluate, summarize, justify, explain, interpret, classify
<ul style="list-style-type: none"> Subject-specific words and/or symbols defined for use in the discipline 	<ul style="list-style-type: none"> proton, food web, photosynthesis, density, acceleration due to gravity (g) , hypothesis, K = potassium, atomic number

III. Discourse	
Definition	Examples
<ul style="list-style-type: none"> How members of the discipline talk, write, and participate in knowledge construction, using the structures of written and oral language Discipline-specific discourse has distinctive features or ways of structuring oral or written language (text structures) or representing knowledge visually. 	<ul style="list-style-type: none"> Completing Lab Reports Writing analysis & conclusions sections of lab reports Interpreting Graphic Representations (e. g. graphs, diagrams) Explaining Materials Lists Analyzing Tabular representations

IV. Syntax	
Definition	Examples
<ul style="list-style-type: none"> ■ The rules for organizing words or symbols together into phrases, clauses, sentences or visual representations. ■ One of the main functions of syntax is to organize language in order to convey meaning. 	<ul style="list-style-type: none"> ■ Mathematical sentences (using words or symbols) including <ul style="list-style-type: none"> • Formulas $D = m/V$ or Density equals mass divided by volume ■ Symbols Replacing Reactants and Products in Chemical Reactions <ul style="list-style-type: none"> • Write the symbolic representation for the combustion of methane. ■ Punnet Squares <ul style="list-style-type: none"> • If a heterozygous black-furred male rabbit is crossed with a homozygous recessive white-furred female rabbit, what resultant offspring genotypes could occur?

EXAMPLE OF PLANNED LANGUAGE SUPPORTS

To help programs and candidates begin to develop their understanding of language supports, **start by examining a key standard or learning objective.**

The chart below identifies sample language demands with related examples of supports based on one selected science standard.

Example standard from NGSS for Chemistry (HS-PS1-5): *Students will **apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which the reaction occurs.***

Identified Language Demands	Planned Language Supports
Explain (Function)	Modeling an explanation, that includes data gathered from school's ski team, to account for the slope conditions that are best for fast downhill runs while skiing or snowboarding.
molarity, $[R]$ = concentration of reactant in M , temperature in $^{\circ}C$, reaction rate (Vocabulary and Symbols)	Review symbols and vocabulary from guided notes.

Constructing analyses (Discourse)	<p>Providing sentence stems to help students explain the relationship observed for temperature to reaction rate. For example:</p> <p>When the concentration of NaOH (aq) was ____ M the reaction started in _____s and when the concentration of the reactant was ____M the reaction started in ____s which shows a(n) <u>direct/indirect</u> relationship (circle one of the underlined words). As concentration <u>increases/decreases</u> the reaction rate _____.</p>
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