

Exploring the Forgotten and Reinvigorating the Neglected:
A Design Research Study into the Enrichment of Upper Secondary English Education

Nick Ruhe

5540240

Utrecht University

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Rick de Graaff

Dr. Roselinde Supheert

Abstract

The lack of perceived interest in humanities subjects, of upper-secondary education students, is cause for concern at the Christelijk Lyceum Zeist. In-school research has shown that students do not recognize the humanities as academically approachable. As a result, a negligible number of students pursue a humanities-oriented university education. This study aims to develop a module informed by academic literature for the school's Alfa Academie enrichment program so that interested students can engage with humanities-related subjects at a level higher than provided by their normal curriculum. Building on the framework of design research, it asks: What are the characteristics of an enrichment module that meets both requirements of the Alfa Academie and aids in the development of academically applicable skills of upper-secondary education students? In this context, academically applicable skills refer to critical thinking and academic writing proficiency. Based on the review of literature on enrichment, critical thinking, collaborative learning, and academic writing proficiency, this study developed a module that adhered to the Alfa Academie's requirements and tested it with a group of participants representative of future users. Semi-structured interviews were used to assess the prototype's expected practicality and expected effectiveness. Analysis of the responses showed appreciation for the implementation of enrichment, critical thinking, and collaborative learning. The results indicate that the module is expected to be effective in developing critical thinking and enriching the regular curriculum of upper-secondary education students. Based on this, future intervention studies, with a comparable focus, are recommended to take a similar approach when conducting design research.

Keywords: enrichment, critical thinking, collaborative learning, academic writing

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1. Introduction

As defined by the Oxford English Dictionary, talent is “a special natural ability or aptitude, usually for something expressed or implied; a natural capacity for success in some department of mental or physical activity” (OED, Talent). The development of talent is important because it delivers to society the driving forces of innovation (Wijers, 2013, in Sterk, 2013). Students of secondary education could, with the right help, better their chances of becoming these driving forces as the talented individuals that teachers and schools want them to be (Renzulli, 2012). To achieve such lofty goals, a robust system of enrichment education needs to be set up. Such an initiative faces numerous challenges.

A fundamental topic of attention is support from school management, without which the longevity of any program cannot be ensured (Thijs & Van den Akker, 2009). Should an innovation fail to improve the existing situation, it is likely to be discarded as well (Van den Branden, 2009). With these challenges in mind, the Christelijk Lyceum Zeist, henceforth CLZ, set up their enrichment program in 2013. While initially only catering to talented beta/science students, the program was expanded upon in 2019 to include the humanities. The current study was set up in service of this expansion, to develop a product that enriches the curriculum of upper-secondary education students.

1.1 The Current Situation

First, the Dutch system of education identifies three main fields of academic inquiry. There are alpha subjects, such as history and languages, which belong to the humanities. There are beta subjects, such as biology, chemistry, and physics, which belong to what we traditionally understand as sciences. Lastly, there are gamma subjects which belong to the social sciences. Among others, the subjects of geography, economics, and social studies belong to this

category. Alpha, beta, and gamma subjects are roughly equally prevalent in Dutch secondary education.

CLZ's enrichment program currently consists of two Academies: Alfa and Bèta. The program aims to prepare the students for post-secondary education and to offer enrichment to those in need of extra challenges (CLZ Academie, n.d.). These goals were affirmed by both the Alfa coordinator and the Bèta coordinator during separate interviews. (Personal communication, 2018; Personal communication, 2019). The Bèta Academie was brought to life in 2013 by enthusiastic teachers of biology, chemistry, and physics. In 2020, it is a well-established program within the school. Filled with modules on topics such as *Magical Acids*, *Finding the Invisible*, and *Cancer in Stop Motion*, the Bèta Academie is available to equally enthusiastic students who want to be more involved with beta courses. Students who apply need to be motivated and have passing grades for all their beta subjects.

Sharing its place in the educational limelight with the beta side of the U-talent program, the Bèta Academie was created to fill a gap left behind by the disbanding of Junior College Utrecht. Whilst communicated towards the students as an enrichment program for well-performing individuals, at its core the Bèta Academie's main role is to fill out the in-school part of the U-talent program, which requires students to participate in classes both at the University of Utrecht and the school they attend. According to the U-talent program's brochure, it aims to valorize scientific knowledge and allow for a better connection between secondary -and higher education. The CLZ's U-talent coordinator confirmed this mission statement in an interview (Personal communication, 2018).

In 2019, CLZ started its trial run of the Alfa Academie. Earlier in 2018, the coordinator explained that the humanities had been neglected for some time and that the school wanted to offer enrichment to well-performing students with an interest in humanities subjects as well. The Alfa Academie was first introduced to a group of teachers in 2018,

during a walk-in meeting. The program's development took place alongside, though independent of, the University of Utrecht's development of a humanities-oriented U-talent program. The Alfa Academie's coordinator stated that they did not want to wait until the University of Utrecht had finished their humanities enrichment program (Berg, 2018). In addition to the above, CLZ had another reason for setting up their program. During the walk-in meeting the Alfa Academie's coordinator also addressed the issue of a general decline in students who picked the humanities-oriented upper-level profile of education.

Before their fourth year of havo (pre-college education) or vwo (pre-university education), secondary-education students are given a choice out of four distinct educational profiles. N&G (science and health) and N&T (science and technology) are meant for science-minded students. E&M (economics and society) and C&M (culture and society) focus on the humanities and social sciences. When faced with the decision to consider one of the four secondary-education profiles, only a handful of students choose the C&M profile at CLZ. The Alfa Academie's coordinator continued they had also observed that, each year, fewer students choose a language or culture focus for their 'profielwerkstuk¹' and that only a negligible number of the school's students would decide to pursue a study in humanities.

The school's closest university, that of the University of Utrecht, adds weight to this claim as its yearly reports show a strong decline in concurrent humanities students between 2010, when it had roughly 7000 students, and 2018, when it had about 5700 students (Universiteit Utrecht, 2011; Universiteit Utrecht, 2018). The number of concurrent sciences students rose in those same years, with roughly 4200 students in 2010 and slightly under 6000 students in 2018 (Universiteit Utrecht, 2011; Universiteit Utrecht, 2018). Non-academic sources comment on this phenomenon as well, with Sas (2018) claiming that the University

¹ A *profielwerkstuk* can be seen as a small-scale study related to any given school subject.

of Amsterdam's Dutch bachelor could disappear and Strikkers (2018) saying that the smaller humanities studies are dwindling.

To combat the decline in C&M students, CLZ's board decided to allow for the creation of the Alfa Academie. The program intends to offer in-depth engagement with languages and culture for upper-secondary education students. Currently, languages are primarily being taught using published teaching materials, which help students reach a certain level of command in that language by offering activities that stimulate the growth of the five main language skills. Although some in-depth engagement is offered through literature, this exposure is mostly taught to the bemusement of students. A solution is required to address this discontent, to show that in-depth engagement can be meaningful and enjoyable.

This study intends to work on such a solution. It aims to address the Alfa Academie's needs and requirements to ensure that its solution, an enrichment module, will be incorporated into the program. This study also aims to have its module aid in the development of critical thinking -and academic writing skills. These two were selected based on the Alfa Academie's aim to prepare students for a post-secondary education and should be applicable to an academic setting. This study's module will offer a variety of enriching, challenging, and interesting activities focused on the overarching topic of the U.S. firearms discussion. This topic was selected based on available academic literature on enrichment education (Renzulli, 2014). Furthermore, as it is a political topic, it fits within the purview of the humanities.

In pursuing the above this study will gather information about the development of the academically-applicable skills in an attempt to contribute to existing knowledge about the integration of language development and academic subject development, focusing on the English language. However, first and foremost, this study's module aims to change the perspective some students have of the humanities.

1.2 Research Questions

In light of this dissertation's purpose, the following main research question has been formulated:

What are the characteristics of an enrichment module that meets both requirements of the Alfa Academie and aids in the development of academically applicable skills of upper form students in secondary education?

In the context of this study, both critical thinking and academic writing skills are considered academically applicable. Sections of the theoretical framework will be dedicated to the justification of this assertion. To answer the main research question, the following four sub-questions will be investigated:

- 1) What are the requirements that need to be met by a module for it to be considered an appropriate addition to the Alfa Academie program?
- 2) What are the characteristics of activities that are considered enriching and how will enrichment be implemented in the creation of an Alfa Academie module?
- 3) From a theoretical standpoint, when does an activity, or do a set of activities, aid in the development of critical thinking skills and how will this be implemented in the creation of an Alfa Academie module?
- 4) How can the proposed design principles be utilized to develop the student's academic language proficiency, and by extension their academic writing skills?

2. Theoretical Framework

To provide it with a body of knowledge relevant to the development of its enrichment module, this study investigated the four concepts of enrichment, critical thinking, collaborative learning, and academic writing. Each concept will be addressed in a separate sub-chapter, all of which end with a section containing design principles. These principles are the result of an effort to distill theory into a more manageable and applicable form. Effectively, they are guidelines that inform the structure and content of this study's enrichment module².

2.1 Enrichment Education

2.1.1 Defining Enrichment: Ambiguities and Compromises

Enrichment, in relation to educational practices, is broadly considered “a term used to describe a set of programming options that extend and supplement the regular curriculum and often include[s] topics that are not typically covered in the curriculum” (Subotnik, Olszewski-Kubilius, & Worrel, 2011). There is, however, no consensus among researchers as to what ‘enrichment’ specifically is, giving it an “aura of vagueness and confusion” (Barbe, 1960). The ambiguity surrounding enrichment may stem from the different ways in which researchers interpret the concept. As a result, the “form that enrichment might take and the nature of its content are often not specified” (Feng, 2005). In response to the vagueness surrounding enrichment and the criticism thereof, this study will consider two approaches when it comes to operationalizing the concept. One approach is informed by the definition in Subotnik et al. (2011), the other by Renzulli (2014).

² See appendix B for a complete list of design principles maintained by this study. See appendix C for an revised version of the module, which discusses this study's incorporation of design principles.

The interpretation of enrichment offered by Subotnik et al. (2011) is clear and does not require extensive dissection to be understood. The inclusion of ‘programming options’ suggests that there is no fixed way of implementing enrichment. Considering that these options ‘extend and supplement the regular curriculum’, it can also be remarked that participating individuals are offered a program that introduces them to a type of engagement that is broad in scope and in-depth in its approach. The broadness of scope may refer to the number of subjects outside of the regular curriculum and the in-depth manner of approach may refer to the type of engagement. If these topics are not commonly covered in the curriculum, it may be inferred that they are “not typically available in the regular-education classroom” (Subotnik et al., 2011, p. 23).

Furthermore, Subotnik et al.’s (2011) definition is a compilation of interpretations from various recent studies. Since this is the case, it is likely this clarification of enrichment is a more up-to-date interpretation of the concept. Nevertheless, this study understands that each manner of implementation of enrichment is different. However, a suitable working definition was needed.

2.1.2 Renzulli’s (2014) Schoolwide Enrichment Program

Another suitable approach to enrichment is that of the Schoolwide Enrichment Model (SEM), which offers four principles as its rationale and distinguishes three Types of enrichment. According to Renzulli (2014), SEM’s purpose is to “make learning more interesting, exciting, and enjoyable, to promote the development of higher-level thinking skills, and to create a school atmosphere that values and practices what we call investigative learning” (p. 541).

Renzulli (2014), in addressing the rationale of SEM, strongly emphasizes the importance of the student as a unique individual with distinct learning styles, interests, and abilities, and indicates the value of enjoyment for effective learning experiences.

Furthermore, Renzulli (2014) claims that “learning is more meaningful and enjoyable when

content (i.e., knowledge) and process (i.e., thinking skills, methods of inquiry) are learned within the context of a real and present problem” (p. 541). Examples of such problems have been addressed by this study’s researcher in the form of misinformation and propaganda in an earlier study (Ruhe, 2019). Lastly, while Renzulli (2014) accepts the necessity of formal and prescriptive instruction, it should not be the main teaching practice. Instead, it is advised that education makes use of SEM “to enhance knowledge, thinking skill acquisition, and creative productivity by examining all topics for opportunities to infuse investigative instructional practices” (p. 541).

The three Types of enrichment distinguished by Renzulli (2014) are Type I, which “is designed to expose students to a wide variety of disciplines, topics, occupations, hobbies, persons, spaces, and events that are not ordinarily covered in the regular curriculum” (p. 545). This type of enrichment is mainly designed to stimulate new interests. Type II “enrichment includes materials and methods designed to promote the development of thinking and feeling processes” (p. 546). Type III “enrichment involves students who become interested in pursuing a self-selected area and are willing to commit the time and effort necessary for advanced content acquisition and process training in which they assume the role of a first-hand inquirer” (p. 546).

Whereas Subotnik et al.’s (2011) definition provides this study with a clear understanding of what its module needs to realize overall to be considered enriching, Renzulli’s (2014) Types more directly inform its structure and content. Type I enrichment, the purpose of which is to introduce and stimulate, is relevant because this study intends to have its module expose students to a wide variety of novel content. Type II underlines that enrichment does more than introduce; it develops cognitive processes. It is relevant to this study, because this study aims to have its module develop the skill of critical thinking.

Simply, the Types provide the study with a clear set of guidelines for implementing enrichment into the module.

2.1.3 Design Principles for Implementing Enrichment

The following design principles have been formulated and will inform the development of the proposed module, focusing on the definition of enrichment, the manner of engagement, and a breakdown of two types of enrichment. Of the relevant theory, Subotnik et al.'s (2011) definition lead to the first -and second design principle. The third, fourth, -and fifth design principle can be traced to theory provided by Renzulli (2014). In the context of enrichment education, as supplementative to traditional in-school educational practices:

- 1) an intervention that extends and supplements the regular curriculum may result in enrichment.
- 2) an intervention that includes topics not typically covered in the curriculum may result in enrichment.
- 3) an intervention that facilitates the learning of content and process within the context of a real and present problem is considered more meaningful and enjoyable.
- 4) an intervention implements Type I enrichment by exposing participants to a wide variety of disciplines, topics, occupations, hobbies, persons, spaces, and events that are not ordinarily covered in the regular curriculum. (based on Type I enrichment, Renzulli, 2014)
- 5) an intervention implements Type II enrichment by offering participants materials and methods that are designed to promote the development of thinking and feeling processes. (based on Type II enrichment, Renzulli, 2014)

Specifically, these design principles are relevant to the current study. The module needs to set itself apart from the curriculum that students normally engage with, which may be achieved by taking the first and second design principles into account. Renzulli (2014) argues that enjoyment is an important part of enrichment. By implementing the third design principle, this study will work towards providing that enjoyment. As for the fourth and fifth design principles, it describes how students might first be introduced to enrichment and then be aided in the development of more widely applicable processes.

2.2 Critical Thinking Skills

2.2.1 Critical Thinking: A 21st-Century Skill

21st-century “skills include being able to solve complex problems, to think critically about tasks, to effectively communicate with people from a variety of different cultures ... to work in collaboration with others” (Koenig, 2011). Although the relevance of such skills increases as individuals begin to take their place in a workforce, schools, colleges, and universities are argued to be the preeminent stage for acquiring and developing them (Celuch & Slama, 1999; Larson & Miller, 2011; Rotherham & Willingham, 2009). The choice for education appears logical, as it offers a favorable structure in which these skills can be taught. Classrooms are inherently catered towards the transference of knowledge from teacher-to-peer, peer-to-peer, or textbook-to-peer. Through direct instruction, students can be shown how to make use of critical thinking skills in a step-by-step manner. Utilizing a group set up, a teacher enables students to explore the application of these skills in a collaborative and communicative manner.

Research in favor of using education as a staging ground for teaching 21st-century skills mostly stresses the importance of preparation. Griffin & Care (2014) state that future employment will increasingly require students to think critically. Skakirova (2007), as quoted

in Sneyder & Sneyder (2008), explains that “critical thinking skills are important because they enable students ‘to deal effectively with social, scientific, and practical problems’” (p. 90). Tiruneh, Verburgh & Elen (2014) express the necessity of acquiring critical thinking skills and consider it a skill of vital importance for students to have, to effectively engage with increasingly complex global issues. This call for action has not gone unheard by curriculum developers.

One example is curriculum.nu, a Dutch initiative to modernize Dutch secondary education³. The development of curriculum.nu is undertaken by several teams, each consisting of roughly fifteen members responsible for one domain. Several of the teams behind curriculum.nu’s developments focus on critical thinking skills and the acquisition thereof. They underline its importance as an attainable skill in Dutch secondary education. One of these teams is responsible for the domain labeled *Burgerschap*⁴. In their proposal, this team states that education related to its field challenges students to create connections between their own lives and larger socio-global issues. The team clarifies that it will allow students to reflect on complex ethical questions, in which an open and critical mindset is imperative (Curriculum.nu, 2019a).

In addition to Team *Burgerschap*, Team Engels/MVT⁵ also underlines critical thinking as a preferred mode of thinking when it comes to effective cross-border communication and language awareness. Team Engels/MVT argues that communication skills are necessary to critically process and communicate ideas in a foreign-language context. Simply, a student needs to be able to apply critical thinking skills to organize language input and structure language output, but to do so in the target language they first need to be able to communicate effectively (Curriculum.nu, 2019b). While Team

³ For more information on each subject covered by the teams of curriculum.nu, visit <https://www.curriculum.nu>

⁴ *Burgerschap* translates to citizenship.

⁵ Engels/MVT translates to English/Modern Foreign Languages

Burgerschap lists ethical reasoning and a reflective attitude as elements of critical thinking and Team Engels/MVT discusses it in a manner reminiscent of Bloom's revised taxonomy (Krathwohl, 2002), it is important to further define the concept using academic sources.

2.2.2 Defining Critical Thinking

Critical thinking, as both a concept and a skillset, is often defined in a way that invites the same 'aura of vagueness and confusion' which Barbe (1960) ascribed to enrichment. Snyder & Snyder (2008), referring to Scriven & Paul (2007), list a series of action verbs related to critical thinking, arguing that critical thinking is the:

intellectually disciplined process or actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflecting, reasoning, or communication as a guide to belief and action. (p. 90)

Especially the inclusion of 'applying', 'analyzing', and 'synthesizing' evoke the higher-order thinking skills of Bloom's revised taxonomy (Krathwohl, 2002). The comparison is justified, as a critical thinker needs to apply existing knowledge to analyze, after which they may synthesize a response based on their analysis of available information.

In other words, critical thinking is the ability to question based on available evidence. It is the why, the how, and the what of a situation from multiple angles. Critical thinking is employed when complex issues require dissection and analysis; to break down and examine each component to address it effectively. McPeck (2016), first published in 1981, also addresses the 'when' of critical thinking, explaining that it "always manifests itself in connection with some identifiable activity or subject area and never in isolation" (p. 5) and that it "requires the judicious use of skepticism, tempered by experience, such that it is productive of a more satisfactory solution to, or insight into, the problem at hand" (p. 7). The conceptual understanding of critical thinking has evolved since it was defined by McPeck in

1981, with a more recent definition focusing on parts hitherto not discussed. While Stassen, Herrington, & Henderson (2011) give no definitive explanation of critical thinking, they contend that it:

can include the thinker's disposition and orientations; a range of specific analytical, evaluative, and problem-solving skills; contextual influences; use of multiple perspectives; awareness of one's own assumptions; capacities for metacognition; or a specific set of thinking processes or tasks. (p. 127)

In analyzing the attempts at defining the concept of critical thinking and its relevance, it is possible to come to several conclusions. When a user engages in critical thinking, they utilize a set of skills to analyze, evaluate, synthesize and solve problems (Kennedy, Fisher, & Ennis, 1991; Scriven & Paul, 2007; Stassen et al., 2011, Tiruneh et al., 2014). Critical thinking is not used in isolation. Instead, it is applied to a specific topic, subject, or area of research (McPeck, 2016; Stassen et al., 2011). Lastly, critical thinking remains a relevant skill to acquire before leaving secondary education (Griffin & Care, 2014; Skakirova, 2007; Tiruneh et al., 2014).

2.2.3 The Acquisition and Development of Critical Thinking

Most of the research on the acquisition and development of critical thinking focuses on teaching methods, in which the teacher plays a central role. In their endeavor to compile the efforts of a multitude of intervention studies on critical thinking instruction at a post-secondary, tertiary, or university education level, Tiruneh et al. (2014) distinguish between direct and implicit strategies of teaching critical thinking. Direct strategies “employed explicit explanation of CT procedures at the early phase of instruction followed by a set of instructional activities” and implicit “employed various teaching strategies that embed CT without any explicit emphasis on CT skills” (Tiruneh et al., 2014, p. 5). In their review, Tiruneh et al. conclude that there is evidence to suggest that a difference exists between both

strategies. The direct approach outperformed the implicit one in terms of the effectiveness (Tiruneh et al., 2014, p. 8), which previous research has argued as well (Beyer, 2008; Paul, 1993).

Three studies (Bensley & Haynes, 1996; Bensley, Crowe, Bernhardt, Buckner & Allman, 2010; Solon, 2007), which implemented a direct approach, began with a teacher explanation of CT principles, “followed by teacher modeling and coaching through practical exercises” (Tiruneh et al., 2014). In these studies, the direct instruction group outperformed the non-explicit instruction group in terms of critical thinking. Another study (Yeh, 2009), “which emphasized on teacher modeling and scaffolding of CT activities reported significant CT improvement compared to the students which did not receive direct CT instruction” (Tiruneh et al., 2014). However, some of the studies with an implicit approach also reported an improvement in critical thinking. These studies (Semerci, 2006; Yuan, Kunaviktikul, Klunkin, & Williams, 2008) incorporated problem-based learning in their approach, presenting the participants with problems that had to be addressed using small-group discussions and other collaborative activities.

