# Perfection Learning Logic Model: *Connections*

## Study Type: ESSA Evidence Level IV

Prepared for:
Perfection Learning

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April 21, 2023

# EXECUTIVE SUMMARY

Perfection Learning engaged LearnPlatform by Instructure, a third-party edtech research company, to develop a logic model for *Connections*[1]. LearnPlatform designed the logic model to satisfy Level IV requirements (*Demonstrates a Rationale*) according to the Every Student Succeeds Act (ESSA).[2]

## Logic Model

A logic model provides a program roadmap, detailing program inputs, participants reached, program activities, outputs, and outcomes. LearnPlatform collaborated with Perfection Learning to develop and revise the logic model.

## Study Design for Connections Evaluation

Informed by the logic model, the next phase will focus on planning for an ESSA Level II study to examine the extent to which *Connections* impacts literacy achievement.

## Conclusions

This study satisfies ESSA evidence requirements for Level IV (*Demonstrates a Rationale*). Specifically, this study met the following criteria for Level IV:

- ✅ Detailed logic model informed by previous, high-quality research
- ✅ Study planning and design is currently underway for an ESSA Level I, II or III study

[1] Throughout this report we use *Connections* to refer to two Perfection Learning products: *Connections English Language Arts (ELA)* and *Connections Literature*.

[2] Level IV indicates that an intervention should include a "well-specified logic model that is informed by research or an evaluation that suggests how the intervention is likely to improve relevant outcomes; and an effort to study the effects of the intervention, that will happen as part of the intervention or is underway elsewhere…" (p. 9, U.S. Department of Education, 2016).

# TABLE OF CONTENTS

# Introduction

Perfection Learning engaged LearnPlatform by Instructure, a third-party edtech research company, to develop a logic model for *Connections*. LearnPlatform designed the logic model to satisfy Level IV requirements (*Demonstrates a Rationale*) according to the Every Student Succeeds Act (ESSA).

Clear communication and critical thinking skills are essential for success in higher education and the workplace. However, K-12 students often lack the opportunities to develop these skills (i.e., the ability to comprehend, analyze, and discuss complex texts and ideas). Perfection Learning provides a set of research-based learning resources, *Connections*, that enable teachers to incorporate high-quality content and instructional strategies into their lessons to ensure students become more proficient in reading and writing.

The study had the following objectives:

1. Define the Perfection Learning logic model and foundational research base.
2. Draft an ESSA Level I, II, or III study design.

*Previous Research*. The design of this logic model was guided by previous research examining literacy instruction. Prior research has found several key qualities that the texts provided to students should include to positively impact learning outcomes. It is important to expose students firstly, to texts that appeal to students' personal interests and are relevant to them because this promotes engagement and motivation (Guthrie et al., 2007; 2012; Ivey & Johnston, 2013) and secondly, to texts that draw on diverse genres (e.g., informational non-fiction articles, literary texts) as this promotes enduring personal interest in reading, and in turn, reading skill development (Alexander, 2005; Sanacore, 2002). For example, *Connections* organizes each unit around an essential question that is designed to be thought-provoking and interesting to students and provides a through-line between informational and literary texts.

There is little doubt that working to support students' motivation to read is important to helping them develop advanced literacy skills (Guthrie et al., 1999). However, providing students with texts that they will be interested in reading is not enough; they must be able to comprehend what they are reading. To this end, students must read texts that are appropriate for their reading level and that gradually increase in difficulty as they become more proficient readers so that they can comprehend what they are reading (Clemens et al., 2019). The latter ensures that students not only comprehend what they are reading but that they feel confident as readers, which in turn makes them more motivated to read (Unrau et al., 2018). *Connections* provides formative assessments that teachers can use to regularly gauge students' level of mastery and tailor readings to meet their skill level, thereby fostering instructional differentiation, which is critical for helping students become more competent readers (Tomlinson, 1995).

In addition to differentiating instruction, another method that facilitates students' practicing new skills and developing them over time is providing them with appropriate scaffolding. For example,

having students focus on one key literacy skill at a time and ensuring that instruction is within students' zone of proximal development allows them to learn new concepts more quickly and fosters self-efficacy (Antonacci, 2000; Nicholas et al., 2021; Vygotsky & Cole, 1978). Since *Connections* provides scaffolded instruction, such as tools students can use for annotating textual evidence and targeted vocabulary and grammar mini-lessons, it is likely to have increased impacts on reading outcomes. Recognizing the importance of text quality, *Connections* provides students with a set of texts that are about high-interest topics, incorporates diverse genres, and provide scaffolding to support students' advanced literacy skill development.