Based on the research compiled in Tiruneh et al.’s (2014) review of instructional strategies, it is clear that a direct approach to critical thinking instruction reaps benefits more effectively, but that problem-based learning also, in which the approach is implicit, aids in the development of critical thinking. Activities are ideally supported by teacher modeling and explicit instruction of critical thinking principles to ensure greater gains. In cases of teacher modeling, a tool might be used. One such a tool is outlined in Snyder & Snyder (2008). Taken from Facione (2007), the IDEALS method, in which the thinking skills related to critical thinking have been incorporated, presents a simple checklist that students can follow. The IDEALS are to Identify, Define, Enumerate, Analyze, List, and Self-Correct.

Identify the problem: *What is the real question we are facing?*

Define the Context: *What are the facts that frame this problem?*

Enumerate the Choices: *What are plausible options?*

Analyze Options: *What is the best course of action?*

List Reason Explicitly: *Why is this the best course of action?*

Self-Correct: *Look at it again... What did we miss?*

The identification process plays a critical role in critical thinking practices. Enumeration and analysis imply the necessity for an evaluative and investigative mindset. Lastly, the self-correction is in line with the reflection that takes place as part of critical thinking (Scriven & Paul, 2007).

2.2.4 Design Principles for Implementing Critical Thinking

The following design principles will inform the development of the proposed module, focusing on direct strategies of teaching critical thinking. Theory detailed in Tiruneh et al. (2014) informed the first -and second design principle, outlining this study's approach to teaching critical thinking. The third design principle lists which skills should be called upon in the module. In the context of teaching critical thinking in an educational environment:

- 1) an intervention that employs a direct strategy to teach critical thinking skills outperforms an intervention that makes use of indirect strategies in terms of the effectiveness of improving a student's critical thinking.
- 2) an intervention makes use of direct strategies when it employs explicit explanation of critical thinking procedures at the early phase of instruction and follows that with a set of instructional activities.

- 3) an intervention engages its participants in critical thinking when it makes them utilize a set of skills to analyze, evaluate, synthesize, and solve problems.

These design principles are relevant to this study, in that they cover what may be considered the most effective approach to teaching critical thinking, as discussed in the literature above, and because they aid in breaking critical thinking down into its constituent parts. Although these design principles apply to the teaching of critical thinking in a post-secondary education setting, it is worthwhile to attempt the application of them to an upper secondary education setting which specifically prepares for further academic education. As discussed in Tiruneh et al. (2014), interventions with a direct strategy for teaching critical thinking proved to be more effective compared to implicit strategies. The first design principle will be implemented, within the bounds of the stakeholders' requirements, to promote the development of critical thinking in the most effective way possible. The second design principle serves as a reminder as to what shape a direct approach might take in general, providing a basic structure for the module to adhere to. The third design has a function similar to the second design principle.

2.3 Collaborative Learning

2.3.1 Differentiating Collaborative -and Cooperative Learning

Collaborative learning, according to Dillenbourg, Baker, Blaye, & O'Malley (1996), as cited in McInnerney & Roberts (2009), is a type of learning which "involves the mutual engagement of participants in a coordinated effort to solve the problem" (p. 206).

Collaborative learning, often conflated with cooperative learning, is characterized by a certain type of engagement. Naturally, collaborative commitment requires at least two people to work on something together. Those that work collaboratively do so by focusing their combined efforts on a single task, whereas "in cooperation, partners split the work, solve sub-

tasks individually and then assemble the partial results into the final output” (Dillenbourg, 1999). Davidson & Major (2014) further delineate the difference between cooperative and collaborative learning by specifying that:

unlike in cooperative learning, where the focus is on working together, or interdependence, in collaborative learning, the focus is on working with each other ... towards the same goal, as the root word suggests - in this case toward the discovering, understanding, or production of knowledge. (p. 21)

Whereas the focus of cooperative learning lies with the type of learning, collaborative learning moves beyond this scope by rendering the collaborative efforts as a means of achieving a common goal.

Despite the differences between both, cooperative and collaborative learning share certain features. As described in Davidson & Major (2014), sourced from Davidson (1994), both cooperative and collaborative learning: 1) require a common task or learning that is suitable for group work; 2) engage in small-group interaction focused on the learning activity; 3) depend on cooperative, mutually helpful behavior among students as they strive together to accomplish a learning task; 4) call for individual accountability and responsibility; and 5) rely on interdependence in working together (p. 29). Kirschner (2001) adds that, in both types of learning, “the teacher is more of a facilitator than a ‘sage on the stage’” (p. 4). To clarify the ‘sage on the stage’, it is used to refer to a more traditional style of education where the teacher assumes the role of a ‘sage’ who functions as the main font of knowledge for students to learn from. Kirschner (2001) further lists several benefits, amongst which the enhancement of one’s ability to reflect and development of social skills are listed (p. 5).

2.3.2 Design Principles for Promoting Collaborative Learning

The following design principles will inform the development of the proposed module, focusing on the process of collaborative learning as well as elements and measures that

facilitate it. In a context where it is desirable to implement a model of teaching that employs more collaborative student-to-student interaction in an educational environment:

- 1) an intervention may succeed in implementing collaborative learning if it engages its participants in a mutually coordinated way to solve problems.
- 2) an intervention may facilitate collaborative learning by providing a task suitable for group work in which participants engage in small-group interaction focused on the learning activity.
- 3) an intervention promotes collaborative learning if it calls for individual responsibility, accountability, and interdependence when working together.

In terms of collaborative language learning, these design principles are considered to be of value to this study as each covers a specific element of collaborative learning. The first design principle plays a supportive role by laying the foundation for the implementation of the second design principle, which informs that the module's assignments must be fit for group work and should promote interaction, and third design principle, which underlines the importance of an individual's role as a co-responsible contributor. The design principles specify the type of engagement that characterizes collaborative learning and will inform the shape of the assignments within the module.

2.4 Academic Writing Skills

2.4.1 Relevance and Definition of BICS and CALP

Addressing the distinction and definitions of BICS and CALP is relevant to this study, especially because its enrichment module aims to improve its participants' academic writing skills. After all, the Alfa Academie does state to prepare students for an educational setting

beyond that of secondary education⁶. Furthermore, while academic language proficiency and academic writing skills are not bound to a single language, the present study intends to develop the CALP and academic writing skills of students of English as a second language.

In the broader context of academic language development, it is important to understand that the language input and output of students engaging in interpersonal communication with peers differ from the type of language they produce and are exposed to in academic environments. Cognitive academic language proficiency, or CALP, in short, refers to a dimension of language proficiency which is closely related to literacy skills (Cummins, 1980). It has been recognized as a type of language distinct from the one people use in daily interpersonal interactions for various reasons. Basic interpersonal communication skills, or BICS in short, refers to the type of language speakers use in everyday interpersonal contexts (Cummins, 1980). CALP follows a different developmental pattern. Its register is acquired “in social institution[s] beyond the family (e.g., school, business, religious, and cultural context) and involve[s] acquisition of specialized vocabulary and functions of language appropriate to those settings” (Cummins, 2008), and continues to develop through schooling, while interpersonal communicative skills plateau at a certain age (Cummins 1999).

2.4.2 The Acquisition of CALP

Cummins’ (2008) point, that CALP is primarily developed in a social context outside of the family, is also echoed by Krashen & Brown (2007), who suggests that academic proficiency⁷ “consists of two central components: knowledge of academic language and knowledge of specialized subject matter” (p. 1). Krashen and Brown (2007) further argue that a third component should be considered in the examination of academic language development:

⁶ This aim is discussed in section 1.1 and is also stated on the webpage of the CLZ Academie: <https://sites.google.com/clz.nl/clzacademie/over-de-clz-academie/hoe-werkt-het?authuser=1>

⁷ This is another means of labeling CALP

strategies. In this, they assume the correctness of the Comprehension Hypothesis, which asserts that language is acquired by understanding messages rather than conscious learning and rote memorization, and the Problem-Solving Hypothesis, which “claims that we do not learn subject matter and new concepts by ‘study,’ but that they emerge as a by-product of problem-solving” (Krashen & Brown, 2007). Given examples include narrow reading, to ensure the natural repetition of vocabulary and grammar (Krashen, 2004), and utilization of background knowledge, to make texts more digestible. By reading literature that covers a distinct topic, scholars and students are more likely to encounter repeat instances of grammatical constructions and subject-specific vocabulary belonging to a widely accepted academic register.

2.4.3 Expressing Academic Language Proficiency in Writing

Academic language proficiency has thus far been discussed in terms of its acquisition. Although input and the means of development are important, educators are equally interested in the expression of academic language proficiency. While reading is necessary to bring in new information and helps to amass an academic register, as a component of academic language proficiency, it is still a skill meant to internalize knowledge. In most cases, academic language proficiency is measured through writing. Academic writing primarily encompasses works that represent “the views and beliefs of a writer on a given subject” (Al-Mansour, 2015) and is carried out with the support of, and with reference to, other works of academic literature.

Horstmanshof & Brownie (2011) identify assessable skills related to academic writing. Topic sentences, construction of paragraphs, appropriate language, and logical

development of ideas are all listed as skills that fall under academic writing. At its core, academic writing does rely on the proper execution of the skills mentioned above.⁸

2.4.4 Using Critical Thinking to Develop Academic Writing Skills

The application of critical thinking may also play a role in the development of academic writing skills. Krashen and Brown (2007) suggest that several strategies may be employed, focusing on the writing process. Actions such as the planning, revision, and re-reading of written works require the use of higher order thinking skills. Critical thinking can be applied throughout the entirety of the writing process, most notably before and after writing a text. This takes the form of planning, a task important to maintain structure during the writing process, and takes the form of reflection, an action that forces the writer to take a self-evaluative position towards their written work. One more element of academic writing listed in the list of Horstmanshof & Brownie (2011) is literature analysis. Creative -and critical thinking are considered to be a part of this. The analysis of literature during one's writing process, the critical analysis that is, makes for better writing. So, by analyzing literature and putting that into words, one makes use of critical thinking.

Furthermore, it may also be argued that critical thinking can be implemented at two identifiable levels of the writing process. It may be applied when structuring, and reflecting on, an entire body of text. The planning of an argument or line of reasoning is facilitated by following a structure similar to the one provided by the IDEALS (Facione, 2007) checklist. The correct identification of a problem, and the context in which it is present, provides food for discussion. The enumeration of plausible actions provides a list of arguments or evidence to pick from. Self-reflection, too, applies here. It may be considered the final check. In turn, after a framework for writing has been created by following the IDEALS (Facione, 2007),

⁸ Horstmanshof & Brownie (2011) also account for the introduction, analysis of literature, conclusion, format, presentation, and referencing in their grid.

critical thinking takes place at a per-paragraph level. The logical development of ideas within any written works relies on the proper execution of critical thinking. While IDEALS can be discussed here as well, another method might be better suited to this task.

Felton & Herko (2004) developed PREP: “a *position* on a topic, one or more *reasons* to support that position, *explanation* for those reasons, and *proof* to support both the reasons and the explanation” (p. 878), to structure argumentative writing at this level. It can also be used as a standard checklist, offering a framework in which written paragraphs do or do not fit. Felton & Herko (2004) argue that PREP can also be used in a dialogic context, making it suitable for collaborative learning.

2.4.5 Using Collaborative Learning to Develop Academic Writing Skills

Bereiter & Scardamalia (1987) say that novice writers often employ what is known as the *knowledge-telling* strategy. This type of writing involves telling the reader what he or she knows, which uses the rules and conventions of conversations. Felton & Herko (2004) say that:

adolescents produce their strongest arguments in dialogic contexts because the very process of interactive argument requires them to supply argumentative elaborations to support and qualify their claims. However, in absence of prompting from their conversational partners, most adolescents are uncertain about how to construct a complete and elaborate argument. (p. 673)

Felton & Herko (2004) argue that “in this process, conversation is the starting place for writing because it is the context for exploring the structure of persuasive argument” (p. 674). They address that students need to be made aware of the two sides of an argument, which happens more naturally when two of them engage in discussion. Although not discussed by them, at this stage it is equally important for students to stay mindful of their own biases about the topic. By employing critical thinking, assessing their own biases, students are more

able to attain an open-minded disposition in their writing (Tanaka & Gilliland, 2017). Not only does this two-way discussion allow for more robust and impartial writing, it also “provides students with vocabulary and metacognitive awareness of their own verbal argumentative strategies as it sets the stage of strategically organizing ideas in writing” (Felton & Herko, 2004). It then follows that students must be guided to structure those ideas. Whether through PREP or IDEALS, “in this way, face-to-face argumentation provides a natural gateway to developing our students’ persuasive writing by enhancing their ability to examine their arguments in a competitive context” (Kuhn, Shaw, & Felton, 1997; Reznitskaya et al., 2001).

2.4.6 Design Principles for Developing Academic Writing Skills

The following design principles will inform the development of the proposed module, focusing on the roles of critical thinking and collaboration during the writing. An analysis of Horsmanshof & Brownie (2011) lead to the conclusion that the PREP (Felton & Herko, 2004) and IDEALS (Facione, 2007) could be used to apply critical thinking to the writing process. As for collaborative learning Kuhn, Shaw, & Felton (1997), well as Reznitskaya et al. (2001), provide an argument for developing academic writing in a dialogic context. It follows that in the context of an enrichment program for gifted students of upper secondary education:

- 1) an intervention that incorporates the use of critical thinking in the writing process is expected to play a role in the development of academic writing skills.
- 2) an intervention that encourages participants to develop arguments for persuasive writing in dialogic context is expected to provide the participants with vocabulary and metacognitive awareness of their verbal strategies as it sets the stage of strategically organizing ideas in writing.

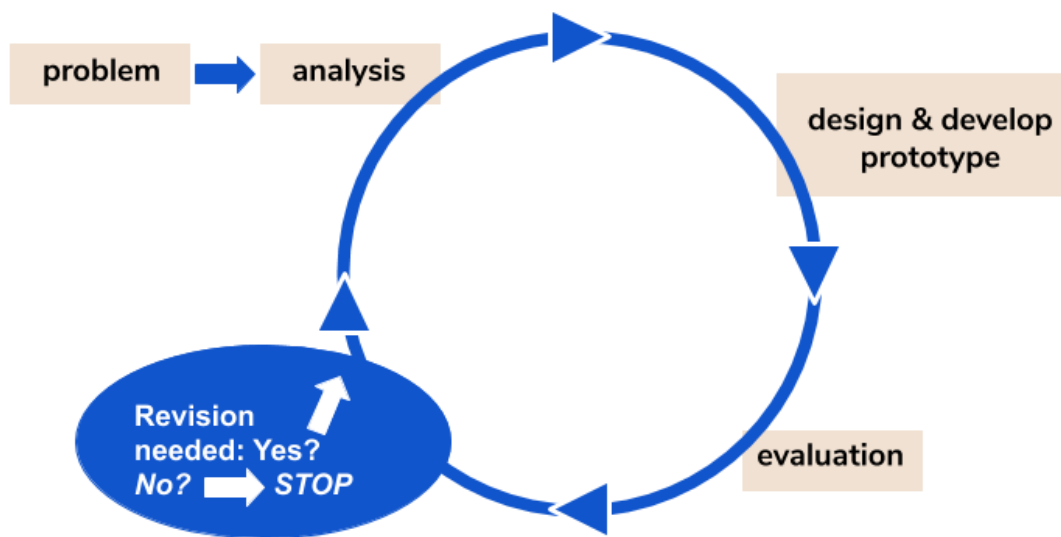
Both design principles are relevant to this study, connecting the concepts of critical thinking and collaborative learning to that of academic writing in an area also covered in Type II enrichment. In the end, both design principles tie all this study's concepts together. The first design principle informs the module by emphasizing that the writing process should be considered as a whole, that critical thinking skills can be applied to explore the stages related to doing research, planning, writing, and revision. The second design principle establishes the notion that preparation for persuasive writing is best done in dialogue and that the module should facilitate such a course of interaction.

3. Methodology

3.1 Design Research; An Informative Model

The structure of this study emerged from the contextual framework of educational design research (Van den Akker, Gravenmeijer, McKenney, & Nieveen, 2006; Plomp & Nieveen, 2013). The study itself may be further specified as a development study since its purpose was “to develop [a] research-based solution for [a] complex problem in education practice” (Plomp & Nieveen, 2013, p. 16). This study went through at least one full design cycle⁹, as illustrated in Figure 1.

Figure 1: Iterations of systematic design cycles (based on Plomp & Nieveen, 2013)



Due to scope limitations and time restrictions, this study primarily focused on the intended curriculum. To a narrower degree, it also covered the implemented -and attained curriculum (Plomp & Nieveen, 2013). See box 1 for an outline. The activities conducted during this

⁹ The initial prototype was evaluated and later revised after the gathered feedback was analyzed. Unfortunately, the second request for feedback yielded no additional information for an additional revision. The AA’s coordinator accepted the revised prototype as finished.

study have been briefly addressed in the paragraphs below box 1 and have been related to the curriculum types.

Box 1: Typology of curriculum representations (taken from van den Akker, 2003, in Plomp & Nieveen, 2013)¹⁰

INTENDED	Ideal	Vision (rationale of basic philosophy underlying a curriculum)
	Formal/Written	Intentions as specific in curriculum documents and/or materials
IMPLEMENTED	Perceived	Curriculum as interpreted by its users (especially teachers)
	Operational	Actual process of teaching and learning (also: curriculum-in-action)
ATTAINED	Experiential	Learning experiences as perceived by learners
	Learned	Resulting learning outcomes of learners.

Following the laid-out framework of design research above, this study conducted a context - and needs analysis to investigate the Alfa Academie's *intended curriculum*. Of this, the *formal/written curriculum* was investigated during the document analysis. The *ideal curriculum* was addressed by semi-structured interviews in the preliminary research phase. Furthermore, design principles were formulated, based on academic literature, to structure the development of the enrichment module.

Both the *perceived -and experiential curriculum* were investigated in post-participation interviews. Student-participants were asked about their experience, whether they thought they had become better at a specific skill, and teacher-participants, in addition to being prompted to comment on the *experiential curriculum*, were asked to discuss the implementability of the enrichment module. As for the *operational -and learned curriculum*,

¹⁰ For a more thorough explanation of this typology, see Plomp & Nieveen (2013), page 56.

both fall outside of the scope of this study. Furthermore, the study also lacked the necessary resources to measure them.

The following sections will discuss the measures employed to ensure this study's validity and will detail the participants and materials. The section on this study's procedure has been split into two. One discusses the implementation of theory on high-quality interventions. The other outlines how data was collected to answer this study's research questions. The last section of this chapter contains an overview of this study's progression, illustrating when participants were involved, materials were used, and activities were undertaken.

3.2 Procedure; Research Validity

3.2.2 Collecting Data for Research Questions

To answer its first research question, this study conducted a context -and needs analysis. Primarily, the needs and wishes of the stakeholders needed to be identified. In the context of this study, the coordinator of the Alfa Academie was considered to be the primary stakeholder. However, this study also aimed to be thorough in the analysis of available information, verifying whether the ideal and formal curriculum agreed with one another.

To answer its second, third, -and fourth research question, this study carried out a thorough analysis of literature. In all cases, research was first conducted to establish a theoretically-informed understanding of the concepts related to the research question. When finished, the study investigated ways of implementing theory on enrichment to structure its module. The study also analyzed means of developing critical thinking and academic writing, specifically in terms of executable strategies. After establishing the 'what' and the 'when', this study clarified the 'how'. Using relevant theory, this study formulated a set of thirteen design principles. These principles informed this study as to how it would implement theory.

Finally, interviews were carried out to verify whether the participants perceived the study to be effective in its efforts to make a module that met the Alfa Academie's requirements, as well as its development of academic skills. The section below provides a more detailed description of the approach outlined above¹¹.

3.2.1 Developing High-Quality Interventions

This research aimed to deliver an intervention of good quality, and in pursuing that goal it consulted Plomp and Nieveen (2013) for reference criteria. Based on Nieveen's (1999) prior work, the four criteria that this study strove to uphold were: relevance, consistency, practicality, and effectiveness. These criteria will be addressed independently of one another in separate paragraphs below. See Table 1 for the criteria and an execution overview.

Table 1: Criteria for high-quality interventions (based on Nieveen, 1990, in Plomp & Nieveen, 2013)¹²

Criterion	Explanation	Execution
Relevance (also referred to as content validity)	There is a need for the intervention and its design is based on state-of-the-art (scientific) knowledge.	- Context -and needs analysis - Use of recent literature
Consistency (also referred to as construct validity)	The intervention is 'logically' designed.	- Stakeholder guidelines - Literature-based design principles - Design research development cycles
Practicality	Expected	- Semi-structured interviews ¹³
	Actual	- Semi-structured interviews with teacher-participants with questions based on AA guidelines

¹¹ See section 3.5 for a visual representation of this study's process from start to finish.

¹² For a more thorough explanation of these criteria, see Plomp & Nieveen (2013), page 29.

¹³ These two actions were taken to maintain a high *consistency* and have no bearing on the *practicality*.

Effectiveness	<p>Expected</p> <ul style="list-style-type: none"> - Using the intervention is expected to result in the desired outcomes <p>Actual</p> <ul style="list-style-type: none"> - Using the intervention results in desired outcomes 	<ul style="list-style-type: none"> - Semi-structured interviews with teacher and student-participants with questions based on academic literature and design principles
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As previously explained, this study aimed to create an enrichment module for the Alfa Academie. Its *relevance*, therefore, stems from the Alfa Academie's need for enrichment materials with a humanities focus. Following the completion of the context -and needs analysis, this study arrived at four base requirements. By taking the needs and wishes of the primary stakeholder into account during the creation of the enrichment module, this study sought to be as *relevant* as possible. Furthermore, recent compilative academic sources (Subotnik et al., 2011; Tiruneh et al., 2014) were also consulted to ensure that up-to-date information was used in the creation of the enrichment module.

The *consistency* of the intervention was maintained by developing it according to the guidelines of a well-established research methodology. It was ensured by following the suggested development cycle for design research in Plomp & Nieveen (2013). The problem itself, a lack of systematic enrichment for well-performing humanities students, was analyzed during the preliminary research phase, followed by a context -and needs analysis. In combination with the research about academically applicable skills, which yielded a number of informative design principles, these efforts resulted in the creation of a prototype Alfa Academie module. The adherence to the primary stakeholder's needs, in combination with the implementation of carefully-established design principles, within the framework of a robust research methodology, ensured that the intervention remained consistent throughout its development cycle.

During the prototype phase, this study also maintained its *consistency*. The instructions that were given to the participants covered the main elements that were researched during the preliminary research stage. Student-participants were asked to keep the four core concepts of enrichment, critical thinking, collaborative learning, and academic writing in mind during their engagement with the module. The teacher-participants, in addition to analyzing the implementation of the four core concepts, were asked to assess the module's adherence to the Alfa Academie's requirements. These decisions were made deliberately, to allow for a more complete and precise line of inquiry during the evaluation phase.

The study made use of semi-structured interviews with open-ended questions during the evaluation stage to maintain high *consistency*. As addressed in Plomp & Nieveen (2013), it is considered a "rich data collection method" (p. 66) and useful as a tool to collect qualitative information. Such interviews are "superbly suited for a number of valuable tasks, particularly when more than a few of the open-ended questions require follow-up queries" (Adams, 2015, as cited in Newcomer, Hatry, & Howly, 2015). Furthermore, the interviews themselves were precluded by a short explanation of the study itself to ensure a level of comfortability beneficial to the progression of them (Stokking, 2016).

Once all of the interviews had been conducted, they were transcribed, analyzed, and coded for themes. This process was done using a mixture of open -and focused coding within the framework of grounded theory coding (Gubrium, 2012) and a step-by-step coding walkthrough (Löfgren, 2013). Throughout this, attention was paid equally to pre-selected themes¹⁴ as well as themes that arose more naturally throughout the coding process. Upon identification of a naturally-arisen theme, an effort was made to reanalyze previously-

¹⁴ Themes related to the four core elements of enrichment, critical thinking, collaborative learning, and academic writing.

analyzed interviews to account for possible initial oversight. This process yielded information relevant to the revision of the prototype and whether the participants' engagement resulted in the expected practicality and expected effectiveness.

Practicality and *effectiveness* were measured during the evaluation phase, using the semi-structured interviews discussed in the paragraph above. For both criteria, only the *expected* element was analyzed. Owing to limitations in scope, it was not possible to test for any *actual effectiveness* in skills such as critical thinking and academic writing, nor was it possible to assess the *actual practicality*.

Only the teacher-participants were interviewed with regards to the *expected practicality* of the intervention since they were more familiar with the Alfa Academie's requirements. The questions were meant to verify whether the prototype module had met the requirements set by the Alfa Academie and to establish expected usefulness of it. As for the *expected effectiveness*, both the student-participants and the teacher-participants were interviewed to verify whether the implementation of design principles would, in theory, aid in the development of academically applicable skills.

3.3 Participants

This study's participants consisted of the Alfa Academie's coordinator, one teacher of English, and four fifth-year vwo students at the Christelijk Lyceum Zeist. All participants were relevant to this study, in that they can be considered representative of future users. This choice was made deliberately, to bolster the *relevance* of this study. In addition to this, an expert in the field enrichment education, who teaches at the University of Utrecht, was consulted during development to assess the initial prototype. All students were between sixteen and eighteen years old at the time of their involvement in 2019-2020. The school, situated in Zeist, teaches students at a secondary education level. Of the students, two were

enrolled in the International Baccalaureate program offered by the school and study English at a higher level. The IB program aims to “develop inquiring, knowledgeable and caring people who help create a better and more peaceful world through intercultural understanding and respect” (International Baccalaureate, n.d.). Although this statement applies to all IB programs, it indicates towards what end two of the participants engage with English as a subject.

The selection process of student-participants was entrusted to the teacher of English, who selected the participants based on availability with permission of their respective teachers of English. This resulted in one duo, both males, who did IB English, and one duo, both males, who followed the regular fifth-year vwo curriculum for English. In doing so, the study accounted for the level of education and willingness to participate¹⁵.

3.4 Apparatus and Materials

The student-participants were given the full prototype enrichment module, a set of instructions to follow, and an informed consent form. These instructions, written in Dutch¹⁶, presented the participants with a brief introduction to the study itself, included theoretical information relevant to the module, and outlined the sample of assignments that the participants had to complete within a two-week timeframe. The assignments within the sample were chosen to represent one of the four main concepts of this study. Those concepts were: enrichment, critical thinking, collaborative learning, and academic writing. See Table 2 below for the categorization of assignments.

¹⁵ See section 3.5 for a visual overview of participant involvement per phase.

¹⁶ To prevent any confusion in understanding what was being asked of the students.

Table 2: Categorization of assignments and corresponding main concept

Main Concept	Corresponding assignment(s)
Enrichment	Part 1, assignment 1 and 3; Part 2, assignment 3 ¹⁷ <ul style="list-style-type: none"> - Exploration of a new topic (Type I enrichment) - Development of a perspective (Type II enrichment)
Critical Thinking	Part 1, assignment 3 <ul style="list-style-type: none"> - Utilization of critical thinking skills - Application of IDEALS
Collaborative Learning	Part 1, assignment 5 <ul style="list-style-type: none"> - Mutually coordinated engagement - Interdependence
Academic Writing	Part 1, assignment 3 and 5 <ul style="list-style-type: none"> - Developing arguments in a dialogic context - Utilization of critical thinking skills in the writing process

A copy of the instructions given to the student-participants can be found in the appendix, as can the informed consent forms. The teacher of English and the Alfa Academie's coordinator were also given the prototype of the enrichment module, a set of instructions, and an informed consent form. These instructions were similar to those received by the students but differed in what they asked. Both participants were asked to analyze the prototype module to assess its suitability for the Alfa Academie.

The entire prototype module consisted of three content parts, a foreword and a 'for your information' section, as well as a resource list at the end. The module was developed using this study's design principles and the Alfa Academie's requirements, which determined the module's overall structure as well as its conceptual approach. In slightly more detail, the foreword was written to introduce the module in terms of content and goals. The 'for your information' section was meant to present a more thorough exploration of the module's goals. The content of this section was set up using the theory explored in the theoretical foundation. Of the three parts, the first part was estimated to take five hours of collaborative engagement.

¹⁷ In the revised edition, the order of assignments has been altered slightly. Assignments 2 and 3, of Part 2, switched places during the redesign process.

The second and third part were estimated to take seven and a half hours of collaborative engagement. All of the assignments were purposefully developed for the module. This prototype was then printed and given to the participants three weeks before the interviews. A schematic overview of the module may be found in the results chapter. Appendix A contains the revised edition.

As established in an earlier section, semi-structured interviews with open-ended questions were developed to maintain high *consistency*. A student-interview consisted of twelve questions, three of which were optional. The teacher -and Alfa Academie coordinator- interviews consisted seven questions, one of which was optional. These interviews were conducted in the third week of participation, during the formative evaluation phase¹⁸. The participants' answers were summarized in separate anonymized documents¹⁹. These interviews were recorded using a Philips VoiceTracer recording device, transferred to an Apple laptop, and transcribed in separate Google Docs files. Colored markers were used during the coding process. These interviews were then printed, analyzed, and coded for themes using colored markers.

3.5 Visual Overview of the Study's Procedure

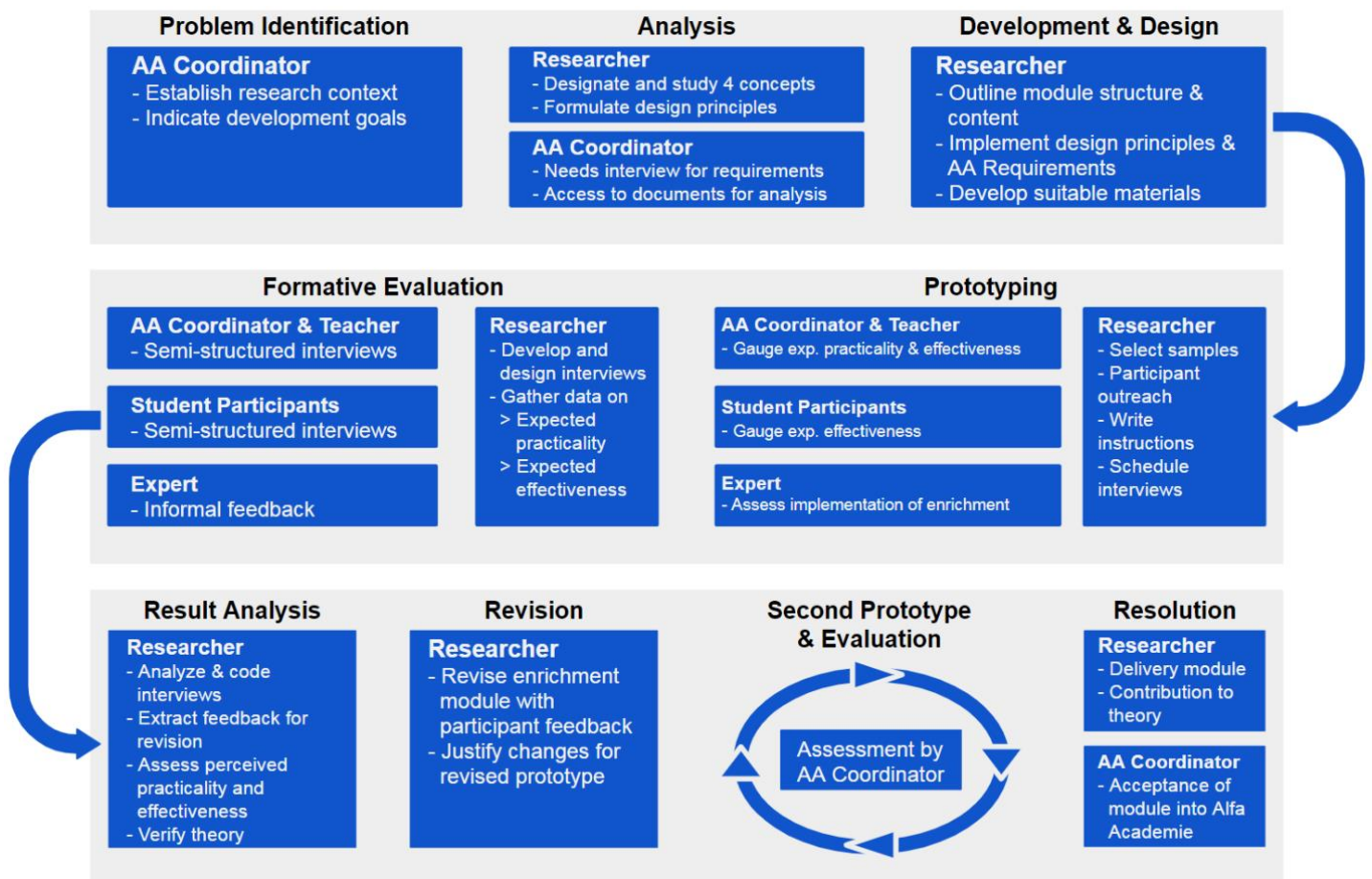
This study was conceptually set up in late 2018 and formally started in early 2019. The preliminary research phase, which encompasses the problem identification and analysis phase in Figure 2 below, lasted until late September, 2019. The design and development phase commenced soon after and the first prototype phase started in the last week of November, 2019. The formative evaluation took place in the first week, during which the expert was consulted, and second week of December, 2019, when the rest of the participants were

¹⁸ See section 3.5 below for a visual overview of when the interviews took place.

¹⁹ Refer to appendix K for a copy of the student version of the interview questions and refer to appendix L for the teacher version of the interview questions.

interviewed. The result analysis and revision took place in the first four months of 2020, resulting in a revised enrichment module at the end of April, 2020. The second prototype - and evaluation commenced around the same time and concluded in the first week of May, 2020, when the Alfa Academie’s coordinator green-lit and accepted the module. See Figure 2 for a visual overview of this study’s procedure.

Figure 2: Display of the firearms-enrichment study in phases



The figure above illustrates when each participant was involved during the separate phases of this study, or when the data produced by them was analyzed by the researcher. In total, this study took a year and a half from start to finish.

4. Results

The results chapter has been structured into five sections. The first section indicates which requirements were formulated after a context -and needs analysis. The second details the proposed implementation of this study's design principles. The third describes this study's actual implementation of design principles, by means of a schematic overview. The fourth presents the post-participation interview data. Lastly, the fifth section discusses which of the prototype's elements were altered after the analysis and incorporation of feedback. These efforts lead to the revised module in appendix A and the annotated revised module in appendix C.

4.1 Context -and Needs Analysis

Prior to its commencement, this study's researcher attended a walk-in meeting about the intended set up of the Alfa Academie. This meeting took place in 2018. Using a PowerPoint, the Alfa Academie's coordinator explained that the program was set up for the following reasons:

- To counteract the dwindling number of students that picked C&M.
- To cast light on the misconception that the field of humanities cannot be approached scientifically.
- To offer enrichment in the form of modules to students who excel at languages, history, or other culture-related subjects.

Following this presentation, the main stakeholder was approached regarding the desirability of a dissertation study that intended to develop an enrichment module for the Alfa Academie. Upon confirmation, this study commenced. For its context -and needs analysis, this study

conducted a document analysis and made use of semi-structured interviews. The document analysis was conducted first. The interviews followed later.

In agreement with the primary stakeholder, access was given to the Google Drive folder of the Alfa Academie to facilitate the document analysis. In it were the promotional PowerPoint, a PowerPoint on creating a suitable Academie module, and various other files. The primary stakeholder affirmed that this Drive folder contained the documents relevant to this study's document analysis (Personal communication, 2019). Especially the first and the second document contained valuable information. The promotional PowerPoint yielded the following information in terms of needs and wishes:

- The module should take 20 slU of the students' time²⁰.
- A clearly described final product has to flow from it, preferably with a creative angle, which has to be presented to an audience.
- The module has to be enriching.

In this document, the Alfa Academie's coordinator stated that the program's purpose was "to make clear that alfa and bèta are two sides of the same coin"²¹ (Berg, 2018). The same point of view was reiterated by the Alfa Academie's coordinator during a semi-structured interview. In addition to the information stated above, the first document also referred to a second document, specifically to the Bèta Academie's model for creating Academie modules. This second document, another PowerPoint, stated that:

²⁰ SLU indicates the number of hours a student, with 1 slU encompassing 60 minutes.

²¹ This statement was translated from Dutch into English.

- After the initial start-up, students have to be able to engage with the module independently of a teacher. (De Vries, 2018).

This information was also corroborated during one of the interviews. This need, however, did introduce a complication, which was addressed using mitigating strategies²².

In the semi-structured interviews that followed the document analysis, both the ideal - and formal curriculum were addressed. All of the requirements stated in the formal curriculum were verified, without particular emphasis on any individual need. Questions relating to the ideal curriculum were answered in a way that made it clear that the CLZ Academies allow interested and able-bodied students to work on subject-related modules, opening their doors for academically-minded students.

The primary stakeholder explained that the program itself could be divided into an Alfa (humanities) and a Bèta (sciences) part, each catering to a different set of students. As a whole, the Academies are available to fifth havo (pre-college) and fifth -and sixth-year vwo (pre-university) students who have proven to excel within their regular curriculum. According to the primary stakeholder, a more open point of view needed to be adopted regarding talent development; the humanities were as important as the sciences.

4.2 Proposed Implementation of Design Principles

The literature analysis, detailed in the theoretical framework of this paper, was conducted to investigate teaching methods and other strategies for developing specific academically applicable skills. Design principles were set up as a result. In the four sections below, the proposed implementation of the design principles will be discussed. The appendix will

²² This complication has been addressed in section 4.2.2 (critical thinking)

contain an annotated version of the final enrichment module, illustrating how the principles have been implemented.

4.2.1 Enrichment

The proposed module may be considered enriching so long as it extends and supplements the curriculum of the students that it is intended for and if it includes topics that are otherwise not covered in that curriculum (Subotnik et al., 2011). During the preliminary research stage, term planners of year five -and six vwo were collected. In term 1, fifth-year vwo students engage with literature, do presentations, and work on units from *New Headway: Advanced* teaching materials. The elements covered in this planner relate to language-skill practice, such as reading and speaking, and the acquisition of grammatical knowledge. Sixth-year vwo students similarly engage with English, with more emphasis on preparation for the national exams.

The enrichment module itself, as well as the assignments and materials within it, will only contain the target language. Students will read instructions in English, watch videos wherein the persons appearing are native speakers of English, and are to conduct their speaking and writing in English. At its core, the module extends the curriculum of the students by taking the notion of language acquisition through skill practice as a constant. Students will only encounter English as they progress through the module, with one notable exception. To make a connection between the content covered by the module and the students' own frame of reference, they will be asked to look at a firearms-related incident in the Netherlands. This point leads to the supplementation of the curriculum, as well as the inclusion of a topic that is otherwise not covered in it.

Instead of working with *New Headway: Advanced*, which presents students with materials specifically prepared for pedagogical purposes, the participants are exposed to a wealth and variety of authentic materials, which makes the language input as rich as possible

(Doughty & Long, 2008). In addition to this, the materials in the module, considered to be authentic because they reflect real-world language use (Richards, 2001), will be in service of introducing the participants to a topic that is not covered in their curriculum.

The topics of firearms violence and the discussion of firearms ownership, by citizens of the United States, will be addressed within the module. These are real-world issues foreign to the lives of most Dutch students and will be approached in an open-minded manner by the module. The focus on real-world issues is twofold.

First, by positioning the real-world problem of firearms violence at its center, this module will create a framework for learning content and processes in a way that is meaningful and enjoyable (Renzulli, 2014). The module's connection to a real-world problem will make the engagement with it more tangible for the participants. The participants will learn about such content by exploring survivor accounts, by conducting literature research, and by investigating measures introduced to curb firearms violence. Processes, too, will be covered by the module, as participants will be asked to engage in thinking critically and to produce written works to develop their academic writing skills. The design principles governing the implementation of critical thinking and academic writing will be elaborated upon in the sections below.

Secondly, one has to consider the bias involved in the discussion of the topic. By maintaining an unbiased and open-minded approach, in terms of first exposure and follow-up, the module will better allow for type I enrichment, in that it introduces participants to a plethora of novel content. This is similar for type II enrichment, as the module will promote the development of thinking and feeling processes. The intention of type I enrichment is, as mentioned, to offer an introduction. Whether it is the passing of bills in parliament, NRA members both in favor of and against intensified regulations, or the coverage of mass shootings in the media, the module will expose students to various topics, persons, places,

and events. From the onset of interaction and up until the final assignment, the module will be designed to continuously expose the participants to new information. However, this introductory nature will feature more prominently at the beginning.

Type II enrichment will feature in three separate stages. Taking thinking processes as an example, in the beginning, students will be asked to think critically by using a grid or through guiding questions. After this, critical thinking will be approached more implicitly. Tasks will be presented that ask students to gather and interpret information individually, after which they will be asked to compare and discuss. Such tasks require the application of critical thinking skills without directly referring to them. During the last stage, students will simply be reminded of the existence checklist and encouraged to make use of it.

4.2.2 Critical Thinking

Students who opt to take part in the Academie's program are allowed to 'miss' two self-designated lessons per week, during which they work on an enrichment module independently. In this specific case, two conflicting points of information have to be considered. First, strategies that take a direct approach to teaching critical thinking skills outperform indirect strategies in terms of effectiveness. Direct strategies are better at improving a student's critical thinking. As stated in the theoretical foundation, such direct strategies often "employed explicit explanation of CT procedures at the early phase of instruction followed by a set of instructional activities" (Tiruneh et al., 2014). In most cases, such direct strategies relied on a teacher to take a leading role in modeling the application of critical thinking skills. Secondly, students who partake in the enrichment offered by the Alfa Academie do so without the direct supervision and support of a teacher. Seemingly, this situation proves to be paradoxical.

The measures that will be taken to mitigate the absence of a teacher attempt to recreate the semblance of the direct strategies to teaching critical thinking in three distinct

ways. Firstly, before starting the first assignments of the enrichment module, students will be required to read through a foreword and a list of educational goals to prime them. In it, the topic of critical thinking will be explained briefly. The IDEALS checklist (Facione, 2007) will feature in the module to support the explicit explanation. To promote the development of critical thinking, the module will provide participants with opportunities to apply the freshly installed information right after they have gained it.

To reiterate, when a person engages in critical thinking, they utilize a set of skills to analyze, evaluate, synthesize and solve problems (Kennedy et al., 1991; Scriven & Paul, 2007; Stassen et al., 2011, Tiruneh et al., 2014). The critical thinking skills will feature throughout the module interspersed. Although meant as a means of directing one's critical thinking process, the IDEALS (Facione, 2007) checklist can be utilized as a tool to dissect the argumentative structure of sources that are meant to persuade an audience. Participants can, for example, identify the problem at the core of a documentary and define the context of that problem. Should such sources bring forward arguments on how to fix the problem defined within them, participants will be able to enumerate the options presented to them and analyze which option is considered best. Simply, each sub-skill will feature in some way. Students will be asked to analyze sources, evaluate opinions held by others and themselves, and will undertake attempts at synthesizing solutions to complex problems.

4.2.3 Collaborative Learning

In implementing the design principles on collaborative learning, the module will, first and foremost, take to heart the advice that it should provide activities that suitably facilitate small-group interaction focused on a learning activity (Davidson, 1994). An example of a task that actualizes this advice can be structured in the following way. An assignment focusing on the application of critical thinking skills could ask participants to analyze a clause from the second amendment together to facilitate the creation of a collective

interpretation. Each participant has their frame of reference and relies on the active participation of the other to be able to complete the task successfully. Such an assignment facilitates small-group interaction.

Individual responsibility and accountability play a role in such an assignment too, because a collaborative effort leads to a more robust understanding. These elements play a role in a slightly different task as well. Participants could, for example, be asked to individually place themselves in the debate concerning firearms ownership. A follow-up element in the task could ask students to compare their answers. Each participant is responsible for their individual sub-task in the successful completion of the assignment. Each student can be held accountable if they did not uphold their end of the bargain. In such cases, participants are interdependent, in that they rely on one another during the progression through the enrichment module.