To positively impact literacy achievement, it is not enough to simply provide high-quality texts. These texts must be accompanied by sound instructional practices. *Connections* provides structured supports for students to engage in close reading. Close reading entails having students read texts multiple times, with a focus on different objectives for each reading (e.g., annotating texts, and responding to text-dependent questions). The close reading approach is found to have positive impacts on students' reading development (Fisher, 2014; Fisher et al., 2016). To facilitate close reading, the *Connections* chapters include objectives that direct students to focus on a specific skill while they read, such as understanding the main ideas of the text or analyzing the word choices, structures, and techniques used. Providing students with specific strategy-focused objectives is found to support their development of the cognitive and metacognitive skills that underpin achievement (Winne & Nesbit, 2010). Furthermore, prior research suggests that these strategies should be taught explicitly following a structured approach to reading (Brevik, 2019), as *Connections* provides as part of its curriculum.

In addition to using appropriate cognitive and metacognitive strategies when reading, it is also important to have students critically analyze texts to develop advanced reading comprehension skills (Duke & Cartwright, 2021). Students that have advanced comprehension skills have taken a step beyond understanding a text and are able to critique texts by closely examining them and formulating an evidence-based argument about the merits of a particular text in comparison to others (e.g., Bloom's taxonomy; Anderson & Krathwohl, 2001; Bloom, 1956). To facilitate this, *Connections* provides interactive texts that students can use to not only annotate texts but also organize textual evidence in order to form a critical evaluation and argument to answer questions aligned with higher-order thinking according to Bloom's taxonomy (e.g., "why is (or why isn't) this informational text convincing?"). By using these tools, students are able to practice critically analyzing texts, and in turn, become more skilled readers (Pearson & Cervetti, 2015). Furthermore, helping students develop their literary analysis skills promotes critical thinking more broadly (VanTassel-Baska et al., 2009).

Reading and writing skills are reciprocally related and, thus, writing is an important way for students to develop as both readers and writers (Graham & Hebert, 2010; Graham, et al., 2017). Specifically, writing allows students to gain a deeper understanding of how a text is constructed, which increases their reading comprehension and critical analysis skills. An important aspect of *Connections* is that it engages students in short- and long-form writing activities where they can apply their developing critical analysis skills and practice effectively communicating their ideas.

*Connections* provides a comprehensive literacy program that interweaves many components necessary for skilled reading. Specifically, *Connections* is aligned with the aspects of Scarborough's Reading Rope (2001) that secondary students should focus on, including background knowledge, vocabulary development, language structures, literacy knowledge, and moral reasoning. Due to the comprehensive and multifaceted nature of the *Connections* program, it is expected to increase students' reading outcomes.

Another proven strategy for supporting students' achievement is to provide them with opportunities to collaborate with their peers (Puzio & Colby, 2013). Collaborative learning predicts achievement because students are more motivated to learn and it supports vicarious learning (Gholson & Craig, 2006; Johnson et al., 2014). Furthermore, engaging in oral discussion is found to promote reading skill development (Shanahan, 2006). *Connections* supports collaborative learning by providing a "collaboration wall" for students to discuss textual evidence, ideas sparked from reading, and their points of view. This tool for collaborative learning is likely to further improve students' literacy achievement.

Lastly, it is important for curriculum materials to be modifiable so that teachers can adjust their instruction to meet each student's unique needs (Cha & Ahn, 2014; Tomlinson, 2003). For example, a teacher may need to have students read different texts and use different annotation strategies depending on their skill level. Due to these instructional requirements, *Connections* provides tools for tracking student progress, supporting formative instruction, and a flexible modular design that allows teachers to select and use curricular components as needed to differentiate instruction. Prior research on teacher professional learning suggests that providing solutions where teachers have autonomy and are able to adapt a program to meet their students' needs increases the use of a new program or product (Knight, 2019). Due to this, it is expected that teachers will be more likely to use *Connections* in their instruction than a less flexible alternative program.

## Logic Model

A logic model is a program or product roadmap. It identifies how a program aims to impact learners, translating inputs into measurable activities that lead to expected results. A logic model has five core components: inputs, participants, activities, outputs, and outcomes (see Table 1).