4.2.4 Academic Writing

Two levels and two stages have been identified where it is possible to incorporate critical thinking in a way that promotes the development of academic writing skills. The IDEALS (Facione, 2007) and PREP (Felton & Herko, 2004) checklists will be incorporated into the module as a way to implement critical thinking at their respective levels and stages. IDEALS and its constituent parts will be applied to pre-writing activities. Students will be asked to critically respond to the materials they are presented with. Through enumeration and analysis, the students will organize their thoughts in shorter pieces of writing. PREP will then take over, presenting itself as a guideline to organize the previously jostled down notes into coherent and cohesive response paragraphs.

To be clear, through their IDEALS, students will be able to take flight and collect and organize information from a higher perspective. When students continue with PREP, they can use that information on a per-paragraph level. Furthermore, considering that the module will

need to contain a final assignment, participants will be circled back to the existence of those checklists, after having gone through the steps of IDEALS and PREP more implicitly, in a way that reiterates the importance of working within the frameworks offered by them.

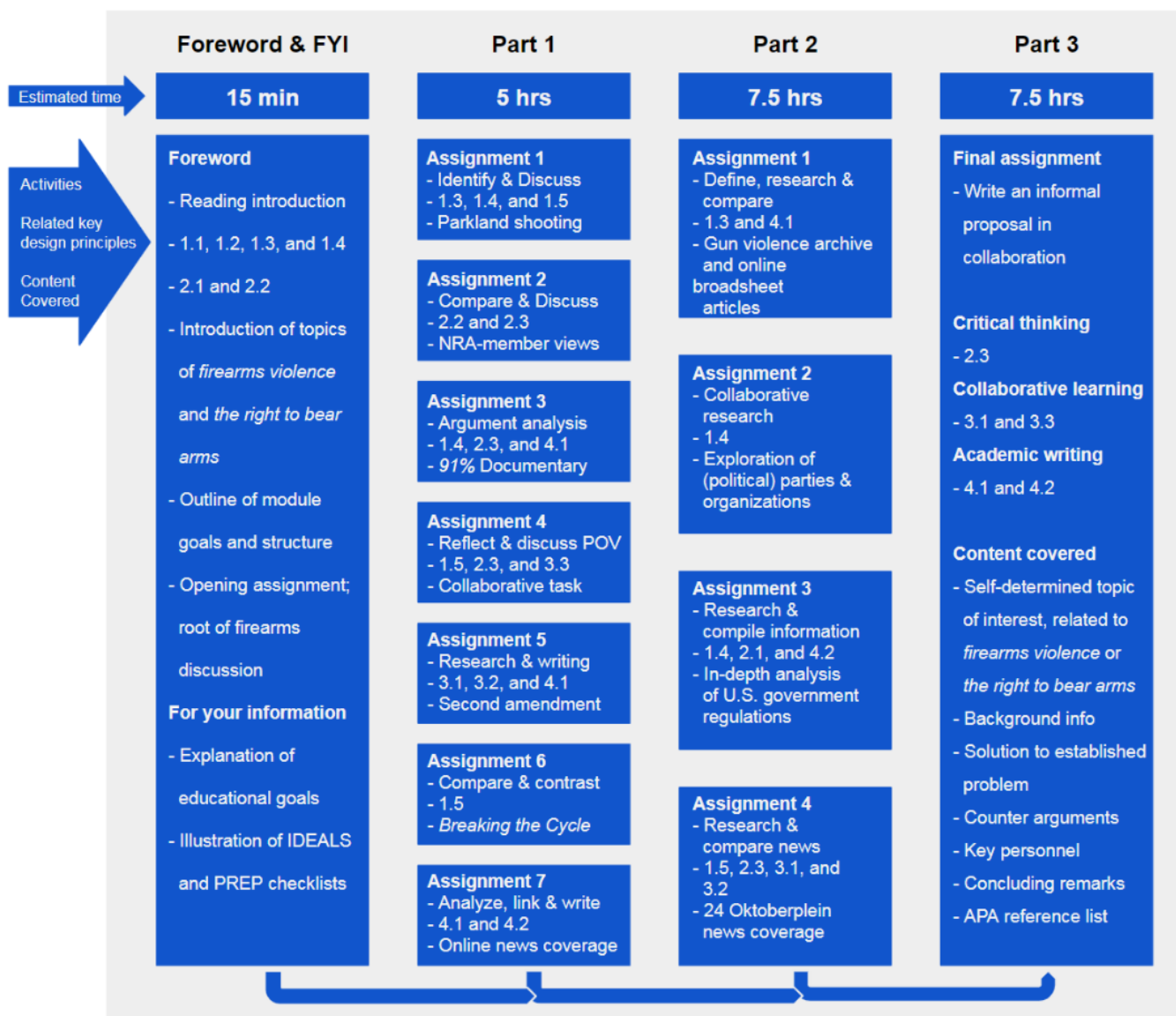
As discussed in the previous section on collaborative learning, students will work on the assignments in a way that engages them in a mutually-dependent manner. The module will frequently ask students to compare their own arguments with one another and will ask them to position themselves in the shoes of others to make them actively step outside of a possible echo chamber of arguments. Not only will they develop their own arguments in this way, they will also address arguments that someone on the other side of the fence might use. In the end, the module will want its participants to interact at all times. Whether it is in response to a source or during a discussion with their partner, participants will be engaged in dialogue where possible. By doing this, in combination with allowing for moments of self-reflection, students become more aware of their verbal strategies, of how they rationalize their position.

4.3 Actual Implementation of Requirements and Main Concepts

Figure 3 below visualizes the implementation of the Alfa Academie's requirements and the four main concepts. It states the module's formal goals and summarizes the module's formal elements. It also schematically illustrates the types of activities, key design principles, and content covered per content part of the module.

Figure 3: Schematic overview of the firearms enrichment module

Formal Module Goals	Summary of Formal Elements	
<ul style="list-style-type: none"> ▣ To develop the academically applicable skills of Critical Thinking and Academic Writing ▣ To provide students with an Enriching experience ▣ To allow students to work in Collaboration 	<ul style="list-style-type: none"> ▣ 20 hrs to complete ▣ 12 individual tasks ▣ No teacher required 	<ul style="list-style-type: none"> ▣ 100% collaborative engagement ▣ Enriching content ▣ Skill development



The schematic overview above was constructed to provide for a more systematic and interpretive reading of the participant evaluation below. In its discussion of results relating to enrichment, for example, this study referred to Type I and II. Each of these Types has been linked to a design-principle code, **1.4** and **1.5** respectively. At a glance, using the schematic overview, it is clear that the module has implemented Type I (**1.4**) and II (**1.5**) throughout most of Part 1 and 2. Readers are encouraged to refer to the revised enrichment module in appendix A and the categorized list of design principles in appendix B when reading and analyzing the results below.

4.4 Evaluation of Requirements and Main Concepts

The evaluation process served to provide the bulk of information needed to improve on the initial prototype. During this stage, interviews were held to gather important feedback. This information was then transcribed and analyzed. The main focus was to describe what the participants experienced, valued, criticized, and recognized in relation to the four main concepts. Where relevant, this information has been related to the four research questions of this study as well as the design principles. Where possible, this information has also been related to the 9 themes that were identified during the analysis of the interviews. See box 2 below:

Box 2: Identified themes of evaluation interviews²³

Pre-selected Themes		Naturally-arisen Themes	
Enrichment		Challenging Engagement	
Critical Thinking		Freedom of Choice	
Benefits of Collaboration		(Media) Bias and Manipulation	
Open-mindedness		Educational Value	
Academic Writing			

Of the pre-selected themes, four correspond with the main concepts. Though pre-selected as a theme for analysis, circumstances prevented a thorough investigation of *academic writing*. Due to a sudden change in their timetables, two of the student-participants were not able to engage with the fifth assignment of Part 1. However, enough useful feedback was gathered to analyze the participants' perception of the *expected effectiveness* regarding *academic writing*. While it will be discussed in detail in section 4.4.5, it should also be said that the sample of

²³ The color left of each theme corresponds to the color of the marker used to highlight the themes in the transcribed interviews. See appendix G for the teacher sample and H for a student sample.

the prototype did not include *academic writing* as clearly as it could have. Throughout the results section, all themes will be *italicized* whenever they are brought up.

4.4.1 Alfa Academie Requirements

When prompted to respond to the prototype's implementation of the Alfa Academie's requirements, both the teacher-participant and the Alfa Academie's coordinator responded similarly. Uncertainty was expressed regarding the size of the prototype. They could only guess at the total number of engagement hours and could not verify if future students would need 20 hours to complete the enrichment module. The teacher-participant stated that the final assignment was clear, detailing that it was the culmination of the thought processes behind the module (Participant 5). The Alfa Academie's coordinator indicated that the final assignment was rather closed, as opposed to the rest of the prototype's assignments, and asked whether it fit this study's goals. Of these two participants, only the teacher indicated that the prototype allowed student-participants to work independently of them. No elaboration was offered. Of the two, only the teacher-participant gave examples in response to the question regarding the enriching nature of the prototype module, though both were positive in their responses. The teacher-participant's statement has been addressed in the section on enrichment below.

4.4.2 Enrichment

Enrichment itself was implemented using the Type I and Type II division. Concerning Type I enrichment, all student-participants expressed they positively experienced the exposure to new information about a topic otherwise unfamiliar to them. One student-participant, in particular, declared their interest in politics, commenting that:

Yeah, anyway, I'm already interested in the subject. Keep myself busy with American politics. I find it quite, I find the system quite fascinating, but, yeah, anyway, it is

something completely different next to our classes. It is not like we ever pay attention to this in them. (Participant 1)²⁴

Other student-participants added to this that the engagement with the sample was more enriching and challenging than their regular English lessons (Participant 3; Participant 4) or that such a subject was uncommon to the Netherlands (Participant 2).

In terms of value statements, two naturally-arisen themes can be applied. Firstly, student-participants often made statements in favor of the assignments' *educational value*, stating they came to the realization the problem of firearms violence could not be addressed by placing a ban on all firearms (Participant 4) or that the use of videos made them realize that the scale of the problem was larger than initially imagined (Participant 2). Although they did not refer to it by name, students recognized Type I enrichment, commenting on the informative and exploratory nature of the module. The second naturally-arisen theme is that of *freedom of choice*. In their discussion of *enrichment*, the teacher-participant commented on the open approach of the enrichment module, stating that:

I think that the open-minded point of view within it is especially enriching ... allowing the students some freedom in that way. If you finish this module, you can end with a product that is pro second amendment and that feels, especially regarding the target audience, boys from 5 vwo, who often feel restricted in terms of the subject matter. 'I have to do what the teacher thinks, I have to follow the teacher's example.' That is what I think this is strong in. This, where they end, is a collection of their thoughts and ideas. (Participant 5)

What the teacher-participant addresses in this is the common role of the teacher as a 'sage on the stage' in traditional education, in that students must follow their teacher's example. The

²⁴ These quotations have been translated from Dutch to English. See appendix G and H for untranslated transcribed samples of the interviews.

teacher-participant added to this that, when the student-participants reported back at the end of each lesson, they valued the *freedom of choice*. The student participants themselves mostly addressed this topic via *open-mindedness*, expressing appreciation towards the enrichment module in its provision of sources representing both sides of the argument, that it remained neutral in its approach to the discussion, and that they were able to explore their own thoughts and opinions. This last example recognizes Type II enrichment.

Several student-participants did express criticism. While the module itself remained neutral, it lacked in terms of providing a clear exploration of the issue at hand and did not represent enough voices in favor of firearms ownership. Furthermore, the lack of representation of voices in favor of firearms ownership, even though sources were selected to represent each side equally, was due to their representation in the chosen sources. Student-participants stated that interviewers allowed pro-rights voices to be cut off and interrupted by other speakers, or that the videos themselves were edited to make arguments made by pro-rights voices appear less strong (Participant 3; Participant 4).

Overall, all participants were clear about the implementation of enrichment, expressing themselves positively. Although not stated explicitly by the student-participants, their enjoyment can be linked to the framing of their learning within the context of a real-world problem. In doing so, they subconsciously recognized one of the design principles related to enrichment.

4.4.3 Critical Thinking

The participants expressed themselves positively towards critical thinking and mostly did so by referring to the IDEALS checklist and their critical awareness of (*media*) *bias and manipulation*. Three out of four student-participants criticized the sources' inclination to manipulate their viewers, explaining that the editing in one of the videos of Part 1 was skewed towards pro-regulation speakers (Participant 3) and that the documentary attempted

to pull at its audience's heartstrings to garner sympathy for its cause (Participant 1). Two reasons may be given for these statements. First, the third assignment in Part 1 included a statement that warned the participants about persuasion techniques. This statement was included on purpose and intended to prime the student-participants before engaging them in critical thinking. Secondly, students might already have been aware of *(media) bias and manipulation* before engaging with the sample, owing to their daily interaction with social media. When pressed to explain their critical stance on *(media) bias and manipulation*, one student-participant explained that they would likely have recognized this a few minutes into Part 1, assignment 3's documentary, stating:

I think I would have found out within a few minutes that it was this way, but you do kind of go into it with the sense of 'okay'. You know what to expect of it. So, the moment you see that, Sandy Hook or another similar incident, those will probably come up ... that you should not take to heart what you are served, but you should form an opinion of your own. (Participant 1).

Several student-participants linked their awareness of *(media) bias and manipulation* to the adoption of a more critical disposition. As a result of their engagement with the third assignment of Part 1, they started to think more critically. In more than one instance, student-participants referred to the application of the skills in the IDEALS checklist. Especially the concluding check provided by the self-correct, recognized by participants as an instance for self-reflection (Participant 5; Participant 2), proved to be valuable. The teacher-participant explained the enrichment module did the job of teaching for critical thinking quite well, stating that one of the assignments captured the essence of it:

... and at the end you give them a choice: 'think about it for yourself and why'. To me, that is the essence of critical thinking. I look at a source or video, I ask myself some questions about that, and then I evaluate if my opinion has changed or not and

why, and if think about it differently now, and that is what this project ends up doing as well. (Participant 5)

In this, the teacher-participants recognized the overall structure of the enrichment module itself. Source materials are presented to -and assessed by students. Intermittent checks are incorporated to encourage self-reflection and the final assignment tasks the students to position themselves based on the evidence they have gathered.

All participants responded positively to the question of the module's *expected effectiveness* in terms of developing critical thinking, referring mainly to the IDEALS checklist through statements about *educational value*, *open-mindedness*, and awareness of *(media) bias and manipulation*. The teacher-participant, while expressing it would be difficult to measure any actual improvement, recognized the checklist as a means of structuring the application of critical thinking skills, and spoke in favor of the warning concerning *(media) bias and manipulation*. In one of their statements, the teacher-participant also recognized the implementation of the direct-teaching-strategy design principle:

... and I believe you name them in the FYI, keep your IDEALS in mind, and at some point in the third assignment they are actually forced to do that, to make such a stopover, and that are some of the things that I think are stronger here than in class, [where] in the last five minutes you ask 'well, what do you think of this? Yeah, nice. Okay, good'. (Participant 5)

Aside from the comments about the sources that engaged in *(media) bias and manipulation*, no criticism was offered about the implementation of critical thinking. The teacher-participant appreciated the efforts to point out *(media) bias and manipulation*, a statement with bearing on collaborative learning as well, and noticed the *educational value* of the assignments in terms of critical thinking development. Student-participants, too, understood the *educational value*, specifically indicating the module *open-minded* approach as pleasant

when it came to exploring both sides involved in the discussion. One of the student-participants stated they read the YouTube comment section of the documentary, included in the third assignment of Part 1 because the opinions of the audience would not have been censored or filtered and therefore allowed for a more thorough exploration of the documentary itself, suggesting an active stance to the gathering of additional information (Participant 4).

4.4.4 Collaborative Learning

When asked to respond to the matter of collaborative learning, more specifically the influence of collaboration on the completion of the assignments included in the sample, the participants discussed *benefits of collaboration* in light of *critical thinking*, *open-mindedness*, and *educational value*. To a lesser degree, the student-participants also mentioned *challenging engagement* and *freedom of choice*.

To start, the teacher-participant spoke in favor of Part 2's structure of assignment 1, specifically referring to 1C and 1D²⁵. This assignment requires students to individually research the media coverage of a mass-shooting incident to compare the coverage to that of their partner's incident later on. The teacher-participant stated:

I think that, if you do not divide the tasks but do the same task together, that that can have a tremendous amount of influence, as in, that students who have the freedom to form their own opinion here ... hopefully, at those assignments where the comparison, will not be confirmed in their own worldview, their own filter bubble, but come into contact with someone who is positioned on the other side. (Participant 5)

²⁵ This assignment was not included in the sample given to the student-participants. While they were given the full prototype, they were not tasked to complete Part 2, assignment 1. This assignment was, however, up for review in the hands of the teacher-participant.

In their statement, the teacher-participant expressed excitement towards the possibility of having two students with opposing views, especially with regards to the prevention of echo-chamber discussion. This *benefit of collaboration*, of furthering a discussion and developing a more robust point of view due to collaborative efforts, was also present in the statements made by the student-participants (Participant 1; Participant 2; Participant 4). One student-participant's answer illustrates this benefit as well, stating that:

Yeah, yeah, it is just working together really. It is nice and you complement each other a little bit ... but it does add something I think. Because, maybe you go into this thing with an opinion beforehand, and if you have someone who challenges that, it helps to create that open-minded point of view again. (Participant 1)

Other *benefits of collaboration* mentioned by student-participants were those of workload-division, continuous active engagement, and the coordination of strengths in overcoming challenges. When asked to describe their collaboration with participant 1, focusing on the fifth assignment of Part 1, participant 2 disclosed their unfamiliarity with the American legal system, stating that:

... helping each other looking up the amendments that you need, or sometimes, if you did not quite understand an amendment, because I do not know a lot about American regulations or how laws are established, I found that quite difficult to understand, and if you work together you can find that out together. (Participant 2)

Earlier, in their response regarding enrichment, participant 1 expressed familiarity with American politics. Participant 2 was able to overcome the challenge posed by the fifth assignment of Part 1, the *benefit of collaboration* increasing the accessibility of previously-unavailable information, indicating that the module engaged these two student-participants in a mutually coordinated fashion. Although not explicitly, they also recognized the implementation of collaborative learning's first and third design principle.

4.4.5 Academic Writing

Questions asking after the implementation of academic writing were met with constructive criticism. The student-participants addressed an oversight, indicating that the sample did not explicitly cover academic writing. The teacher-participant and the Alfa Academie's coordinator, who analyzed the entirety of the prototype module, stated that the enrichment module was inadequate in its structural implementation of academic writing skill practice.

All student-participants indicated that, based on the experience with the sample, their engagement unlikely resulted in *expected effectiveness* in terms of academic writing skill development. While no student-participant expressed a regression, they were hesitant in expressing their experience, illustrated by examples such as "I did not really have the feeling that I got ahead at this" (Participant 2), "Yeah, I cannot really talk about the entire module. Maybe you have to write an essay somewhere or something, but ..." (Participant 1), and "I do not know if it is due to the fact that we did not do all the questions, but I did not have the feeling that it really developed academic writing" (Participant 3). Student-participants found the writing assignment simple in nature and expected a more structured approach, for a technique to be taught.

The teacher-participant, as well as the Alfa Academie's coordinator, stated that, while students would practice with academic writing skills when engaging with the enrichment module's contents, the PREP checklist could have been implemented more thoroughly throughout it. Effectively, these comments address the perceived lack of structural engagement indicated by the students.

One student-participant, however, did point out that the IDEALS checklist could be applied to academic writing, stating that "I had never seen that IDEALS checklist before, so I learned about that, because that is quite a different process, that you first write something down and then elaborate on it later" (Participant 3). Unknowingly, the student-participant

recognized the design principles related to the use of critical thinking skills in the writing process. In addition to this, the teacher-participant recognized the worth of PREP, stressing that it functioned similarly to the PEEL (Point Example Explanation Link) strategy, but did so more effectively. Overall, however, the addressal of academic writing was met with constructive criticism.

4.5 Revision of the Enrichment Module

Adjustments to the prototype, after the analysis of feedback, were made in several areas. Constructive criticism addressed the lack of a structural approach to teaching academic writing skills. Secondly, student-participants noted the absence of a comprehensive introduction to the topic of firearms violence and the discussion surrounding the ownership of firearms. Thirdly, owing to *(media) bias and manipulation*, student-participants requested an additional source in which the main voice was in favor of gun rights. Lastly, although not mentioned by any of the participants, this study's main researcher concluded that the prototype module was not complete enough in mitigating the lack of a teacher in its attempt to implement a teacherless direct strategy to teaching critical thinking.

Starting with PREP, an effort was made to incorporate it earlier on in the enrichment module. Assignment 5C, of Part 1, now instructs future users of the module to make use of the PREP method to structure their writing, closing the gap between it and assignment 1D, of Part 2, which also instructs future users to make use of the PREP method.

Next, the starting question in the foreword section of the prototype module was replaced with a more-clearly indicated opening assignment. This assignment addresses the previous lack of a comprehensive introduction to the topic.

Further, the second video source of assignment 1, of Part 1, was replaced with a source in which the main voice speaks up for gun rights. The previous video source was the

subject of criticism, with two of the student-participants referring to it as an example of *(media) bias and manipulation*.

Last, to better mitigate the absence of a teacher an additional line has been included in the ‘for your information’ section because the teacher’s modeling of critical thinking skill application was still absent in the module. This line instructs future users to refer to the resource list of the enrichment module, a list in which two additional video links have been incorporated. These links redirect future users to two YouTube videos, in which the concept of critical thinking is explained, and the application of critical thinking skills is modeled.

5. Discussion, Conclusion, and Limitations

5.1 Key Findings in Light of the Research Questions

5.1.1 Sub-Question 1: Alfa Academie Requirements

The first sub-question investigated the needs of the main stakeholder, to ensure the enrichment module's future *practicality* within the school's program. This question was:

What are the requirements that need to be met by a module for it to be considered an appropriate addition to the Alfa Academie program?

During the preliminary research stage, the document analysis and interviews resulted in the establishment of four requirements²⁶.