Table 1. Logic model core components

| Component | Description | More information |
|---|---|---|
| Inputs | What the provider invests | What resources are invested and/or required for the learning solution to function effectively in real schools? |
| Participants | Who the provider reaches | Who receives the learning solution or intervention? Who are the key users? |
| Activities | What participants do | What do participants do with the resources identified in Inputs? What are the core/essential components of the learning solution? What is being delivered to help students/teachers achieve the program outcomes identified? |
| Outputs | Products of activities | What are numeric indicators of activities? (e.g., key performance indicators; allows for examining program implementation) |
| Outcomes | Short-term, intermediate, long-term | Short-term outcomes are changes in awareness, knowledge, skills, attitudes, and aspirations.<br><br>Intermediate outcomes are changes in behaviors or actions.<br><br>Long-term outcomes are ultimate impacts or changes in social, economic, civil, or environmental conditions. |

LearnPlatform reviewed Perfection Learning resources, artifacts, and program materials to develop a draft logic model. Perfection Learning reviewed the draft and provided revisions during virtual meetings. The final logic model depicted below (Figure 1) reflects these conversations and revisions.

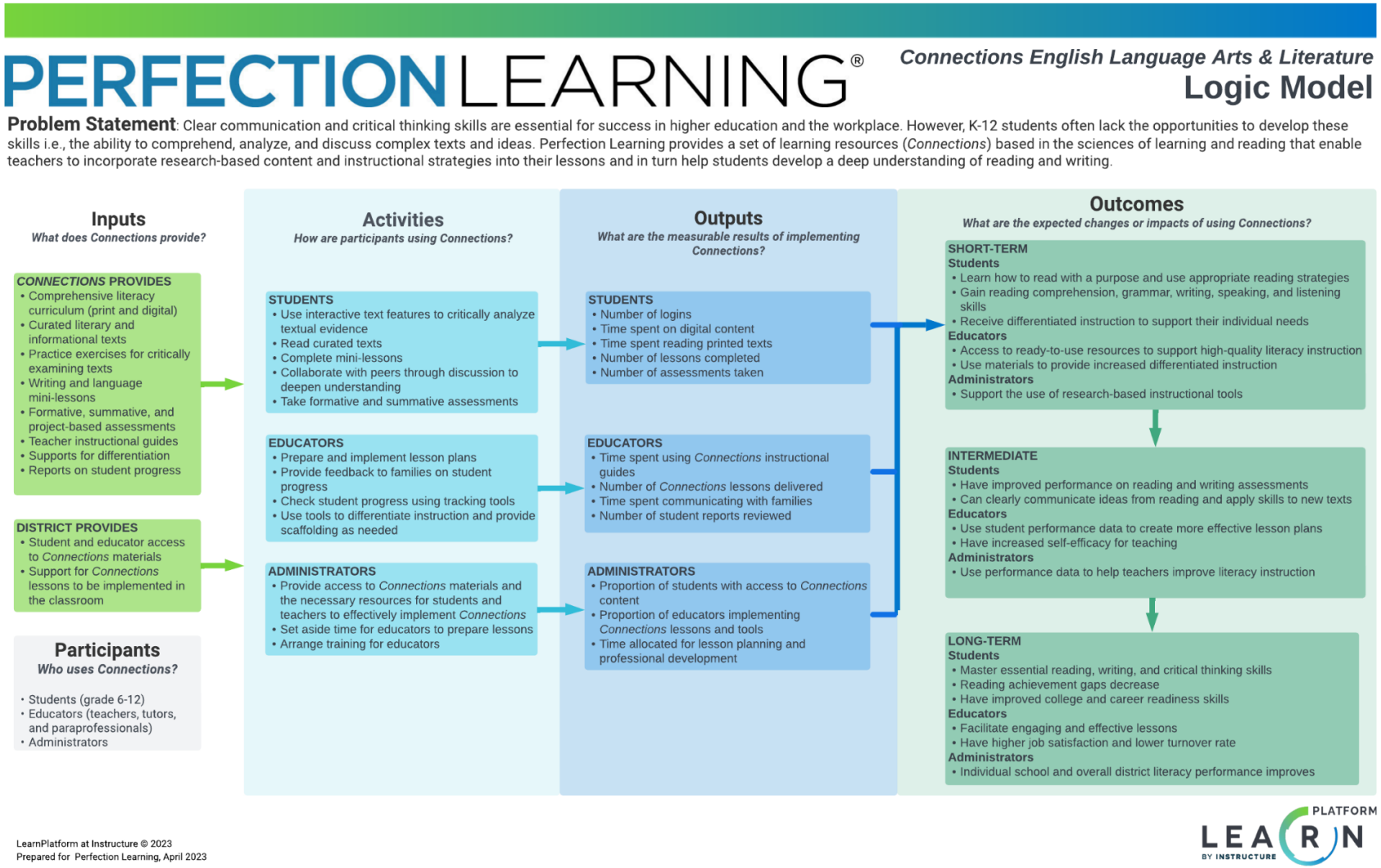


Figure 1. *Connections* logic model

*Connections Logic Model Components*. Perfection Learning invests several resources into *Connections*, including a comprehensive literacy curriculum (print and digital), curated literary and informational texts, practice exercises for critically examining texts, writing and language mini-lessons, formative, summative, and project-based assessments, teacher instructional guides, supports for differentiated instruction, and reports on student progress. Ultimately, through *Connections,* Perfection Learning aims to reach 6-12 grade students, educators, and administrators.