The generally positive findings from the interviews indicate that the module was considered enriching, with participants unknowingly recognizing several of the design principles linked to enrichment itself. While the teacher-participant underlined that the student-participants were able to work independently of them during the testing phase, it was not clear whether it would take future users twenty hours to complete. One point of contention was the final assignment. Although opinions differed between the Alfa Academie's coordinator and the teacher-participant, both agreed it was clearly described.

²⁶ These were: 1) The module needed to be enriching, 2) should take students 20 hours to complete, 3) needed a clearly described final product to flow from it, and 4) could be engaged with independently of a teacher.

5.1.2 Sub-Question 2: Characteristics and Implementation of Enrichment

The second sub-question built on the first sub-question, investigating the concept of enrichment and methods of implementing it, to ensure that the final product was academically-informed. This question was:

What are the characteristics of activities that are considered enriching and how will enrichment be implemented in the creation of an Alfa Academie module?

Overall, the results indicated a positive experience with the samples. Key to this were the responses of the participants, stating that the topic was not covered in any of the school subjects. These results are in line with this study's working definition of enrichment, in that it "includes topics that are not typically covered in the curriculum" (Subotnik et al., 2011). As for the extension and supplementation of the curriculum, while not recognized by the student-participants in their answers, the Alfa Academie program serves this role by offering enriching engagement in a way that supplements the students' regular curriculum.

Furthermore, this study built on Renzulli's (2014) approach to enrichment by incorporating Type I and Type II enrichment within the module itself. As covered in the proposed implementation section on enrichment, Type I enrichment would be most prominent at the beginning of the module to expose students to a wide variety of novel content (Renzulli, 2014, p. 545). This sentiment is in line with the participants' experiences, who, by making statements about *educational value*, expressed themselves about the acquisition of hitherto unknown information. Type II enrichment was acknowledged by the teacher-participant, who stated that the final product produced by the students would be a collection of their thoughts and opinions. Linking this to the theory, wherein Type II enrichment is explained to promote the thinking and feeling processes of students (Renzulli,

2014, p. 546), the students deliver their final product informed by the constant exploration of their thoughts and feelings. In this, they valued the *freedom of choice*. To answer the second part of the sub-question, the participants recognized that Type I and Type II enrichment were used to structure the engagement with the module.

5.1.3 Sub-Question 3: Development and Implementation of Critical Thinking

The third sub-question investigated the methods for teaching and developing critical thinking skills. This approach had to be effective in terms of results and had to fit the method of engagement. This question was:

From a theoretical standpoint, when does an activity, or do a set of activities, aid in the development of critical thinking skills and how will this be implemented in the creation of an Alfa Academie module?

Concluded from the results, all participants were overwhelmingly positive about the implementation of critical thinking. In their answers, the participants indicated that the videos were cause for adopting a critical disposition and that the IDEALS checklist (Facione, 2007) served an important role in structuring their critical thinking. All student-participants claimed the enrichment module was effective in developing their critical thinking, suggesting that the *expected effectiveness* might match the *actual effectiveness*. The activities, in which these elements were embedded, were part of a direct strategy to develop critical thinking (Tiruneh et al., 2014). The activities themselves were preceded by an explanation of critical thinking in the FYI section, which was recognized by the teacher-participant, bearing semblance to the strategies employed by Bensley & Haynes (1996), Bensley, Crowe, Bernhardt, Buckner & Allman (2010), and Solon (2007).

Looking more specifically at the elements tied to critical thinking, it is worthwhile to point out the two that contributed the most to the participants' positive experiences. As mentioned, the participants were unanimously in favor of the IDEALS checklist (Facione, 2007). In this, the self-correct proved to be especially valued as a means of stopping to self-reflect and reevaluate one's position (Scriven & Paul, 2007). Most notable, however, were the results concerning *open-mindedness* and *(media) bias and manipulation*. While participants were appreciative of the open-minded approach, they were most outspoken about the manipulation -and persuasion techniques employed in the sources they analyzed. Commenting that, in combination with the warning provided in the module, it primed them to adopt a more critical disposition.

To answer the third sub-question, the use of a direct-approach strategy appears to have aided in the development of the student-participants' critical thinking skills, its implementation facilitated by having a clearly-structured approach to informing students about, and engaging students in, the application of critical thinking skills.

5.1.4 Sub-Question 4: Design Principles in Developing Academic Writing Skills

The fourth sub-question investigated the benefits of collaborative learning and critical thinking in the development of academic writing skills. While question states that it focuses on the effect of this study's design principles, only the two directly tied to academic writing were investigated. The question was:

How can the proposed design principles develop the students' academic language proficiency, and by extension their academic writing skills?

Of the four main principles, academic writing was appreciated the least. The results indicated that participants recognized the first design principle, but not the second design principle. The first design principle was:

In the context of an enrichment program for gifted students of upper secondary education, an intervention that incorporates the use of critical thinking in the writing process is expected to play a role in the development of academic writing skills

The analysis of sources is argued to make for better writing (Horstmanshof & Brownie, 2011) and the application of techniques tied to critical thinking, in the form of following a guiding checklist, add to the overall structure of a piece of writing (Facione, 2007; Felton & Herko, 2004). While the teacher-participant and the Alfa Academie's coordinator understood the usefulness of the PREP checklist, only one of the student-participants pointed out the module's use of the IDEALS checklist as a tool that applied critical thinking to the writing process.

Although the literature suggests that critical thinking and collaborative learning may aid in the development of academic writing skills, the results are too inconsistent to verify the *expected effectiveness* and cannot reliably speak for the *actual effectiveness*.

5.1.5 Main Research Question

The information detailed in the five sections above answer this study's main research question:

What are the characteristics of an enrichment module that meets both the requirements of the Alfa Academie and aids in the development of academically applicable skills of upper form students in secondary education?

Such a module enriches the curriculum of students by offering new subject matter (Subotnik et al., 2011) that promotes the students' thinking and feeling processes (Renzulli, 2014) in the context of a real-world issue (Renzulli, 2014). During their engagement with the module, the student-participants investigated the subject of firearms violence in the United States. It made them analyze and comment on the arguments given by pro-regulation and pro-rights voices, at the same time allowing them to explore their perspectives on the matter.

Secondly, such a module approaches the teaching of critical thinking in a structured and effective manner, employing direct teaching strategies (Tiruneh et al., 2014) in combination with checklists (Facione, 2007). Student-participants dissected the line of argumentation of a documentary, analyzed and researched the history of the United States' citizens' right to bear arms, and were made to reflect on their established points of view. While intended to offer the students *freedom of choice* by taking on an *open-minded* approach, such a module also, unintentionally, makes students that engage with it more aware of *(media) bias and manipulation*.

Thirdly, such a module necessitates collaborative engagement, making use of interdependency to facilitate the learning of content and procedure (Davidson & Major, 2014). Student-participants were able to develop a more robust point of view as a result of their continuous interactivity and overcame challenges by effectively building on one another's strengths. Such a module, unintentionally, also uses collaborative learning to prevent echo-chamber discussions and possibly breaks down pre-existing filter-bubble worldviews, resulting in more *open-mindedness*.

Lastly, such a module takes a structured approach to the teaching of academic writing. It engages students in collaborative learning, by making them explore the content and structure of their persuasive arguments (Felton & Herko, 2004). It also drives students to apply critical thinking during the writing process (Krashen & Brown, 2007). Had the

module's sample been adequate, the student-participants would have structured their writing through PREP (Felton & Herko, 2004) and IDEALS (Facione, 2007) in a dialogic context.

5.2 Further Interpretation and Implication of the Results

While the sections above already interpret this study's result to a degree, it is worthwhile to focus on some of its specific aspects. In the sections below, key points of information will be discussed. The implications of these findings vary. In some cases, the results merit further academic research. In other cases, the results may inform future educational practices.

5.2.1 Alfa Academie Requirements

All participants were generally positive about the enrichment module itself. It was considered enriching, student-participants were able to work on it independently of a teacher, and a clearly-described final product could flow from it. However, the results concerning Part 3's assignment merits further discussion. As stated, the Alfa Academie's coordinator questioned the closed nature of the assignment. To elaborate, for Part 3's assignment, students have to write an informal proposal in response to the knowledge they have gained throughout their engagement with the module. Effectively, they are asked to propose a solution in which they address one of the key issues related to firearms violence and the right to bear arms in the United States.

Based on the understanding of autonomy in Deci & Ryan's (2000) Self-Determination Theory, an argument can be made for the nature of the final assignment. The degree of choice is limited since students are required to write an informal proposal. They have no influence over the form of the assignment. However, the enrichment module does acknowledge its participants' feelings. It also permits them *freedom of choice* because it allows them to establish an opinion and to choose the direction of the final assignment. Both work towards a greater sense of autonomy (Deci & Ryan, 2000, p. 70).

5.2.2 Results in Light of the Design Principles

In the discussion concerning the implementation of enrichment, it was stated that the participants recognized the implementation of Type I and Type II enrichment. Throughout the development of the prototype enrichment module, an effort was made to incorporate both types within a compact format. Looking at the overall positive response, the enrichment module can be considered successful in its compacting efforts. The finding that students were able to engage with more than one Type of enrichment at the same time was especially interesting.

As stated in Renzulli (2014), “Type I enrichment is mainly designed to stimulate new interests leading to Type II or III follow-up on the parts of the students who become motivated by Type I experiences” (p. 545-546). It is clear that, while these Types are connected, they are traditionally engaged with in sequence. This notion is indicative of SEM’s original purpose, to carry out “the application of gifted education pedagogy to total school enrichment and joyful learning” (Renzulli, 2014, p. 539).

This study’s findings suggest that engagement with the Types of enrichment did not need to take place sequentially. Though no comment can be made about Type III enrichment, the results illustrated that Type I and II enrichment could take place at the same time. Future studies are encouraged to further investigate the relationship between the Types of enrichment.

Another of this study’s findings relates to its approach to the development of critical thinking skills. As established, the teaching of these skills was most effective when it began with a teacher explanation of CT principles, after which coaching and modeled application took place in combination with practical exercises (Tiruneh et al., 2014). Unfortunately, this method could not be implemented due to the Alfa Academie’s requirement that students needed to engage with the module independently of a teacher. In response, the study aimed to

mitigate the absence of a teacher. It included an FYI section on the second page of the enrichment module, which explained the concept of critical thinking. It followed up on that with exercises in Part 1 to have participants practice specific critical thinking skills. The results concerning the implementation were overwhelmingly positive.

To reiterate what has been stated in previous sections, the results suggested that the *expected effectiveness* of the module could match the *actual effectiveness*. Further interpretation of this success may lead to several hypothetical statements.

First, a teacherless approach to developing critical thinking could also be effective, so long as it first explains the concept of critical thinking and allows for near-immediate practice with critical thinking skills. Few studies have researched this matter, but a teacherless approach is suggested to be viable and effective, though it requires collaborative engagement on the part of the students. In their study, Fung and Howe (2012), compared the learning outcomes of 3 groups. The first group worked on critical thinking with teacher-centered methods and individual practice, the second group was self-directed and worked collaboratively, and the third group worked collaboratively with teacher guidance.

The results of this study indicate that collaborative learning, in combination with teacher guidance, as suggested in Tiruneh et al., (2014), was effective (p. 106). Of the three groups, this one improved the most. At the same time, the self-directed group also saw improvements, more so than the teacher-centered first group. This finding suggests that there is reasonable support for the assumption that a teacherless approach to developing critical thinking is a viable route. However, the method employed by Fung and Howe (2012) does apply a direct strategy at the beginning. Their discussion also focuses more heavily on the importance of collaboration in developing critical thinking, while the present study focuses on a teacherless method. The findings of both studies could be explored in future research, to investigate the value of collaboration and teacherless engagement in the development of

critical thinking. In either case, the present study's results indicate that a teacherless collaborative approach results in positive *expected effectiveness*.

Second, an open-minded approach to a controversial topic may lend itself well to the teaching of critical thinking. Using controversial topics to develop critical thinking is not a novel concept. Debates have been a long-standing approach to fostering these skills (Bell, 1982; Garland, 1991; Fallahi & Haney, 2007; Moeller, 1985). In addition, open-mindedness has been linked to critical thinking skills, as an open-minded mindset necessary in the effective application of critical thinking skills (Siegel, 2009). More interesting is a recent study by Verduci (2019), in which American polarization is argued to be a complicating factor in teaching critical thinking in high schools.

The study suggests that the use of controversial topics, such as firearms regulation, to develop critical thinking is ill-advised in the United States, due to the divisiveness of them in a polarized setting and needs to be preceded by "exercises that help *open* teachers' and students' minds to alternative perspectives (Verduci, 2019, p. 6). A future study set around the concepts of critical thinking, controversial topics, and open-mindedness would be worthwhile in a less-polarized setting. If anything, the current study suggests that it is possible within a Dutch setting. It might also benefit Dutch educational practices, especially as the possession of critical thinking skills is becoming more of a requirement rather than a beneficial addition.

The module also proved to be suitable for collaborative engagement, as it facilitated group work. The removal of barriers that this type of engagement provided should be acknowledged too. It made the learning of content more accessible to the student-participants. Most recent studies investigate this *benefit of collaboration* in light of online learning experiences (Eden, 2002; Gerben, 2009), indicating that collaborative learning does aid in

overcoming barriers. All in all, the results indicate that educational design and practice would benefit from collaborative learning to reach learning outcomes.

While literature does suggest that both critical thinking and collaborative learning play a part in the development of academic writing, the results are not conclusive enough to make recommendations based on them. Limited evidence does suggest that critical thinking checklists, in the form of IDEALS (Facione, 2007) and PREP (Felton & Herko, 2004), could theoretically be applied to the writing process (Krashen & Brown, 2007), but this should be re-investigated in a future study. If found to be viable in practice, results would imply that the module effectively applied the theory above, which could inform future teaching practices.

5.2.3 Unexpected Results and Findings

The two unanticipated findings also merit further discussion, especially for future study and educational design. The study's results illustrated that all participants were keenly aware of the *(media) bias and manipulation* they faced. This finding is not unexpected, as the module did issue a warning to that effect. However, the role this awareness played in the development of critical thinking skills is more important. While this study pinned the *expected effectiveness* of its module on the direct strategies discussed in Tiruneh et al. (2014), the results of another study (Fung & Howe, 2012) already suggests that collaboration could have played an equally important role. Furthermore, owing to the participant responses, it might be possible to suggest that the utility value of awareness creation cannot be overlooked either.

Recent studies into media literacy underline the importance of creating awareness to counter disinformation and media manipulation and to foster the development of critical thinking skills (Dell, 2019; Jahn & Kenner, 2018; Mikhaleva, 2016). Bulger and Davison (2018) argue that, according to the U.S National Association for Media Literacy Education, media literacy and critical thinking share the same skillset. Skills such as analysis, evaluation,

and creation are mentioned. They further state that, while studies have shown that media literacy interventions are more likely to result in critical thinking outcomes, and as a result in more awareness of messaging and bias (Bulger & Davidson, 2018, p. 12), it is uncertain whether this awareness prepares individuals to be more resistant to disinformation.

As for the relevance of the link between awareness and critical thinking for future educational design and practices, especially in the Netherlands, efforts have been made by curriculum designers to address media literacy. Curriculum.nu's Digitale Geletterdheid²⁷ Team address the importance of a critical disposition in a digital age. While their main focus is the responsible use of digital media, their advice document does attribute the importance of critical thinking to responsible media consumption too (Curriculum.nu, 2019c, p. 45-46).

Closely related to the adoption of a critical mindset, one *benefit of collaboration* suggests that collaborative engagement may prevent the formation of echo-chamber discussions and could lead to a more open-minded mindset. Though recent studies have investigated the link between collaborative learning and open-mindedness, this study's endeavor to find additional literature to support its finding, that collaborative learning may play a role in fostering open-mindedness, has turned up empty-handed. That is not to say that such a hypothetical claim is unreasonable.

Hypothetically, the study's main concepts could have been subject to cross-pollination. In an earlier section on the influence of collaborative learning on academic writing, it was stated that the application of critical thinking could lead to a more open-minded disposition in a student's writing (Tanaka & Gilliland, 2017). Most, if not all, engagement with the module took place in collaboration. As a result, the critical disposition of students may have resulted in the development of open-mindedness due to the coordinated mode of learning. As one student-participant stated, the presence of someone who could

²⁷ Translated into English, *digitale geletterdheid* means *digital literacy*.

challenge a previously-established opinion helps to create an open-minded point of view. In a way, the collaborative engagement allows students to function as their own pseudo-system of checks and balances.

Teaching for open-mindedness might be key to prevent societal polarization. The fostering of such a mindset has already found root in Team Burgerschap's advice document (Curriculum.nu, 2019a, p. 6). Should it be established that collaborative learning better facilitates the teaching for open-mindedness, it might be worthwhile to incorporate it in future educational practices.

5.3 Limitations and Further Recommendations

This study's results indicate that it was successful in creating a module that enriched its participants' curriculum in a manner that promoted collaborative learning and might be effective in developing future user's critical thinking skills. Research has led to interesting new insights, indicating that *(media) bias and manipulation* and critical thinking skills are more closely related than originally anticipated. Additionally, the module allowed its student-participants a considerable measure of *freedom of choice*, an effort which was appreciated by all of the participants. However, this study was limited in two ways. These limitations will be discussed, after which recommendations will be given for future research.

This study could not verify the *actual practicality* or *actual effectiveness* of its module. Neither could it assess the *implemented operational curriculum* or the *learned attained curriculum*. Such verification would have required a testing period equal to one full rotation. One full rotation of the Alfa Academie consists of eight weeks. During this time, students engage with one enrichment module of the Academie's program. Due to time constraints, this study could only allocate two weeks for actual testing. Owing to this, it was not possible to verify whether it would take participants twenty hours to complete the entire

prototype module. Further complications did also affect these results, as discussed in previous sections. However, the results suggest that the *perceived operational curriculum* and *experiential attained curriculum* could lead to *implemented* and *learned* in terms of the Alfa Academie requirements and the development of critical thinking.

Furthermore, the overall sample size of this study was fairly small. In total, six participants took part in this study. Two of these were staff, one of which was the Alfa Academie's coordinator. The other staff member was an upper form teacher of English. The remaining four participants consisted of students. Due to time constraints, student-participants were only able to work on four out of the prototype's twelve assignments. Further complications also affected these results, as discussed in previous sections. It can be stated with some certainty that this study's results are not generalizable. The participants were representative of future user, meaning that all the results were still relevant to this study.

These limitations, however, are grounds for future research. For example, the module's *actual practicality* can easily be verified. For this, students need to be given the eight weeks that the Alfa Academie allocates for each enrichment module. Surveys, or semi-structured interviews might be used to then investigate the overall *actual practicality* and look at specific parts of the enrichment module.

In the same setting, future research could incorporate pre -and post-tests to measure the students' ability to think critically with the use of established assessment methods. In doing so, the module's *actual effectiveness* could be ascertained. The information gained by this effort may inform the approach of future design studies, specifically those working with modules, that seek to produce skill-development-oriented interventions. The information could be equally informative for designers of enrichment programs, especially because of this study's extensive treatment of academic literature on enrichment education and skill

development throughout the development cycle of its module. It also details its application of design research guidelines.

Furthermore, this study's unanticipated findings also warrant additional research. Future studies are recommended to further assess the importance of awareness of (*media bias and manipulation*) as an influential factor in the development of critical thinking. While studies have pointed out the close ties between media literacy and critical thinking, it was often the case that critical thinking led to more awareness instead of the other way around. A study could investigate the ties between awareness and critical thinking, by reversing the roles. If further evidence is found, that the act of creating awareness could be the first step in developing both skill-sets, this could have implications for future educational practices. It puts forth a simple structure for education and might be adopted at an educational level preceding secondary education. A simple warning message might be enough.

Lastly, future research is encouraged to investigate the effect of collaborative learning in teaching for open-mindedness. As stated, this study's endeavor to unearth additional academic literature on the subject turned-up empty-handed. While it is possible that this study was not thorough enough in its search, the prevention of filter-bubbles and echo-chamber discussions might be yet unexplored benefits of collaboration. In an increasingly polarized world, where it is easy to entrench oneself on one particular side of the no man's land, caused by divisive world issues, it is important to teach students to be open-minded and critical. If collaboration facilitates the development of both, it is worth investigating it so that students might become the critical and open-minded driving forces of innovation that we need them to become.

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Appendix

Appendix A - Enrichment Bundle

Locked and Loaded

An open-minded approach to the U.S. firearms discussion and firearms violence



Creator: Nick Ruhe, Master Student, University of Utrecht

Foreword: April 20, 1999, two students arrive at their local high school. After a failed attempt to blow up the cafeteria with homemade explosives, the duo opens fire and causes enough bloodshed to achieve international coverage. August 3, 2019, a man shoots his way through a parking lot in what is described as an act of domestic terrorism.

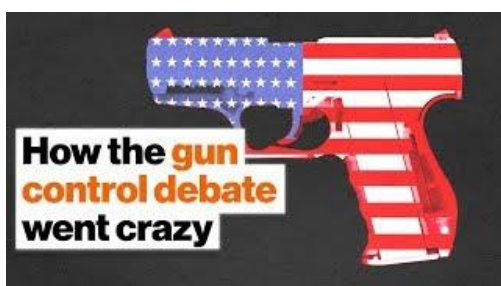


Whether you go to school in the United States or the Netherlands, news of mass shootings and other firearms-related incidents will have reached you in one way or another. In this enrichment module, you will find numerous interesting activities that will get you involved in the world of *firearms violence* and the discussion about *the right to bear arms*. The focus will be America, a country whose gun culture has only grown since the introduction of the Second Amendment to the United States Constitution.

The purpose of this module is to offer you an *enriching* experience, to allow you to work in *collaboration*, and to improve your *critical thinking* and *academic writing skills*. These are the educational goals.

The module has been divided into three parts. In part 1 you will be introduced to the topics included in this bundle, which you will explore by means of videos, texts, short exercises, and by reflecting on your own opinion regarding *firearms violence* and *the right to bear arms*. In part 2 you will be asked to do research on the parties involved in the discussion, safety measures, and mass shootings. Lastly, in part 3 you will work on the final assignment.

This module is going to be a bit of a challenge, but you're encouraged to give it the best you've got. Be aware that media outlets always have an agenda and will try to manipulate their audience. Good luck and have fun!



Opening Assignment: Watch the short video in which Kurt Anderson explains, from his point of view, the root cause of the firearms discussion.

Source: The Second Amendment: How the gun control debate went crazy | Kurt Anderson

For your information:

As mentioned above, this module has some educational goals. Some of these goals have been explained below, to give you an idea of how to engage with the content of the module.

Critical Thinking: When you engage in critical thinking, you make use of a set of skills in order to analyze, evaluate, synthesize and solve problems. In a way, critical thinking is your ability to question based on available evidence. It is the why, the how, and the what of situations from multiple angles. Go to the **resource list** for an explanation of critical thinking.

When you work on the multiple exercises in this module, it is good to keep **IDEALS** in mind. In some cases you will have to do some creative thinking to apply them, but consider them a mental checklist you can use.

Identify the problem: *What is the real question we are facing?*

Define the Context: *What are the facts that frame this problem?*

Enumerate the Choices: *What are plausible options for taking action?*

Analyze Options: *What is the best course of action?*

List Reason Explicitly: *Why is this the best course of action?*

Self-Correct: *Look at it again... What did we miss?*

Collaboration: When working on an assignment together, there is a difference between collaborative learning and cooperative learning. You only need to remember that you need to work on each assignment together, without dividing the tasks between you and the other person.

Academic Writing: The language you use when you write a text message to one of your friends is different from the language used in formal essays for school subjects. Part of your high school education is dedicated to teaching you how to write in an academic manner. Writing topic sentences, constructing paragraphs, using appropriate language, and logically developing your ideas are all skills that fall under academic writing.

Throughout this module you will find multiple opportunities to put your thoughts into written text. Part of structuring your writing can be done by means of **PREP**-ing your writing. While **PREP** is designed to aid with argumentative writing, it follows a similar structure to the *point, example, explanation* method.

Position on a topic: *What is the point you're trying to make? Your topic sentence.*

Reasons to support the position: *Why should your idea be taken into consideration?*

Explanation for the reasons: *Explore your reasons, clarify what you mean.*

Proof to support reasons and explanation: *What evidence do you have?*

Part 1: An Introduction to the Topic

Suggested time: 5 hours



Video source: Tucson, Arizona students take on both sides of the gun debate after Parkland shooting



Video source: Parkland survivor Kyle Kashuv speaks up for gun rights

Assignment 1: You might know that America is politically divided into two parties: the Democrats and the Republicans. In their discussion of firearms violence and gun ownership, each side brings forth their arguments. Watch the YouTube videos listed above. With your partner, list the arguments given by the speakers and respond to them after you're done watching. What do you think of the point of view of the students who are on one side of the argument and what do you think of the point of view of the students who are on the *other* side of the fence? How do you feel about it?



Video source: Current & Former NRA Members Talk About What To Do About Mass Shootings (HBO)

Assignment 2: The video above depicts both current and former members of the NRA, the National Rifle Association, who discuss firearm violence and gun regulation.

- A) Watch the video and repeat the tasks you did for Assignment 1.
- B) Compare the speakers and arguments in the 1st and 2nd video with those in the 3rd video. What is the focus of the discussion and what can you say about the persuasiveness?



Video source: 91%: A Film About Guns in America | Full Documentary | Reel Truth

Assignment 3: There is no lack of visual materials when it comes to the firearms discussion. The video above is a documentary which goes into more detail than the videos above and allows for a broader coverage of the issue. In it you will find that time is given to victims of firearms-related violence, gun owners, and policy makers.

The main purpose of this video is to broaden your understanding of the issue and it is therefore advised to list what the speakers and narrators have to say about firearms, mass shootings, law reforms, and more. However, be aware that this documentary, despite giving voice to both sides of the discussion, is trying to convey a message. Be critical of the persuasion techniques employed in it. For this assignment work with the **IDEALS** checklist and apply it to the content of this documentary.

Identify the problem	
Define the context	
Enumerate the choices	
Analyze options	
List reasons explicitly	
Self-Correct	

Assignment 4: Now that you've watched the videos:

- A) Individually formulate where you place yourself in the debate concerning firearms.
- B) Compare your answers with each other, where do you agree or disagree?
- C) What might those who don't agree with your point of view say about it?

Assignment 5: The Second Amendment to the United States Constitution covers the right to own a firearm. This amendment was ratified on December 15, 1791 as part of the Bill of Rights and has been in place for well over 200 years. Since then a lot has changed in terms of the modernization of firearms and the interpretation of this clause below.

A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed

- A) How do you interpret the clause above? Be specific and go into detail by defining and explaining each part of the sentence. (i.e. what is a militia, what does *Arms* refer to, etc.)
- B) In the time since the ratification of the Second Amendment others have made attempts to interpret the quote above as well. Find out how the interpretation of the above has changed over the course of history. Start your search on Wikipedia and follow the trail of sources.
- C) Compare your interpretation of the clause with one of the ones you've found. Write about this in a paragraph or two, it will be useful in part 3. Make use of the **PREP** method to structure your writing.

Assignment 6: In their dedicated sections on firearms violence, The Guardian publishes articles on gun reform, gun control, and gun laws. This section is named "*Break the Cycle.*"

- A) Individually, how do you interpret the name of the section? What does *Breaking the Cycle* mean to you?
- B) Compare your answers with each other and discuss similarities, as well as differences, in the interpretation of the title.

Assignment 7: Media coverage of firearms-related violence in the U.S. varies in terms of subject coverage, political undertone, and more. Next, you're each going to read and analyze one online news article related to firearms *violence* or *the right to bear arms*. You're free to choose what the focus of your search will be (i.e. law reforms, NRA, school shootings, etc.) and what your main source will be (Tabloid or Broadsheet), but complete the following:

- A) What is the main topic of your article, summarize it.
- B) How does the article fit in the list of videos/materials you've covered so far?
- C) Where do you stand in relation to the arguments made in your chosen articles? Write one paragraph together. Use the **PREP** method to structure your writing.

Part 2: Doing Research and Critical Thinking

Suggested time: 7,5 hours

Assignment 1: Not a day goes by in the U.S. without at least one mass shooting taking place. You might think that this is an exaggeration of facts, but in late July/early August of 2019, the number of mass shootings in the U.S. surpassed the number of days at that point in time. See *There have been more mass shootings than days this year* on the CBS News website. The article was updated on January 2, 2020.



One website keeping track of mass shootings, amongst other firearms-related data, is <https://www.gunviolencearchive.org/>

- A) Define what a 'mass shooting' is. Use multiple sources to improve the solidity of your definition. If definitions conflict, report on this as well and incorporate it into your explanation.
- B) Find the list of mass shootings of the current school year and pick one incident with more than a combined total of 15 killed/injured.
- C) Individually, pick at least one case that fits the parameters above and do research on the coverage of it in the news. While you're free to pick the type of sources which cover the mass shooting, you're encouraged to use online Broadsheets. Your purpose is to analyze how your mass shooting is depicted/covered in the news, what happened as a result of it, and how it relates to the larger issue. (This means you need to find out what the larger issue is). Additionally, find out if the news agency that published the article is politically motivated to report in a specific way. Are they considered Democratic, Republican or other?
- D) Write about the elements listed in 1C, using the **PREP** method to structure your text.
- E) After you're done with assignment 1D, you will compare the cases. The purpose is to find out if there is a difference concerning the cause of the mass shooting, the coverage by news agencies, and results of the incidents. What happened in one that didn't happen in the other?

Assignment 2: Whether it is a small-business owner with a license to sell firearms, an innocent bystander caught in the crossfire, or a larger organization, different parties and organizations are involved in the discussion. Different parties, representing different sides of the fence, have different points of views. In order to understand the multilayered-ness of the discussion, it is important to find out more about these parties and organizations. You do not have to limit yourself to a specific number of parties or organizations, but stick to the most important ones. Ask yourself the following:

Which parties or organizations have a stake in the firearms discussion, how are they involved, and why would they be involved in it?



Assignment 3: Incidents of mass shootings, as you've read and seen by now, may motivate policymakers to lobby for preventative measures to be put in place in order to curb firearms-related violence nationwide. It is important to understand why certain laws have been accepted, why others have been rejected and why, even now, interested parties are still pushing to introduce new gun reforms. The purpose of this assignment is to help create this understanding.

Do research on major measures that have been introduced in the U.S. since the year 2000 to curb firearms violence nationwide. This list should include measures that are still pending and those that have been rejected. If the list of measures proves to be too long, limit yourself to 9 measures in total (3 accepted, 3 rejected, 3 pending). Per measure do the following:

- A) Name of the measure/bill
- B) People backing the measure/bill and the political party they represent
- C) Other organizations involved (if relevant)
- D) Purpose of the measure/bill (provide a short summary)
- E) (If accepted) what are the main reasons this measure/bill was accepted?
- F) (If rejected) what are the main reasons this measure/bill was rejected?

Assignment 4: So far this module has focused its attention on the U.S. However, firearms violence takes place all over the world and each country has its own laws regarding firearms and the possession of them.

You're going to take a closer look at your own country: The Netherlands.

- A) In terms of policy-making and laws, which measures are in place to prevent or limit the possibility of a firearms-related incident taking place? How is the Netherlands different from the U.S. in this?
- B) One recent incident in the Netherlands is that of the 24 Oktoberplein Shooting in 2019, during which a single gunman opened fire in a tram. Compare 1 U.S. mass shooting to this incident in terms of what happened, what followed afterwards, and how the media covered it.

Part 3: Processing the Acquired Information

Suggested time: 7,5 hours

Final assignment:

Now that you've had some time to dive into the world of *firearms violence* and *the right to bear arms* you should be able to show other Alfa Academie enthusiasts what you've learned in the last 8 weeks. The final assignment is twofold. To the associated teacher you will present the knowledge you've gained by means of an *informal proposal*. You will also deliver an *elevator pitch* to others who took part in this term's Alfa Academie lineup/program.

The task: Write an informal proposal on one of the topics related to *firearms violence* and *the right to bear arms*. This informal proposal is 1500 words in length and APA annotated. In it you should address one of the key issues related to the topics above. You are free in your decision on what to focus on in your proposal, but you may draw inspiration from the materials you've covered in this module.

You're highly encouraged to follow the **IDEALS** method, to organize the position of your proposal as a whole, and the **PREP** method, to structure your paragraphs, before you start writing. Position yourself, acquire evidence and sources to support your position, develop your arguments, and deliver a killer proposal.

Informal proposal, required content: An informal proposal is defined as “a formal way of putting forward an idea and asking for action to be taken on that idea” and should cover the following points in chronological order.

1. **Introduction:** State the purpose of your proposal clearly and concisely. Make sure to pique the interest of the reader.
2. **Background:** Explain why you are proposing your suggestion, making sure that the reader has a better understanding of the problem.
3. **Solution:** You state the solution to the problem; this is where you give specific examples about your suggestion.
4. **Counter argumentation:** Continue with any resistance to your solution and rebut if possible. The purpose of this is to show that you are able to acknowledge that others might not agree with your point of view.
5. **Key personnel:** The proposal should discuss which people or organization will be involved/approached to aid you in realizing the proposed solution.
6. **Conclusion:** Should be brief and restate the most important benefits of actualizing your proposed solution.
7. **APA reference list:** Include an APA-style reference list at the end of your proposal.

Critical thinking resources: The YouTube videos linked below explain critical thinking and the explanation thereof in a way that I think is accessible and relatable. One is by Ted-ED and the other by a teacher at an American university.

<https://www.youtube.com/watch?v=dItUGF8GdTw>

<https://www.youtube.com/watch?v=Cum3k-Wglfw>

Informal proposal sources: For a more detailed explanation concerning the structure of an informal proposal, you're encouraged to visit the following websites.

<https://owlcation.com/academia/How-To-Write-A-Proposal-Essay>

<http://professionalwritingservices.net/informalproposals.html>

<https://examples.yourdictionary.com/what-is-example-informal-written-proposal.html>

APA annotation resources: For a more in-depth explanation of APA-style annotation visit the following website. It explains how to make use of *in-text citations* as well as how to create an APA-style *reference list*.

Since most of your evidence will most likely come from online sources, you will find the *Electronic Sources* tab particularly useful. Anything from an online news article to a YouTube video is covered under this tab.

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html

The American Psychology Association also has their own website. Although some of the information is locked behind a paywall (they want you to buy their book), the website contains information on anything from block quotations to the font types you may use in your writing.

<https://apastyle.apa.org/>

Appendix B - Categorized List of Design Principles

The design principles below have been given codes. These codes correspond with the codes used in the annotated version. To illustrate, **1.1** refers to the first design principle of enrichment, **2.3** refers to the third design principle of critical thinking, and so forth.

1) - Enrichment: In the context of enrichment education, as supplementary to traditional in-school educational practices:

1.1: ...an intervention that extends and supplements the regular curriculum may result in enrichment.

1.2: ...an intervention that includes topics not typically covered in the curriculum may result in enrichment.

1.3: ...an intervention that facilitates the learning of content and process within the context of a real and present problem is considered more meaningful and enjoyable.

1.4: ...an intervention implements Type I enrichment by exposing participants to a wide variety of disciplines, topics, occupations, hobbies, persons, spaces, and events that are not ordinarily covered in the regular curriculum. (based on Type I enrichment, Renzulli, 2014)

1.5: ...an intervention implements Type II enrichment by offering participants materials and methods that are designed to promote the development of thinking and feeling processes. (based on Type II enrichment, Renzulli, 2014)

2) - Critical Thinking: In the context of teaching critical thinking in an educational environment

2.1: ...an intervention that employs a direct strategy to teach critical thinking skills outperforms an intervention that makes use of indirect strategies in terms of effectiveness of improving a student's critical thinking.

2.2: ...an intervention makes use of direct strategies when it employs explicit explanation of critical thinking procedures at the early phase of instruction and follows that with a set of instructional activities.

2.3: ...an intervention engages its participants in critical thinking when it makes them utilize a set of skills to analyze, evaluate, synthesize and solve problems.

3) - Collaborative Learning: In a context where it is desirable to implement a model of teaching that employs more collaborative student-to-student interaction in an educational environment

3.1: ...an intervention may succeed in implementing collaborative learning if it engages its participants in a mutually coordinated way to solve problems.

3.2: ...an intervention may facilitate collaborative learning by providing a task suitable for group work in which participants engage in small-group interaction focused on the learning activity.

3.3: ...an intervention promotes collaborative learning if it calls for individual responsibility, accountability, and interdependence when working together.

4) - Academic Writing: In the context of an enrichment program for gifted students of upper secondary education:

4.1: ...an intervention that incorporates the use of critical thinking in the writing process is expected to play a role in the development of academic writing skills.

4.2: ...an intervention that encourages participants to develop arguments for persuasive writing in dialogic context is expected to provide the participants with vocabulary and metacognitive awareness of their own verbal strategies as it sets the stage of strategically organizing ideas in writing.

Appendix C - Annotated Enrichment Module

Locked and Loaded

An open-minded approach to the U.S. firearms discussion and firearms violence



Creator: Nick Ruhe, Master Student, University of Utrecht

Comments about the Title Page:

By means of a clever title and an image sourced from the internet, the students are introduced to the main topic of the module. Although fifth -and sixth-year students attending secondary education will undoubtedly have heard of forms of firearms violence in the United States, the module makes it clear that they will engage with that topic in a way that does not force them to adopt a specific point of view. To be more specific:

1.1: the intervention extends the regular curriculum.

1.2: The module's main topic is not typically covered in the student's curriculum. Support for this claim has been affirmed by one of the participants, who, in personal communication with the teacher involved in this project, relayed that, while some teacher might state their opinions regarding the subject every once in a while, the topic of firearms violence is part of the regular curriculum.

1.3: The topic, while geographically and politically removed from the students' personal lives, is still a real and present problem. While the Netherlands does not have organizations the size of the NRA and is not heavily divided on the issue of carrying firearms, it does have its own share of firearms violence. The Oktoberplein shooting in Utrecht is an example of such an incident. As students engage in critical thinking, collaborative learning, and academic writing, they do so within the framework of a real and present problem.

Comments about the Foreword and For-Your-Information Sections

The function of the foreword is to introduce the topic to the students by means of factual information, stating what the students will likely encounter and what goals they will be working towards. Further attention is paid to the module's structure. This is concluded with an opening assignment which illustrates how **Type 1** enrichment is included in the module.

1.4: In this video, the core issue is explored by an American writer. Students are introduced to a wide variety of topics, persons, and spaces included in this module.

2.1 & 2.2: The concept of critical thinking is described to the student as early as possible. The module refers students to the resource list at the end of the document for video explanations of the concept - and application of critical thinking. An easy-to-remember mnemonic device summarizes how the students might remember the application of critical thinking.

Foreword: April 20, 1999, two students arrive at their local high school. After a failed attempt to blow up the cafeteria with homemade explosives, the duo opens fire and causes enough bloodshed to achieve international coverage. August 3, 2019, a man shoots his way through a parking lot in what is described as an act of domestic terrorism.

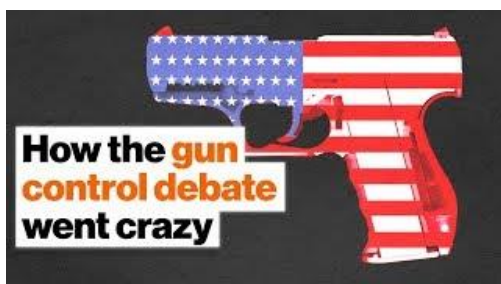


Whether you go to school in the United States or the Netherlands, news of mass shootings and other firearms related incidents will have reached you in one way or another. In this enrichment module you will find numerous interesting activities that will get you involved in the world of *firearms violence* and the discussion about *the right to bear arms*. The focus will be America, a country whose gun culture has only grown since the introduction of the Second Amendment to the United States Constitution.

The purpose of this module is to offer you an *enriching* experience, to allow you to work in *collaboration*, and to improve your *critical thinking* and *academic writing skills*. These are the educational goals.

The module has been divided into three parts. In part 1 you will be introduced to the topics included in this bundle, which you will explore by means of videos, texts, short exercises, and by reflecting on your own opinion regarding *firearms violence* and *the right to bear arms*. In part 2 you will be asked to do research on the parties involved in the discussion, safety measures, and mass shootings. Lastly, in part 3 you will work on the final assignment.

This module is going to be a bit of a challenge, but you're encouraged to give it the best you've got. Be aware that media outlets always have an agenda and will try to manipulate their audience. Good luck and have fun!



Opening Assignment: Watch the short video in which Kurt Anderson explains, from his point of view, the root cause of the firearms discussion.

Source: The Second Amendment: How the gun control debate went crazy | Kurt Anderson

For your information:

As mentioned above, this module has some educational goals. Some of these goals have been explained below, to give you an idea of how to engage with the content of the module.

Critical Thinking: When you engage in critical thinking, you make use of a set of skills in order to analyze, evaluate, synthesize and solve problems. In a way, critical thinking is your ability to question based on available evidence. It is the why, the how, and the what of situations from multiple angles. Go to the **resource list** for an explanation of critical thinking.

When you work on the multiple exercises in this module, it is good to keep **IDEALS** in mind. In some cases you will have to do some creative thinking to apply them, but consider them a mental checklist you can use.

Identify the problem: *What is the real question we are facing?*

Define the Context: *What are the facts that frame this problem?*

Enumerate the Choices: *What are plausible options for taking action?*

Analyze Options: *What is the best course of action?*

List Reason Explicitly: *Why is this the best course of action?*

Self-Correct: *Look at it again... What did we miss?*

Collaboration: When working on an assignment together, there is a difference between collaborative learning and cooperative learning. You only need to remember that you need to work on each assignment together, without dividing the tasks between you and the other person.

Academic Writing: The language you use when you write a text message to one of your friends is different from the language used in formal essays for school subjects. Part of your high school education is dedicated to teaching you how to write in an academic manner. Writing topic sentences, constructing paragraphs, using appropriate language, and logically developing your ideas are all skills that fall under academic writing.

Throughout this module you will find multiple opportunities to put your thoughts into written text. Part of structuring your writing can be done by means of **PREP**-ing your writing. While **PREP** is designed to aid with argumentative writing, it follows a similar structure to the *point, example, explanation* method.

Position on a topic: *What is the point you're trying to make? Your topic sentence.*

Reasons to support the position: *Why should your idea be taken into consideration?*

Explanation for the reasons: *Explore your reasons, clarify what you mean.*

Proof to support reasons and explanation: *What evidence do you have?*

Before you continue your analysis of the annotated version of the enrichment module, it should be made clear to you that assignments will be addressed by **P[number]**, followed by the **number of the assignment** and, where relevant, an **alphabetical letter** after this point. For example, **P1.2B** refers to the **B** question of the **Second** assignment of **Part 1**. As you continue to read through the annotated version, you might come to the realization that many of the design principles apply to many of the assignments. To prevent presenting you with a barrage of text, only specific design principles will be *highlighted*.

Of **P1** assignment **1, 2, and 3** continue the trend set by the opening assignment. Each introducing a new perspective of the parties involved in the firearms discussion.

In **P1.1**, students hear the opinions of mass shooting survivors through the voices of those that survived the Parkland Shooting and through Kyle Kashuv. Although the first video incorporates the views of students on both sides of the discussion, the second video more explicitly illustrates the opinion of a student who more clearly expresses to be in favor of gun rights.

1.3, 1.4, & 1.5: Although all of **1** will most likely continuously be present throughout the module, **P1.1** illustrates the implementation of **1.3**, in which learning of content is within the context of a real and present problem, **1.4** because it exposes students to a variety of novel content (persons, spaces, and events), and **1.5** because students are asked to express themselves in terms of feelings and thought on the opinions of speakers.

P1.2 introduces the students to the NRA organization by means of a discussion panel. This video does also give voice to those one both sides of the discussion.