Using these program resources, the following participants can engage with *Connections* in the following activities:

- Grade 6-12 Students:
    - use interactive text features to critically analyze textual evidence;
    - read curated texts;
    - complete mini-lessons;
    - collaborate with peers through discussion to deepen understanding; and,
    - take formative and summative assessments.
- Grade 6-12 Educators:
    - prepare and implement lesson plans;
    - provide feedback to families on student progress;
    - check student progress using tracking tools; and,
    - use tools to differentiate instruction and provide scaffolding as needed.
- School and District Administrators:
    - provide access to *Connections* materials and the necessary resources for students and teachers to effectively implement *Connections;*
    - set aside time for educators to prepare lessons; and,
    - arrange training for educators on using Connections effectively.

Perfection Learning can examine the extent to which core activities were delivered and participants were reached by examining the following quantifiable outputs:

- Grade 6-12 Students:
    - Number of:
        - logins;
        - lessons completed, and
        - assessments taken.
    - Time spent:
        - on digital content; and,
        - reading printed texts.
- 6-12 Educators:
    - Number of:
        - *Connections* lessons delivered; and,
        - student reports reviewed.
    - Time spent:
        - using *Connections* instructional guides; and,

        - communicating with families.
- School and District Administrators:
    - Proportion of:
        - students with access to *Connections* content; and,
        - educators implementing *Connections* lessons and tools.
    - Time allocated for lesson planning and professional development.

If implementation is successful, based on a review of program outputs, Perfection Learning can expect the following short-term outcomes among students using *Connections*. Students will learn how to read with a purpose and use appropriate reading strategies, gain reading comprehension, grammar, writing, speaking, and listening skills, and receive differentiated instruction to support their individual needs. In the intermediate term, students are expected to have improved performance on reading and writing assessments and be able to clearly communicate ideas from reading and apply literary analysis skills to new texts. In the longer term, using *Connections* will facilitate students mastering essential reading, writing, and critical thinking skills. Reading achievement gaps between students will decrease and more students will be college- and career-ready.

By using *Connections*, educators are also expected to have several short-term outcomes, including accessing ready-to-use resources to support high-quality literacy instruction and using materials to provide increased differentiated instruction. In the intermediate term, educators will use student performance data to create more effective lesson plans and have increased self-efficacy for teaching. These outcomes are expected to lead to educators facilitating engaging and effective lessons and having higher job satisfaction and lower turnover rates in the longer term.

Among administrators, using *Connections* will lead to increased support for teachers using research-based instructional tools in the short-term and greater use of performance data to help teachers improve literacy instruction in the intermediate term. These outcomes are expected to result in improved school- and district-level literacy performance in the longer term.

## Study Design for *Connections* Evaluation

To continue building evidence of effectiveness and to examine the proposed relationships in the logic model, Perfection Learning has plans to conduct an evaluation to determine the extent to which its program produces the desired outcomes. Specifically, Perfection Learning has plans to begin an ESSA Level II or III study to answer the following research questions:

### Implementation Questions

1. Among teachers, what were the usage patterns of *Connections ELA and/or Literature* resources?
    a. What was the average number of views of *Connections* instructional guides?
    b. How many *Connections* lessons did teachers deliver?
2. Among students, what were usage patterns of *Connections ELA and/or Literature* resources?
    a. What was the total number of logins to the *Connections* online platform?
    b. What was the total number of *Connections* lessons completed?
    c. What was the average amount of time spent reading *Connections* texts online (per week)?

### Outcome Questions

3. After controlling for students' prior literacy levels, how was the use of *Connections ELA and/or Literature* related to student:
    a. Performance on standardized literacy assessments?
    b. Mastery of ELA standards within the Perfection Learning platform?
    c. Increased motivation and engagement?
4. After controlling for students' prior literacy levels, what is the magnitude of observed differences of students who used *Connections ELA and/or Literature* compared to students who did not use the program for:
    a. Performance on standardized literacy assessments?
    b. Mastery of ELA standards within the Perfection Learning platform?
    c. Increased motivation and engagement?

Perfection Learning plans to begin this study in spring 2023.

## Conclusions

This study satisfies ESSA evidence requirements for Level IV (*Demonstrates a Rationale*). Specifically, this study met the following criteria for Level IV:

✅ Detailed logic model informed by previous, high-quality research
✅ Study planning and design is currently underway for an ESSA Level I, II or III study

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