2.2 & 2.3: Students are asked to further evaluate the statements of the speakers in light of their own conceptions, after which compare the statements and arguments made. This in turn asks for an analytical approach.

P1.3 presents more of a survivor's perspective of firearms violence, in which more attention is paid to introducing stricter litigation. It attempts to show how the firearms discussion is more complicated than the black-and-white division that is often ascribed to it.

1.4: Noticeable, students continued to be exposed to the persons, spaces, and events related to the overarching topic of firearms violence and firearms possession.

2.3: Students continue with their analytical and evaluative efforts in order to unearth more information about the views held by the speakers in the video sources. More importantly, this act is done by means of a checklist. Students are asked to directly *apply* critical thinking skills by means of filling in the **IDEALS** list.

4.1: The application of critical thinking skills, by means of the checklist, is meant to stimulate the organization of thoughts into coherent writing.

Part 1: An Introduction to the Topic

Suggested time: 5 hours



Video source: Tucson, Arizona students take on both sides of the gun debate after Parkland shooting



Video source: Parkland survivor Kyle Kashuv speaks up for gun right

Assignment 1: You might know that America is politically divided into two parties: the Democrats and the Republicans. In their discussion of firearms violence and gun ownership, each side brings forth their arguments. Watch the YouTube videos listed above. With your partner, list the arguments given by the speakers and respond to them after you're done watching. What do you think of the point of view of the students who are on one side of the argument and what do you think of the point of view of the students who are on the *other* side of the fence? How do you feel about it?



Video source: Current & Former NRA Members Talk About What To Do About Mass Shootings (HBO)

Assignment 2: The video above depicts both current and former members of the NRA, the National Rifle Association, who discuss firearm violence and gun regulation.

- A) Watch the video and repeat the tasks you did for Assignment 1.
- B) Compare the speakers and arguments in the 1st and 2nd video with those in the 3rd video. What is the focus of the discussion and what can you say about the persuasiveness?



Video source: 91%: A Film About Guns in America | Full Documentary | Reel Truth

Assignment 3: There is no lack of visual materials when it comes to the firearms discussion. The video above is a documentary which goes into more detail than the videos above and allows for a broader coverage of the issue. In it you will find that time is given to victims of firearms-related violence, gun owners, and policy makers.

The main purpose of this video is to broaden your understanding of the issue and it is therefore advised to list what the speakers and narrators have to say about firearms, mass shootings, law reforms, and more. However, be aware that this documentary, despite giving voice to both sides of the discussion, is trying to convey a message. Be critical of the persuasion techniques employed in it. For this assignment work with the **IDEALS** checklist and apply it to the content of this documentary.

Identify the problem	
Define the context	
Enumerate the choices	
Analyze options	
List reasons explicitly	
Self-Correct	

P1.4 asks students to slow down in their engagement, tasking them to place themselves in the debate concerning firearms and asking themselves how others might have reservations to that position.

1.5: Students are specifically asked to place themselves in the discussion, adding to the overall personal investment in the engagement with the module on their part. The positioning of **P1.4A** covers the transitioning of feeling into thought. **P1.4C** then asks students to put themselves in the shoes of not just anyone, but in those that might not agree with their own point of view. They are invited to ask themselves why others might not agree with them. By asking the students to answer a ‘what’ rather than a ‘why’ the assignment more heavily focuses on an initial response.

2.3: A critical mindset is required to compare answers, as students need to reflect on their own position as well as analyze and evaluate the position of that of their partner.

3.3: The assignment cannot be adequately completed if students do not compare their answers with one another at **P1.4B**.

P1.5 takes advantage of the slowed-down modus of approach and the (self) analytical mindset and redirects it towards the second amendment.

3.1 & 3.2: The task is designed with a heavy focus on interpretation. While students could complete this assignment individually, the presence of a partner allows for a more robust understanding of the second amendment.

4.1: In this, **P1.4C** makes use of the **PREP** device. The structuring of writing is done by means of applying critical thinking skills during the writing process.

P1.6 cleverly introduces the students to a source of information about firearms violence. Though this source does not limit itself in terms of coverage, as it covers more than just the U.S., it does contain a wealth of information that student may explore at a later point (**P3** for example).

1.5: Students explore what “*Breaking the Cycle*” means to them.

P1.7 Continues the investigation of media sources online, permitting the students a considerable degree of freedom. They are asked to look up online news articles related to either *firearms violence* or *the right to bear arms*. **P1.7C** lends itself especially well to the exploration of bias in media.

4.1 & 4.2: Students are to apply **PREP** once more to their writing, but this time the assignment more overtly states the “*together*” aspects of the writing process. Students are encouraged to develop their argumentation in a collaborative effort, exercises the qualities attached to the application of collaborative engagement on the process of writing.

Assignment 4: Now that you've watched the videos:

- A) Individually formulate where you place yourself in the debate concerning firearms.
- B) Compare your answers with each other, where do you agree or disagree?
- C) What might those who don't agree with your point of view say about it?

Assignment 5: The Second Amendment to the United States Constitution covers the right to own a firearm. This amendment was ratified on December 15, 1791 as part of the Bill of Rights and has been in place for well over 200 years. Since then a lot has changed in terms of the modernization of firearms and the interpretation of this clause below.

A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed

- A) How do you interpret the clause above? Be specific and go into detail by defining and explaining each part of the sentence. (i.e. what is a militia, what does *Arms* refer to, etc.)
- B) In the time since the ratification of the Second Amendment others have made attempts to interpret the quote above as well. Find out how the interpretation of the above has changed over the course of history. Start your search on Wikipedia and follow the trail of sources.
- C) Compare your interpretation of the clause with one of the ones you've found. Write about this in a paragraph or two, it will be useful in part 3. Make use of the **PREP** method to structure your writing.

Assignment 6: In their dedicated sections on firearms violence, The Guardian publishes articles on gun reform, gun control, and gun laws. This section is named "*Break the Cycle.*"

- A) Individually, how do you interpret the name of the section? What does *Breaking the Cycle* mean to you?
- B) Compare your answers with each other and discuss similarities, as well as differences, in the interpretation of the title.

Assignment 7: Media coverage of firearms-related violence in the U.S. varies in terms of subject coverage, political undertone, and more. Next, you're each going to read and analyze one online news article related to *firearms violence* or *the right to bear arms*. You're free to choose what the focus of your search will be (i.e. law reforms, NRA, school shootings, etc.) and what your main source will be (Tabloid or Broadsheet), but complete the following.

- A) What is the main topic of your article, summarize it.
- B) How does the article fit in the list of videos/materials you've covered so far?
- C) Where do you stand in relation to the arguments made in your chosen articles? Write one paragraph together. Use the **PREP** method to structure your writing.

P2 continues with offering information in line with **Type 1** enrichment, as students are tasked to do research on a variety of topics, organizations, and events related to the firearms discussion. However, the key difference between **P1** and **P2** is the role adopted by the students. Whereas **P1** hands students information by means of videos adapted for education purposes, **P2** asks students to take on the role of enquirer and makes them responsible for the quality of their own learning. Students have to do research collaboratively.

P2.1 Takes approaches the topic of mass firearms violence in more of an investigative manner, as students have to consult related websites, pick one event and analyze its coverage in the news. The assignment ends in individual writing, in combination with a post-writing comparison, using the **PREP** format.

1.3: The entirety of **P2.1**, specifically **A** through **C**, serves as a reminder to the students that the topic of *firearms violence* is a pervasive problem in the U.S. The learning about this, perhaps not enjoyable in a traditional fashion, is made more meaningful by due to the focus on facts²⁸, figures, and witness statements.

4.1: Once more, **PREP** is utilized as critical thinking tool to structure the students' writing.

P2.2 Has students conduct research into the people, organizations, and parties involved in the discussion of *firearms violence* and *the right to bear arms* in the U.S. They are to grow their understanding of the motivation for the actions undertaken by these people, parties, and organizations.

1.4: Students explore *persons* in terms of political parties and movements (Democrats & Republicans), as well as larger organization (National Rifle Association).

P2.3 contributes to building an even more robust understanding of *firearms violence* and *the right to bear arms* by exploring the passing/rejection of government regulations. It continues with **1.4**, but does include more.

2.1 & 4.2: Mainly analytical skills are used, but the compilative effort itself adds to a growing body of information that students may draw from. The tasks provides students with the necessary vocabulary, which they will have ready access to when **P3** comes around.

P2.4 Makes students compare Dutch firearms-related incidents and firearms regulations to those of the U.S. This might cause a realization of how foreign to topic actually is.

1.5 & 2.3: Once more, thinking processes processes are promoted and critical thinking engaged in.

3.1 & 3.2: This task lends itself quite well to small-group interaction, spoken interaction is central.

²⁸ **P2.1E** does indicate that students need to be critical in their examination of information. Sometimes information is presented as a 'fact', but proves to be false or otherwise unverifiable.

Part 2: Doing Research and Critical Thinking

Suggested time: 7,5 hours

Assignment 1: Not a day goes by in the U.S. without at least one mass shooting taking place. You might think that this is an exaggeration of facts, but in late July/early August of 2019, the number of mass shootings in the U.S. surpassed the number of days at that point in time. See *There have been more mass shootings than days this year* on the CBS News website. The article was updated on January 2, 2020.



One website keeping track of mass shootings, amongst other firearms-related data, is <https://www.gunviolencearchive.org/>

- A) Define what a 'mass shooting' is. Use multiple sources to improve the solidity of your definition. If definitions conflict, report on this as well and incorporate it into your explanation.
- B) Find the list of mass shootings of the current school year and pick one incident with more than a combined total of 15 killed/injured.
- C) Individually, pick at least one case that fits the parameters above and do research on the coverage of it in the news. While you're free to pick the type of sources which cover the mass shooting, you're encouraged to use online Broadsheets. Your purpose is to analyze how your mass shooting is depicted/covered in the news, what happened as a result of it, and how it relates to the larger issue. (This means you need to find out what the larger issue is). Additionally, find out if the news agency that published the article is politically motivated to report in a specific way. Are they considered Democratic, Republican or other?
- D) Write about the elements listed in 1C, using the **PREP** method to structure your text.
- E) After you're done with assignment 1D, you will compare the cases. The purpose is to find out if there is a difference concerning the cause of the mass shooting, the coverage by news agencies, and results of the incidents. What happened in one that didn't happen in the other?

Assignment 2: Whether it is a small-business owner with a license to sell firearms, an innocent bystander caught in the crossfire, or a larger organization, different parties and organizations are involved in the discussion. Different parties, representing different sides of the fence, have different points of views. In order to understand the multilayered-ness of the discussion, it is important to find out more about these parties and organizations. You do not have to limit yourself to a specific number of parties or organizations, but stick to the most important ones. Ask yourself the following:

Which parties or organizations have a stake in the firearms discussion, how are they involved, and why would they be involved in it?



Assignment 3: Incidents of mass shootings, as you've read and seen by now, may motivate policymakers to lobby for preventative measures to be put in place in order to curb firearms-related violence nationwide. It is important to understand why certain laws have been accepted, why others have been rejected and why, even now, interested parties are still pushing to introduce new gun reforms. The purpose of this assignment is to help create this understanding.

Do research on major measures that have been introduced in the U.S. since the year 2000 to curb firearms violence nationwide. This list should include measures that are still pending and those that have been rejected. If the list of measures proves to be too long, limit yourself to 9 measures in total (3 accepted, 3 rejected, 3 pending). Per measure do the following:

- A) Name of the measure/bill
- B) People backing the measure/bill and the political party they represent
- C) Other organizations involved (if relevant)
- D) Purpose of the measure/bill (provide a short summary)
- E) (If accepted) what are the main reasons this measure/bill was accepted?
- F) (If rejected) what are the main reasons this measure/bill was rejected?

Assignment 4: So far this module has focused its attention on the U.S. However, firearms violence takes place all over the world and each country has its own laws regarding firearms and the possession of them. You're going to take a closer look at your own country: The Netherlands.

- A) In terms of policy-making and laws, which measures are in place to prevent or limit the possibility of a firearms-related incident taking place? How is the Netherlands different from the U.S. in this?
- B) One recent incident in the Netherlands is that of the 24 Oktoberplein Shooting in 2019, during which a single gunman opened fire in a tram. Compare 1 U.S. mass shooting to this incident in terms of what happened, what followed afterwards, and how the media covered it.

P3 is the culmination of the entire module. This is where thought processes, critical thinking skills, the ability to work collaboratively effectively, and the understanding of academic writing comes together in one final assignment. Students are to build off of the body of knowledge they have established during their engagement with the enrichment module, in combination with their own opinions and preferred focus, and write an informal proposal. The challenge itself is tough, especially because there is no easy solution to fixing *firearms violence* or addressing *the right to bear arms*. Hence, **P3** asks students to focus on a topic related to one of the two.

Critical Thinking

2.3: The acts of analyzing are evaluating key to gather the right number of arguments, as well as the most accurate and supportive evidence, for the informal proposal itself. While any related information is useful, picking the right piece of information likely determines the persuasiveness of their arguments. Synthesizing, too, plays an important role. Nothing is created from nothing. Students will have to establish an academic piece of writing to the best of their ability.

Collaborative Learning

3.1 & 3.3: The problem addressed by the students is self-chosen, a topic they both agree could be solved if the right measures are put into place. Since this topic is likely to be determined collaboratively, students are more likely to be dependent on one another when working together. They will be able to build off of each other's pool of knowledge.

Critical Thinking on Academic Writing:

4.1: Especially in **P3**'s case, **IDEALS** and **PREP** are valuable methods to structure the writing itself during the writing process. While **IDEALS** lends itself better to the overall establishment of *content*, it is an equally-useful tool to determining the overarching structure of a piece of writing prior to writing engagement. It can also be used as a checklist at the end. Did the students identify the problem to their readers, define its context, and list the reasons for suggesting a specific course of action? **PREP** is such in a similar way to **IDEALS**, but focuses on the paragraph level. It can be used as a structuring method, as well as a means to assess if all the necessary elements are present.

Collaborative Learning on Academic Writing:

4.2: Throughout their engagement with the module, students have been expanding their subject-related vocabulary. In addition to this, they have developed their position and the arguments they need to support that position. In their collaborative effort to create an informal proposal, students are likely to verbally explore specific angles of approach in terms of picking the right argument at the right time and to maintain a coherent structure. This back-and-forth effort will eventually lead to a more robust piece of academic writing.

Part 3: Processing the Acquired Information

Suggested time: 7,5 hours

Final assignment:

Now that you've had some time to dive into the world of *firearms violence* and *the right to bear arms* you should be able to show other Alfa Academie enthusiasts what you've learned in the last 8 weeks. The final assignment is twofold. To the associated teacher you will present the knowledge you've gained by means of an *informal proposal*. You will also deliver an *elevator pitch* to others who took part in this term's Alfa Academie lineup/program.

The task: Write an informal proposal on one of the topics related to *firearms violence* and *the right to bear arms*. This informal proposal is 1500 words in length and APA annotated. In it you should address one of the key issues related to the topics above. You are free in your decision on what to focus on in your proposal, but you may draw inspiration from the materials you've covered in this module.

You're highly encouraged to follow the **IDEALS** method, to organize the position of your proposal as a whole, and the **PREP** method, to structure your paragraphs, before you start writing. Position yourself, acquire evidence and sources to support your position, develop your arguments, and deliver a killer proposal.

Informal proposal, required content: An informal proposal is defined as “a formal way of putting forward an idea and asking for action to be taken on that idea” and should cover the following points in chronological order.

1. **Introduction:** State the purpose of your proposal clearly and concisely. Make sure to pique the interest of the reader.
2. **Background:** Explain why you are proposing your suggestion, making sure that the reader has a better understanding of the problem.
3. **Solution:** You state the solution to the problem; this is where you give specific examples about your suggestion.
4. **Counter argumentation:** Continue with any resistance to your solution and rebut if possible. The purpose of this is to show that you are able to acknowledge that others might not agree with your point of view.
5. **Key personnel:** The proposal should discuss which people or organization will be involved/approached to aid you in realizing the proposed solution.
6. **Conclusion:** Should be brief and restate the most important benefits of actualizing your proposed solution.
7. **APA reference list:** Include an APA-style reference list at the end of your proposal.

Critical thinking resources: The YouTube videos linked below explain critical thinking and the explanation thereof in a way that I think is accessible and relatable. One is by Ted-ED and the other by a teacher at an American university.

<https://www.youtube.com/watch?v=dItUGF8GdTw>

<https://www.youtube.com/watch?v=Cum3k-Wglfw>

Informal proposal sources: For a more detailed explanation concerning the structure of an informal proposal, you're encouraged to visit the following websites.

<https://owlcation.com/academia/How-To-Write-A-Proposal-Essay>

<http://professionalwritingservices.net/informalproposals.html>

<https://examples.yourdictionary.com/what-is-example-informal-written-proposal.html>

APA annotation resources: For a more in-depth explanation of APA-style annotation visit the following website. It explains how to make use of *in-text citations* as well as how to create an APA-style *reference list*.

Since most of your evidence will most likely come from online sources, you will find the *Electronic Sources* tab particularly useful. Anything from an online news article to a YouTube video is covered under this tab.

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html

The American Psychology Association also has their own website. Although some of the information is locked behind a paywall (they want you to buy their book), the website contains information on anything from block quotations to the font types you may use in your writing.

<https://apastyle.apa.org/>

Appendix C - Instructions for Students

Een korte uitleg

Het onderzoek waar de module een deel van uitmaakt kan omschreven worden als *ontwerponderzoek* (Plomp & Nieveen, 2013). In bepaalde gevallen richten dit soort onderzoeken zich op de verwerving of ontwikkeling van vaardigheden. Tijdens de ontwikkelingscyclus van een product evalueert men dan de *perceived relevance*, of de waargenomen relevantie, van het product. Om maar gelijk deze module als voorbeeld te nemen. Een van de doelen is om de ontwikkeling van het kritisch denkvermogen van de leerlingen te stimuleren. De vraag is dan is de module, en zijn de onderdelen daarvan, relevant voor die ontwikkeling? Zou de module daadwerkelijk in staat zijn om leerlingen te helpen bij de ontwikkeling van hun kritisch denkvermogen?

In een analyse van de module 'Locked and Loaded' staat de kwestie van *perceived relevance* centraal. Je moet bij (bijna) elk onderwerp nagaan of de module een rol speelt in de ontwikkeling.

Punten ter analyse

- **Verrijking (enrichment):** Anders dan het reguliere curriculum, verrijking houdt in dat men zowel breder als dieper met een onderwerp aan de slag gaat. Is de module verrijkend ten opzichte van het reguliere curriculum? (zie Renzulli, 2014).
- **Het kritisch denkvermogen (critical thinking skills):** De vaardigheid om vragen te stellen aan de hand van beschikbaar bewijsmateriaal. Hieronder vallen de hogere denkvaardigheden van Bloom, zoals analyseren, evalueren en creëren (zie Kennedy, Fisher, & Ennis, 1991).
- **Samenwerkend leren (collaborative learning):** Een manier van leren waarbij leerlingen zich wederzijds inspinnen in een gecoördineerde poging om een probleem op te lossen. Leerlingen verdelen de taken niet, ze zijn écht samen aan de slag (zie Dillenbourgh, Baker, Blaye, & O'Malley, 1996).
- **Academische schrijfvaardigheid (academic writing skills):** Hieronder vallen onder andere de volgende deelvaardigheden: onderwerpszinnen, alinea constructie, doelmatig taalgebruik, en logische ontwikkeling van ideeën. Ook introducties, analyse van literatuur, conclusies, presentatie, en correct verwijzen zijn gelinkt aan academische schrijfvaardigheid (maar vallen er niet specifiek onder) (zie Horstmanshof & Brownie, 2011).

De opdracht

Je gaat de komende twee weken aan de slag met een aantal opdrachten uit *Part 1* en *Part 2* van deze module. De bedoeling is dat je deze opdrachten binnen een tijdsperiode van ongeveer twee weken maakt. Probeer de opdrachten zo goed mogelijk te maken. Van je docent krijg je de tijd om buiten het lokaal, tijdens de lessen Engels, aan de opdrachten te werken.

Uit *Part 1* doe je:

Uit *Part 2* doe je:

Neem de **foreword**, **starting question** en de **for your information** stukken goed door voordat je begint. Je maakt je werk in een gezamenlijk Google Docs bestand. Houdt tijdens het maken van de opdrachten de **punten ter analyse** hierboven goed in de gaten. Succes!

Appendix D - Instructions for Teachers

Een korte uitleg

Het onderzoek waar de module een deel van uitmaakt kan omschreven worden als *ontwerponderzoek* (Plomp & Nieveen, 2013). In bepaalde gevallen richten dit soort onderzoeken zich op de verwerving of ontwikkeling van vaardigheden. Tijdens de ontwikkelingscyclus van een product evalueert men dan de *perceived relevance*, of de waargenomen relevantie, van het product. Om maar gelijk deze module als voorbeeld te nemen. Een van de doelen is om de ontwikkeling van het kritisch denkvermogen van de leerlingen te stimuleren. De vraag is dan is de module, en zijn de onderdelen daarvan, relevant voor die ontwikkeling? Zou de module daadwerkelijk in staat zijn om leerlingen te helpen bij de ontwikkeling van hun kritisch denkvermogen?

In een analyse van de module 'Locked and Loaded' staat de kwestie van *perceived relevance* centraal. Je moet bij (bijna) elk onderwerp nagaan of de module een rol speelt in de ontwikkeling.

Punten ter analyse

- **Verrijking (enrichment):** Anders dan het reguliere curriculum, verrijking houdt in dat men zowel breder als dieper met een onderwerp aan de slag gaat. Is de module verrijkend ten opzichte van het reguliere curriculum? (zie Renzulli, 2014).
- **Het kritisch denkvermogen (critical thinking skills):** De vaardigheid om vragen te stellen aan de hand van beschikbaar bewijsmateriaal. Hieronder vallen de hogere denkvaardigheden van Bloom, zoals analyseren, evalueren en creëren (zie Kennedy, Fisher, & Ennis, 1991).
- **Samenwerkend leren (collaborative learning):** Een manier van leren waarbij leerlingen zich wederzijds inspannen in een gecoördineerde poging om een probleem op te lossen. Leerlingen verdelen de taken niet, ze zijn écht samen aan de slag (zie Dillenbourgh, Baker, Blaye, & O'Malley, 1996).
- **Academische schrijfvaardigheid (academic writing skills):** Hieronder vallen onder andere de volgende deelvaardigheden: onderwerpszinnen, alinea constructie, doelmatig taalgebruik, en logische ontwikkeling van ideeën. Ook introducties, analyse van literatuur, conclusies, presentatie, en correct verwijzen zijn gelinkt aan academische schrijfvaardigheid (maar vallen er niet specifiek onder) (zie Horstmanshof & Brownie, 2011).

Geschied voor de Alfa Academie

Uit een interview met de Alfa Academie coördinator kwamen de volgende punten naar voren. Dit zijn de vereisten van een Alfa Academie module. In hoeverre voldoet het prototype hieraan?

- Minimaal 20 uur aan opdrachten/materiaal om mee te werken
- Duidelijk omschreven eindproduct/eindopdracht
- Leerlingen zijn in staat om zelfstandig aan de slag te gaan
- Inhoud is verrijkend

Overige punten

Zijn er nog andere punten of opmerkingen die je hebt na het analyseren van de module? Schrijf deze op, zodat ze besproken kunnen worden in het eind interview.

Appendix E - Questions for Student Interviews

In de afgelopen twee weken heb je tijdens de lessen vrijstelling gekregen om te werken aan een selectie van opdrachten uit een prototype module, welke ontworpen is voor de Alfa Academie. Dit interview bestaat uit een aantal vragen over de opdrachten die je hebt gemaakt, jouw impressie van de gehele module, en de specifieke onderdelen, zoals beschreven in de eerste pagina's van de module: **critical thinking**, **collaboration**, en **academic writing**. De vragen die ik zal stellen hebben betrekking tot de onderzoeksvragen van mijn Master Thesis.

Het is belangrijk dat je eerlijk antwoord geeft op te vragen, en zo objectief mogelijk terugblijkt op de afgelopen paar weken. Mocht er iets onduidelijk zijn, aarzel niet om vragen te stellen.

De volgende vragen zijn gebaseerd op de onderzoeksvragen van mijn masterscriptie

Verrijking houdt in dat men zowel breder als dieper met een onderwerp aan de slag gaat, een onderwerp wat in sommige gevallen niet in het reguliere lesprogramma aan bod komt. In hoeverre vind jij dat de module en de daaruit geselecteerde opdrachten verrijkend zijn?

Vind je dat de geselecteerde opdrachten geholpen hebben bij de ontwikkeling van jouw **critical thinking skills**? Zo ja, waarom denk je dat? Zo nee, waarom niet?

In welke mate heeft **collaboration** invloed gehad op het maken van de geselecteerde opdrachten?

In hoeverre vind jij dat de module en de daaruit geselecteerde opdrachten jou helpen in het ontwikkelen van jouw **academic writing**, of academische schrijfvaardigheid?

De volgende vragen gaan specifiek over de geselecteerde opdrachten die je hebt gemaakt in de afgelopen paar weken

In hoeverre hebben **assignment 1 en 3, van part 1**, jou geholpen bij de verkenning van het onderwerp?

Hoe hebben **assignment 1 en 3, van part 1**, bijgedragen aan de ontwikkeling van jouw perspectief betreffende de vuurwapen discussie?

In welke mate heeft **assignment 3, van part 1**, geholpen bij het toepassen van **critical thinking skills**. (Heeft deze opdracht bijgedragen bij de ontwikkeling naar jouw mening?)

Voor **assignment 5, van part 1**, moest je zelfstandig onderzoek doen naar een zin uit de *second amendment*. Hoe heeft **collaboration** een rol gespeeld in het maken van deze opdracht volgens jou?

Voor **assignment 2, van part 1**, moest je onderzoek doen naar Amerikaanse wetsvoorstellen om vuurwapengeweld te bestrijden. In hoeverre heeft deze opdracht geholpen in het creëren van een begrip waarom bepaalde voorstelling zijn aangenomen, waarom andere zijn afgewezen, en waarom partijen nog steeds bezig zijn met het introduceren van nieuwe wetsvoorstellen?

Nu nog een laatste paar vragen

Hoe heb je het maken van de opdrachten ervaren?

Was de samenwerking volgens jou van toegevoegde waarde?

Stel, je hebt de mogelijkheid om de module aan te passen. Waar zou jij deze aanpassingen maken?

Appendix F - Questions for Teacher Interviews

In de afgelopen twee weken heb je aan de hand van een set instructies gekeken naar een prototype module voor de Alfa Academie. Dit interview bestaat uit een aantal vragen over jouw impressie van de gehele module en specifieke onderdelen, zoals beschreven in de eerste pagina's van de module: **critical thinking**, **collaboration**, en **academic writing**. De vragen die ik zal stellen hebben betrekking tot de onderzoeksvragen van mijn Master Thesis.

Het is belangrijk dat je eerlijk antwoord geeft op te vragen, en zo objectief mogelijk terugblijkt op de afgelopen paar weken. Mocht er iets onduidelijk zijn, aarzel niet om vragen te stellen.

De volgende vragen zijn gebaseerd op de onderzoeksvragen van mijn masterscriptie

Verrijking houdt in dat men zowel breder als dieper met een onderwerp aan de slag gaat, een onderwerp wat in sommige gevallen niet in het reguliere lesprogramma aan bod komt. In hoeverre vind jij dat de module verrijkend is (t.o.v. het reguliere programma)?

Zou de module volgens jou helpen in de ontwikkeling van **critical thinking skills**? Zo ja, waarom denk je dat? Zo nee, waarom niet?

In welke mate zou **collaboration** invloed uitoefenen op het maken van de opdrachten uit de module?

In hoeverre vind jij dat de module helpt in het ontwikkelen van **academic writing**, of academische schrijfvaardigheid?

De volgende vraag gaat over de geschiktheid van deze module voor de Alfa Academie

De vereiste onderdelen van een Alfa Academie module zijn:

- Minimaal 20 uur aan opdrachten/materiaal om mee te werken
- Duidelijk omschreven eindproduct/eindopdracht
- Leerlingen zijn in staat om zelfstandig aan de slag te gaan
- Inhoud is verrijkend

In hoeverre voldoet het prototype hieraan? (wat is er nodig om te zorgen dat de module geschikt is?)

Overige punten

Welke overige opmerkingen heb je na de analyse van de module?

Appendix G - Sample of the Transcribed Teacher Interview

P: Ja, ja. Kijk het lastige, de kleine nee die je erbij kan stellen, of de kleine vraagteken die je erbij kan stellen, is in hoeverre je dat meet, zegmaar. Ik denk niet dat het meetbaar aan het einde, dat je kan zien dat die vergroot zijn, maar ik denk wel dat die kan helpen met de ontwikkeling, omdat je bijvoorbeeld met dat IDEALS volgens, leerlingen volgens een bepaalde methodiek dwingt te kijken, maar wel open. Dus, in geen van die 'lessen', dwing je ze om een bepaald standpunt in te nemen. Bij een van die assignments kijken ze van kant 1, en bij een andere van een andere kant, en aan het einde geef je ze een keuze: "Denk nou eens voor jezelf na en waarom" En voor mij is dat de essentie van Critical Thinking. Ik bekijk een bron of een video, ik stel daar vragen over ana mijzelf, en dan evalueer ik ook mijn mening bijgesteld is of niet en waarom, en of ik er nu anders over denk, en dat is eigenlijk waar het project ook in uitmondt. Dus je begint kleinschalig, of niet kleinschalig, naar je begint met bronnen, met documentaires en dergelijke, en je werkt toe naar die proposal waarbij je heel duidelijk zegt: "position yourself and acquire sources to support your position", maar niet "position yourself on this side of the argument".

→ Critical Thinking is probably not measurable at the end.
 → Educational Value.
 → IDEALS = method to engage w/ critical thinking
 → Open-mindedness
 Essence of Critical Thinking
 ① Analyze source
 ② Ask questions
 ③ Evaluate opinion
 Enrichment + CT
 → Start small
 → End big
 → Open-mindedness

I: En als ik dan concreet vraag naar bepaalde aspecten van critical thinking, higher order thinking skills van Bloom, analyseren, bekritisieren. In hoeverre zie je deze terug komen? Zou de module helpen in het ontwikkelen daarvan? De sub onderdelen van critical thinking skills, als we het opbreken.

P: Nou ik denk dat je, als je die stappen ^④ Analyseren zit hem vooral in het eerste gedeelte. Je begint ook, het is voor studenten helder opgebouwd. Je begint met de focus op de U.S. volgens mij, en daarna trek je het pas breder, en daarna vraag je ze wat bronnen/video's, bijvoorbeeld wel van beide kanten, en dan vraag je eigenlijk te specificeren wat de argumenten zijn die in die video's naar voren komen. En daarvoor moeten ze dus dat materiaal analyseren, en daar dan uithalen, door de ruis heen door de verhitte discussie heen wat de kern van de twee kanten zijn. Daarna vraag je zie via dat IDEALS, om een eens te evalueren, "kijk nou eens wat je eruit hebt gehaald, waar sta jij in het spectrum, en verandert wat je ziet, naarmate je meer en meer bronnen krijgt, verandert dat wat je ziet?" Bovendien, zit er naar het bekijken en analyseren van de bronnen een stukje waarschuwing in, dus de module geeft ook wel ene goede hint hier en daar, dus ^② bedenk even in de video dat je eventueel gemanipuleerd wordt", en daar zit het kritische in. Dus vorm je mening, maar wees je er ook van bewust dat je mening voor je gevormd wordt. En het creeren

Critical Thinking Skills
 ① Start w/ analysis → use IDEALS
 ② Critical of source material
 ③ Creation = proposal, to utilize what they already know + opinion
 → Also self-reflection.
 → Opinion formed, but indirectly?

→ The warning primes students to be critical of media manipulation if they were not aware of it before.

Appendix H - Two Samples of Transcribed Student Interviews

I: En heeft die opmerking invloed gehad op hoe je de documentaire hebt bekeken?

P: Ik denk na een paar minuten was ik er ook wel achter gekomen dat het zo was geweest, maar je gaat er wel al een beetje in van meteen "oke" je weet wel wat je ervan moet verwachten. Dus zodra je dat ziet, ze gaan Sandy Hook of een dergelijke incident, zal wel voorbij komen.

I: Dan de volgende vraag, gaat nog steeds over dezelfde assignments. Hoe hebben assignment 1 en 3 bijgedragen aan de ontwikkeling van jouw perspectief betreffende de vuurwapen discussie?

P: Ja 1, niet heel veel, want de argumenten ben ik wel een beetje mee bekend. Want ja, het tegenargument is dat het voor de veiligheid en dat die mass shootings gewoon te veel zijn, en dat tegen moeten worden gehouden. En voor is gewoon Second Amendment, we hebben wapens nodig om onszelf te verdedigen. "People kill people" en "guns is a solution, not a problem". Dat soort dingen. En dan assignment 3, was heel erg over die background checks volgens mij geloof ik. Dat had wel, zeg maar, van tevoren wist ik niet heel veel over de background checks en dat die law het niet gehaald heeft, ook al was er wel een meerderheid. En bij het publiek helemaal, een grote meerderheid. Ja dat heeft wel heel veel bijgedragen aan mijn perspectief, ook omdat, je zag ook al die NRA aanhangers die er ook voor waren, dus, ja dat heeft ook wel mijn perspectief een beetje veranderd daarvoor. Op sommige punten van de issue zijn dus beide partijen het wel met elkaar eens, en vantevoren had ik een beetje een zwartepieten discussie visie ervan, dat beiden kanten geen centimeter toegaven en dat het nooit echt een, dat er geen concrete oplossing uit zou kunnen komen. En dat werd hier wel meer duidelijk gemaakt.

I: Top. dan hebben we de vragen die meer over de skills gaan, waarbij de volgende assignment weer over assignment 3 gaat, en mijn vraag dus. In welke mate heeft assignment 3, van part 1, geholpen bij het toepassen van Critical Thinking skills?

P: Ja dat is dus denk ik, dat het realiseren dat het filmpje niet objectief is, dat je daar doorheen, met zo'n bril op moet kijken, dat je niet zomaar op moet nemen wat je voorgeschoteld krijgt, maar zelf je eigen mening vormen. En in dat stappenplan wordt het ook meer duidelijk voor jezelf wat er precies aan de hand is.

Handwritten notes:

- Due to comment. knew what to expect.
- could have found out by self
- Also Media Bias & Manipulation.
- 2 things
 - 1) The statement caused the student to be more biased toward the documentary, or
 - 2) The statement made the student aware that they had to pay attention, activated critical thinking.
- The 'beetje' suggests the 1st option though but the first sentence indicates the 2nd option.
- In its essence this is tied to Critical Thinking.
 - Students could also talk about 'learning' or 'bias'
- Arguments of 2) known.
 - Against = safety -> too many shootings
 - For = 2nd amendment
- New info -> Does suggest that he 'learned' something new. The new info contributed (is positive) to his perspective and development thereof. Suggest he values the new info
- Mentions pro-safety NRA members in relation to new perspective
- Discussion is less one-sided than he originally thought -> His perspective now includes that there is not black & white. In other words: he learned something new.
- 3) Helped clarify w/ new info.
 - This means that his pre conceived notions were 'corrected' -> Can I tie this to Open-mindedness, neutrality & Bias?
- Media Bias & Manipulation
- No objective POV @ 3)
- Have to look past what is presented to you.
 - Had to poke through the 'noise', he had to be inquisitive / investigative, to be critical, to be the opposite of complacent -> Conscientious?
 - Conscientiousness
- Freedom of Choice
- Critical Thinking

Student 4: Codename Musician

verschillende dingen die aan bod kwamen zegmaar. Dus niet alleen het onderwerp, maar ook bijvoorbeeld de context en dat soort dingen, en dat is niet iets typisch waar ik aan denk. en dat vond ik wel verrijkend ja. Wat ik realiseer me eigenlijk dat er veel meer dingen zijn dan wat je direct ziet. Dat eigenlijk.

I: Oke, kun je daar een voorbeeld van noemen?

P: Hmm, Ja ik, ja tijdens die documentaire de context. Dat ik dacht van, ik een beetje het idee van "waarom? waarom hebben zij, zouden ze dit hebben gemaakt" en "hoe" want ik vond, ik had soort van een. Als je kijkt naar het eerste filmpje van die panels, realiseer ik me dat er heel erg een bias is en op basis daarvan ben ik gaan nadenken "hoe zou het zijn als het eerlijk zou zijn?" Tijdens het kijken van die documentaire van die panels zou ik denken "Ja, maar wat als allebei de kanten eerlijk aan bod kwamen?" Ik heb het een beetje vaag uitgelegd, maar...

I: Nee, ik snap wel wat je bedoeld. Er werd hiervoor uitgelegd dat er meer aandacht besteed werd aan de ene kant...

P: Ja, precies, precies

I: .. van de discussie, dan aan de andere kant

P: En dan zat ik te denken "wat als dit meer aandacht werd besteed aan de Republican side," was het in dit geval. Dus dat je die kant meer aan bod zou krijgen, dat je daar meer de kant van zou zien. Hoe zou dat de mening van mij veranderen? Hoe zou dat de resultaten van de panels veranderen. En hoe zou dat misschien de documentaire beïnvloeden? Dat meer.

P: En het was ook sowieso over die specifieke onderwerp verrijkend. want ik kende gewoon de algemene discussie Democrats zijn voor, Republicans zijn tegen.

I: Mhm

P: En ik wist, ik vind dat ze moeten afgeschaft worden en verder had ik er niet echt veel, niet echt een mening over en dan door het zien hiervan ben ik wel een duidelijke een sterke mening gaan vormen over het onderwerp, maar niet zozeer of ik voor of tegen ben. Ik juist een mening van "ik vind dat er een kant heel erg geholpen wordt door de verschillende

Handwritten notes:

- REALLY paid attention
- o Subject
- o Context
- Has become more aware of things that happen beyond surface level.
- o Context!
- ↳ It might have activated the ANALYTICAL part of critical thinking
- ↳ Was of Educational Value because the student learned more
- ponders absence of Bias in videos
- ↳ As in, "how would it be if the videos weren't biased?"
- ↳ Key word indicate critical thinking
- Bias provokes thoughts about it's absence and how that might have influenced their opinion.
- ↳ Assignments definitely provoked critical thinking.
- Enriched subject knowledge
- ↳ He already knew a little bit, but the assignments enriched that subject-related knowledge even more
- o Educational Value.
- Was free to choose the focus of his opinion. No political focus, but media focus bias
- ↳ So, the assignments helped develop an opinion that doesn't necessarily place this student on one side of the fence. Rather, his opinion is about media manipulation and bias, indirectly more tied to Critical Thinking and Neutrality.
- o If I wanted the student to be more critical, then this student would be an example.
- Videos helped form a stronger opinion, one that focuses on potential bias.

Appendix I - Informed Consent Forms²⁹

Informed consent formulier

Titel onderzoek: Locked and loaded, An open-minded approach to the U.S. firearms discussion
Verantwoordelijke onderzoeker: Dhr. Nick Ruhe
Telefoonnummer: [REDACTED]
E-mail: [REDACTED]
Locatie van de studie: Christelijk Lyceum Zeist

Beste deelnemer of voogd,

Uw zoon of dochter is gevraagd om met te doen aan een onderzoek. Het onderzoek bestaat uit het maken van een aantal opdrachten uit een verrijgingsmodule en een interview. De focus van de module ligt op Amerika, met daarin terugkomend de onderwerpen *vuurwapen geweld* en *het recht om een vuurwapen te bezitten*. In een periode van ongeveer 2 weken oriënteren de leerlingen zich over het onderwerp en worden ze gevraagd om zelfstandig onderzoek te doen naar een deelonderwerp. Het doel van dit onderzoek is om een waardige module te ontwikkelen voor de Alfa Academie op het CLZ, waarin leerlingen al samenwerkend hun kritisch denkvermogen en academische schrijfvaardigheid sleutelen.

Het eindinterview zal met opname apparatuur worden vastgelegd. Deze opname is enkel bestemd voor onderzoeksdoeleinden.

Hierbij verklaart u dat uw zoon/dochter vrijwillig aan dit onderzoek deelneemt en hiervoor geen financiële compensatie ontvangt. U geeft uw goedkeuring dat de testresultaten anoniem worden verwerkt en geanalyseerd in het kader van het onderzoeksproject gecoördineerd door Universiteit Utrecht. De resultaten van het onderzoek, inclusief de audio opnames, worden enkel en alleen door de onderzoeker verwerkt. De opnames worden bewaard totdat het onderzoeksverslag is beoordeeld en worden daarna vernietigd.

Uw zoon of dochter kan zich/haar op elk moment en zonder opgaaf van redenen terugtrekken uit het onderzoek of mag besluiten geen antwoord te geven op vragen die gedurende het onderzoek gesteld worden.

In het geval dat uw zoon of dochter wilt stoppen met deelname aan de studie kunt u contact opnemen met Dhr. Nick Ruhe

Uw toestemmingsverklaring relateert alleen aan informatie die u geeft in het kader van het onderzoek

Naam deelnemer: [REDACTED]
 Naam Voogd: [REDACTED]

Datum: 5-12-19 Handtekening deelnemer: [REDACTED]
 Handtekening voogd: [REDACTED]

²⁹ Due to the Covid-19 outbreak, it was not possible to collect two of the student-participants' informed consent forms. At no point have these participants indicated they wanted to be excluded from this study.

Informed consent formulier

Titel onderzoek: Locked and loaded, An open-minded approach to the U.S. firearms discussion

Verantwoordelijke onderzoeker: Dhr. Nick Ruhe

Telefoonnummer: [REDACTED]

E-mail: [REDACTED]

Locatie van de studie: Christelijk Lyceum Zeist

Beste deelnemer of voogd,

Je bent gevraagd om mee te doen aan een onderzoek. In dit onderzoek analyseer je een verrijksmodule over de onderwerpen *vuurwapen geweld en het recht om een vuurwapen te bezitten*. De focus module focust zich op Amerika. In een periode van ongeveer 4 weken krijg je twee keer de tijd om de module door te lopen aan de hand van een aantal criteria. De eerste keer geef je feedback op een prototype en de tweede keer geef je feedback op een gereviseerde versie. Feedback wordt middels een interview verzameld.

Het doel van dit onderzoek is om een waardige module te ontwikkelen voor de Alfa Academie op het CLZ, waarin leerlingen al samenwerkend hun kritisch denkvermogen en academische schrijfvaardigheid sleutelen.

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Uw toestemmingsverklaring relateert alleen aan informatie die u geeft in het kader van het onderzoek

Naam deelnemer: [REDACTED]

Datum: 13-12-19

Handtekening deelnemer: [REDACTED]

Informed consent formulier

Titel onderzoek: Locked and loaded, An open-minded approach to the U.S. firearms discussion

Verantwoordelijke onderzoeker: Dhr. Nick Ruhe

Telefoonnummer: [REDACTED]

E-mail: [REDACTED]

Locatie van de studie: Christelijk Lyceum Zeist

Beste deelnemer of ~~groep~~,

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Uw toestemmingsverklaring relateert alleen aan informatie die u geeft in het kader van het onderzoek

Naam deelnemer: .. [REDACTED] ..

Datum: Handtekening deelnemer: .. [REDACTED] ..

15/12/19

Informed consent formulier

Titel onderzoek: Locked and loaded, An open-minded approach to the U.S. firearms discussion

Verantwoordelijke onderzoeker: Dhr. Nick Ruhe

Telefoonnummer: [REDACTED]

E-mail: [REDACTED]

Locatie van de studie: Christelijk Lyceum Zeist

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Uw toestemmingsverklaring relateert alleen aan informatie die u geeft in het kader van het onderzoek

Naam deelnemer: [REDACTED]

Naam Voogd:

Datum: 26/11/19 Handtekening deelnemer: [REDACTED]

Handtekening voogd: