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Motivational Strategies and Student Engagement in a Blended German Course

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ABSTRACT

Motivational Strategies and Student Engagement
in a Blended German Course

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Blended and online courses can require more student self-regulation than traditional in-person courses. Instructors and course designers can support student motivation and self-regulation in a variety of ways, such as by including motivational strategies in the course materials. The purpose of this study was to explore the relationship between the following three factors: the motivational strategies employed in the online course materials of a blended German language course, student engagement in the course, and student usage of the course materials. Selected course activities were analyzed using a checklist based on Keller's ARCS (Attention, Relevance, Confidence, Satisfaction) model for motivational design to identify the motivational strategies that were present. At the end of each unit, students completed surveys about their level of engagement with the online portions of the blended course and their perceptions of the online activities. At the end of the semester, data about student usage of the online activities was collected from the Canvas Learning Management System. The results of this study show that a wide range of motivational strategies are used in the online materials of this course and that students were highly engaged in this course. Students found the grammar and vocabulary activities to be the most motivating and the most useful for their language learning. The number of Attention strategies in an activity was strongly correlated with how often students used the activity, and the number of Attention strategies also predicted how often students would use the activities, likely because Attention strategies increase ease of use of the materials and encourage student curiosity. The number of Satisfaction strategies in an activity predicted how motivating students would find the activity, likely because Satisfaction strategies allowed students to use their new skills in realistic contexts and experience intrinsic and extrinsic rewards. There was a strong correlation between how motivating students found an activity and how useful they found the activity for their language learning. Including more motivational strategies, particularly Attention and Satisfaction strategies, can enhance the student experience and increase student motivation; however, students are most likely to be motivated by activities that they find useful for their language learning.

ACKNOWLEDGMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1: Introduction

The number of online and blended language classes has increased in recent years, which has allowed both students and teachers to take advantage of the increased flexibility that blended learning can provide. However, students in online and blended courses can also have increased self-regulation difficulties with that autonomy. One important element of self-regulation is student motivation (Andrade, 2012). Teachers can have significant impact on student motivation, and they can support students and increase student engagement by improving the design of online course environments (Dörnyei, 1994; Hampel & Pleines, 2013). An underutilized method of analyzing online language courses is motivational analysis, which allows instructors and course designers to determine how well the course currently motivates students and how it might be improved (Keller, 2010).

The purpose of this study was to explore the relationship between three factors: the motivational strategies employed in the online course materials of a blended German language course, student engagement in the course, and student usage of the course materials. This was completed by analyzing selected online activities from Brigham Young University's blended German 201 course, surveying the students of this course at the end of each unit, and collecting data about how students used the online course materials.

Chapter 2: Review of Related Literature

With decreasing enrollments in post-secondary world language classrooms (Looney &
Lusin, 2019), it is increasingly important for instructors to be aware of what motivates their
students to learn a language. This is particularly important in blended and online language
courses, where online interaction has been substituted for traditional in-person interaction.
Because motivation is so complicated, it is important for teachers to understand what motivation
is and how they can influence and support student motivation in their courses. This study
investigated the motivational strategies used in the online portion of a blended language course
and their relationship to student engagement and student perceptions of online activities, which
will lead to a better understanding of the role of motivational strategies in the design of blended
language courses.

Student Motivation to Learn a Second Language

To understand what motivates students and how motivation changes, it is important to
first determine the components of second language motivation. Motivation is a complex
construct that encompasses many internal processes and external influences (Deci & Ryan, 1980;
Dörnyei, 1994). Motivation affects both actions that are conscious and those that are
unconscious, and this motivation can come from intrinsic and extrinsic influences (Deci & Ryan,
1980). An important element of the cognitive processes involved in motivation is how people
feel about the choices or tasks before them. In order for a behavior to feel intrinsically rewarding,
and thus intrinsically motivating, it needs to be autonomous (Dörnyei, 1994). In addition,
motivation is influenced by feelings of self-efficacy, which means that a person feels that they
can successfully complete a given task, which is related to general self-confidence (Dörnyei,
1994; Hsieh & Schallert, 2008). Feelings of self-efficacy are related to the overall mindset that

one has when faced with problems and how one justifies previous failures (Dweck, 2016; Hsieh & Schallert, 2008). Thus, in addition to being influenced by external factors, motivation is closely linked to how one feels about oneself and one's task.

While all motivation is influenced by the factors already discussed, motivation to learn a second language is influenced by some factors particular to language learning. Dörnyei (1994) theorizes that there are three components to language learning motivation: the language level (feelings towards the target language and culture), the learner level (self-perceptions and self-confidence), and the learning situation level (feelings toward and influence of the specific course, materials, teacher, and learning group). Language learning is a social process, both in the language classroom and because it tends to prepare students for future interactions with members of the target culture. Thus, students' written and verbal interactions with teachers and other students can have an important effect on their motivation (Busse & Walter, 2013; Dörnyei, 1994). Student motivation is also greatly influenced by students' perceptions of how they want to or think they should use the target language in the future (Csizér & Dörnyei, 2005; Henry, 2017).

In addition to encompassing many factors, motivation is also complex because each student is motivated differently. Different students set different kinds of goals and are motivated by different kinds of incentives (Busse & Walter, 2013; Miller, 2019). For example, students can set goals that are more focused on what they want to achieve or more focused on what they want to avoid (such as failure or embarrassment), and language students can set goals based on the kinds of people they want to be able to communicate with or the future contexts where they believe their language will be useful (Miller, 2019). Students are also motivated to learn specific languages for various reasons (Csizér & Dörnyei, 2005; Lamb & Arisandy, 2019; Williams,

Burden, & Lanvers, 2002). Students may be motivated to learn many foreign languages or to learn just a specific one, and that motivation may be affected by the students' regard for the target culture (Csizér & Dörnyei, 2005). Gender differences have been found in both the languages students are interested in studying and in the kinds of incentives that are most effective (Gass, Gorp, & Winke, 2019; Williams, Burden, & Lanvers, 2002). Of course, students' self-perceptions also differ, and subsequently, they will have differing levels of self-efficacy and perceptions of success and failure (Dweck, 2016; Hsieh & Schallert, 2008). Thus, motivation in the language classroom is a complex construct and varies greatly between students, and it can vary even more significantly because motivation can also change over time. Teachers can best make changes to their classrooms to improve motivation when they understand what motivates their students and how motivation can change.

Motivation Change

Even students who were once extremely motivated can lose motivation and become less interested in learning a world language, as multiple studies have found that learners' motivation decreases over time. Busse and Walter's (2013) longitudinal study investigated undergraduate language majors' motivation over the course of a semester through questionnaires and interviews. This study found that, even as students' intrinsic motivation and feelings of self-efficacy decreased during the year, their desire for proficiency increased over time. Students felt this desire even when they felt they were not making progress in the language because of the decrease in time spent practicing the language in class compared to their secondary school experiences. Williams, Burden, and Lanvers (2002) found that British seventh graders were generally more motivated to learn languages than ninth graders were. While the students in both

studies were in different, complex contexts, this suggests a pattern of decreasing motivation that teachers should be aware of.

Although some studies suggest that it is common for students' motivation to decrease over time, others suggest that it is possible to increase students' motivation over time, particularly as students change their self-perceptions and their expectations for themselves. Students can change their mindsets when faced with failure so that they are more willing to persist despite setbacks (Dweck, 2016; Hsieh & Schallert, 2008). Students can also change their self-perceptions in terms of what languages they see as a part of their identity: a student who is contentedly bilingual and does not want to learn another language could change their mind and see multilingualism as an important part of their identity (Henry, 2017). Since motivation includes many factors, increases in motivation could be due to a variety of reasons, but it appears that broadening students' understanding of their identities as language learners and increasing self-confidence and self-efficacy are important elements involved in increasing motivation. As teachers strive to find ways to increase students' motivation, is it particularly important for teachers to understand the parts of motivation that they can most directly influence.

Teacher Influence on Motivation

As an important element of the learning environment of a second language classroom, language teachers can have a significant effect on student motivation. Depending on the structure of the learning institution, teachers may have a large amount of control over various parts of the learning environment, from curriculum and expectations to individual learning activities, all of which can affect student motivation (Dörnyei, 1994). Some students' motivation can also be influenced by a teacher's experience and reputation (Busse & Walter, 2013). While a teacher cannot construct an environment that is perfectly motivating to all students, teachers need to be

aware of how the changes they make to the learning environment can affect the students and their motivation.

One way that teachers can influence student motivation is through their interactions with students. Teachers can encourage students to change their mindsets and self-perceptions by demonstrating how the target language could be relevant to students' current or future lives (Henry, 2017). Teachers can also use their interactions with students to foster a learning environment with low anxiety that encourages students to be more self-confident (Dörnyei, 1994). Though student motivation will still vary, teachers should be aware of their influence on students and strive for interactions that encourage students and increase motivation, rather than discouraging students and contributing to the all-to-frequent decrease in motivation to learn a second language.

Motivation in Blended Learning

While different institutions have different standards for what is categorized as a blended or a hybrid course, it is generally understood that a blended course is one that includes some combination of in-person learning and distance learning, particularly learning in an online environment (Graham, 2013). A benefit of blended learning is that it can give students more freedom and autonomy in their learning (Graham, 2013; Vanslambrouck et al., 2018). This increase of autonomy means that students need to be able to self-regulate to navigate a course with fewer constraints (Barnard et al., 2009). However, self-regulation is not the only determining factor in success in virtual learning environments, as changes in course design can also have an effect on student engagement and, thus, success. For example, changes to the types of discussion boards in an online course influenced the ways that students posted on them (Hampel & Pleines, 2013). Regardless of whether a course is in-person, online, or blended,

ensuring that all parts of the course design "reflect and support each other" can increase student engagement and deepen learning (Fink, 2007, p. 15). As such, teachers and designers of blended courses should carefully consider the design of their course to determine how they can best support student self-regulation and motivation.

Motivational Analysis

One way to determine how a course, whether in-person, blended, or online, supports student motivation is through a motivational analysis. For in-person classes, motivational analyses can be conducted through surveys and observations based on various models of motivation and motivational strategies (Guilloteaux & Dörnyei, 2008; Ruesch et al., 2012). When considering the design of virtual environments in blended and online courses, a particularly useful framework is the ARCS model for motivational design. ARCS stands for Attention, Relevance, Confidence, and Satisfaction, and the model encourages educators to consider how they can design a course or learning experience to best motivate their students. (Keller, 2010). Researchers have published motivational analyses of both blended and online courses using the ARCS model, which gave the researchers more information about how well their courses were designed to promote student motivation (Chang & Chen, 2015; ChanLin, 2009). However, no previous studies that used this model to analyze a blended language course were found. This study applied similar methods of using the ARCS model to analyze the online content of a blended language course in order to determine how the course design affects student motivation and engagement.

Student Engagement

Like motivation, student engagement is a complicated construct. Student engagement describes a student's interactions with a course, whether while working independently, working

with materials, or interacting with classmates or instructors, and it consists of "both affective and behavioral components," such as personal participation, emotional reactions to a course, and connections with classmates (Dixson, 2015, p. 4). Various instruments exist for measuring student engagement, including the Online Student Engagement Scale (OSE), a student survey that measures engagement in specifically online courses based on students' perceptions of their own behaviors, thoughts, and feelings (Dixson, 2015). Some researchers have begun using student log data, such as number of page views and amount of time spent on certain tasks, from learning management systems (LMS) to measure student engagement, but more research is needed to determine how effective such data is at predicting student engagement (Henrie et al., 2015). This study used a combination of student surveys and LMS log data to measure student engagement.

Student motivation, particularly in a language course, is a complex construct that is affected by a variety of factors. Student motivation is further complicated in a blended or online learning environment because additional self-regulation skills may be needed to help students succeed in the course. Because teachers can influence student motivation and engagement, particularly through their verbal and written interactions with students when utilizing sound and motivational course materials, it is important for teachers to understand their role in promoting student motivation. Thus, this study investigated the relationship between motivational strategies used in the course design materials of a blended language course in relation to student engagement in the course and perceptions of course materials.

Chapter 3: Methodology

In order to investigate the motivational strategies in the online portion of a blended course and student engagement with those materials, this study was designed using the ARCS model of motivational design and the Online Student Engagement Scale in the context of a blended German course at Brigham Young University. In addition to the research questions for this study, this chapter will describe the context of this study, including the types of online activities used in the blended course, as well as the sources of information and process of data collection and analysis.

Research Questions

The research questions for this study were as follows:

RQ1. What motivational strategies, as identified using the Adapted Motivational Tactics Checklist, are employed in the online activities in this blended German course?

RQ2. How engaged are the students in the blended German course, as measured by the Online Student Engagement Scale, course page views, and time spent in the online course?

RQ3. What online activities do students find the most motivating and useful for their language learning, as identified through student perception surveys?

RQ4. What is the relationship between the motivational strategies used in the activities, as identified using the Adapted Motivational Tactics Checklist, student perceptions of how useful and motivating the activities are, as measured by student surveys, and student usage of the course materials, as measured by course page views?

Setting

This study focused on the German 201 course at Brigham Young University in Utah. German 201 is the first of two second-year German language courses. By the end of German 202

(the next course in the series), students are expected to communicate at the ACTFL Intermediate Mid level. Data was collected from the Fall 2020 and Winter 2021 semesters. Each semester had two sections of the course. The Fall 2020 sections were taught by a different instructor than the Winter 2021 sections, but the online materials were the same for both semesters.

The course has four units, and each unit is structured around a different German film: *Die drei Räuber, Das Wunder von Bern, Die Welle,* and *Almanya – Willkommen in Deutschland.* The course was designed by the course's primary instructor using the textbook *Cineplex: Intermediate German Language and Culture Through Film* (Schueller, Zachau & Collenberg-Gonzalez, 2014). This course has been taught using the flipped classroom model since 2013, with an online mastery-based grammar workbook that allows for unlimited practice. The course has been taught as a blended course since 2018. Before it was a blended course, the class met in person five times a week. As a blended course, there are more online activities than in the flipped classroom approach, and the class has fewer synchronous meetings. In Fall 2020, the classes met three times a week in person (Mondays, Wednesdays, and Fridays). In Winter 2021, the classes met four times a week via the videoconferencing platform Zoom (Mondays, Tuesdays, Wednesdays, Thursdays). All class sessions last 50 minutes.

The online portion of the course is housed on the Canvas Learning Management System (LMS). Each unit is divided into 16 lessons. Each lesson includes up to four online activities, which are due each weekday before the time that class is scheduled (e.g., for a class that meets at 9 am, each day's assignments are due at 9 am, even on days that the class does not meet). Because this study focused on specific types of activities used in this course, it is important to

understand the types of work that students complete online. The online activities can be divided into 11 categories, described below.

Vocabulary Practice and Mastery Quizzes

The first assignments in each unit introduce students to the vocabulary for that unit. Students are given a list of German vocabulary words related to the film and their English translations. Students are also asked to memorize the genders and plural forms of the new nouns. Often, the vocabulary list is accompanied by an embedded set of Quizlet flashcards with the new vocabulary words.

The second part of these activities is the vocabulary mastery quizzes. In this course, mastery quizzes are short quizzes that draw randomly from a large bank of questions to test the students' mastery of a given vocabulary or grammar concept. Students can take the quizzes as many times as they would like with a new set of questions each time. After taking the quizzes, students receive instant feedback about which questions they answered incorrectly and what the correct response would be. Students are expected to retake the vocabulary quizzes until they reach a score of at least 80%. Each unit has three vocabulary lessons with accompanying quizzes at the beginning of the unit and one vocabulary review quiz towards the end of the unit.

Grammar Practice and Mastery Quizzes

While each unit has vocabulary mastery quizzes, the majority of mastery quizzes are meant to help students master the grammar concepts in the unit. Students are introduced to a grammar concept that they may or may not have encountered in previous German courses. Many concepts are introduced with a lecture in a whiteboard-style video. Students are also given a written explanation with example sentences as well as links to external sources with additional information about the grammar concept.

Like the vocabulary mastery quizzes, the grammar mastery quizzes draw from a large bank of questions, and students can take the quizzes as many times as they would like. In addition to instant feedback about what the correct answers to the quiz questions are, some grammar quizzes also give brief explanations for why a certain answer is correct to support student understanding. Students are expected to retake the grammar quizzes until they reach a score of at least 90% (or, for some quizzes, 100%). Each unit has between 12 and 14 grammar lessons and mastery quizzes.

Film Performance Project

For an assessment at the end of each unit, the students must memorize and recite an assigned monologue or dialogue from the film. The texts are chosen by the instructor and are approximately 100–150 words. Each student submits a creative video of them reciting the text. If students choose to create a video with a group or create a video where the text is recited as a voiceover, they must submit an additional video to show that they can recite the text from memory. On the last meeting of class for each unit, the students watch each other's videos. The videos are graded on pronunciation, fluency, memorization, and creativity. Each unit includes a page introducing the project with examples, memorization helps, and a rubric and a page for submitting the assignment.

Performance Prep Activities

These optional activities help students memorize the text for the film performance project. If students complete these activities on time, they receive extra credit. For these assignments, students listen to the film text as many times as they would like and then complete a quiz that tests their memorization of the text and reviews vocabulary or grammar principles.

Many of these quizzes are cloze tests that require students to fill in missing words. Each unit has 12 of these activities.

Film Worksheets

The unit's film is divided into four sections. Students watch the films online with German subtitles. For each of the four sections, students receive a worksheet of comprehension questions in German to complete while watching the film. Some questions ask students to define new vocabulary terms or infer the meaning of idioms. The worksheets are discussed and scored during class time.

Cultural Discussions

Students are given a general cultural topic related to the film, along with a small amount of background information and several possible topics and questions that they can research. Students are instructed to research the topic and write at least 50 words about the topic to post in a group discussion, along with an image or link to an outside source. On subsequent days, students are asked to comment on classmates' posts, respond to the comments they receive, and finally revise their original post. These assignments are graded on task completion and the sophistication and accuracy of the writing. In Fall 2020, there were three cultural discussions in each unit, but in Winter 2021, there were only two cultural discussions in each unit.

Imitating Sentences

Students are given two (non-consecutive) sentences from the film and asked to write their own sentences based on the grammatical structure of the model sentences. Students are also given examples of new sentences based on the model sentences to help them determine which grammatical structures they need to imitate. Students write their own sentences on a topic of

their choice and post their new sentences to a discussion board. These sentences are graded on accuracy. Each unit has two of these activities.

Crafting Paragraphs

Students are given a short paragraph that is written in a simple style with very few conjunctions, details, or subordinate clauses. Students must rewrite the paragraph to be more sophisticated and complex, such as by adding relative clauses, adding subordinating conjunctions, using adverbs and adjectives, or changing word order for emphasis. Students post their new paragraph to a discussion board. The paragraphs are graded on accuracy and sophistication. Each unit has one activity like this.

Narrative Writing

Students are instructed to write a narrative based on the unit's film and are given ideas for what they could write about, such as writing an alternate ending, writing about different characters in a similar situation, or writing a letter between two characters. Students are required to write at least 300 words and include two sentences based on the model sentences in the Imitating Sentences activities.

After students submit a draft of their narrative, they choose a group of classmates to meet with outside of class to review each other's narratives. Students report on how each participant contributed to the peer review activity, and finally, students submit a revised draft of their narrative. The narratives are graded based on task completion and the sophistication and accuracy of the writing. Each unit has one page about the first draft, two pages about the peer review activity, and one page about the final draft.

Cumulative Mastery Quiz

This is an optional activity to help students review for the unit exam. If students complete this quiz, they receive extra credit. This mastery quiz is longer than other mastery quizzes and draws from quiz banks used in previous mastery quizzes, so students can get unlimited randomized practice on the vocabulary and grammar topics from the whole unit. Like the other mastery quizzes, students receive immediate feedback about the correct answers to the quiz questions. Only the first three units have this activity.

Unit Practice Test

This is an optional activity to help students review for the unit exam, but unlike the cumulative mastery quiz, it is not for extra credit. This activity includes questions that are similar to those on the unit exam so that students can be familiar with the topics and types of questions. Some quizzes have a small amount of randomization, but the vast majority of questions will stay the same if students choose to retake the quiz. Students receive automatic feedback on all questions that can be graded by computer, but they may not receive feedback on questions that require responses in complete sentences. Students are also informed that there will be listening comprehension and writing portions of the exam, but there are no sample questions for those sections. The first three units have a practice unit test, and the fourth unit has a practice final exam.

Researcher Context

After understanding the course as a whole, it is important to understand the researcher's own experience with this course. This course was chosen for the study because it is the oldest blended German course at Brigham Young University, so the instructors and course designers have had the most time to improve the materials. Also, during the semesters that data was collected, German 201 was more likely to have sufficient student participants than German 202.

Before designing this study, the researcher taught the blended German 201 course once during Fall 2019 and made some changes to the course materials, including correcting errors and writing a small number of quiz items. In Summer 2020, the researcher reviewed the course to make suggestions about converting it to an independent study format. Though the researcher did not teach German 201 during data collection or ever see students' grades for this course, the researcher knew some of the students prior to data collection because of interactions in previous German courses or in the university language lab. During data collection, the researcher interacted with some of the students through the university language lab, including by giving feedback on narrative drafts. After data collection from the Fall 2020 students but before data analysis, the researcher was the teaching assistant and grader for a blended German 202 class in Winter 2021 that included some of the Fall participants in this study. German 202 is the next course in BYU's second-year German language sequence and includes the same types of activities as German 201. This additional exposure to some of the participants does give the researcher unanticipated knowledge of those students' language abilities and how they interact with this type of course. However, the effect of this knowledge of these students was limited by analyzing the data with only randomized student numbers attached, rather than student names.

Sources of Information

In order to investigate the research questions for this study, this study included three sources of information: the Adapted Motivational Tactics Checklist, based on Keller (2010), a survey consisting of the Online Student Engagement Scale (OSE) by Dixson (2015) and questions specific to the course activities examined in this study, and usage data logged by the Canvas LMS.

Adapted Motivational Tactics Checklist

The Adapted Motivational Tactics Checklist was used to analyze the online course materials for various motivational strategies. Keller's original checklist, the Motivational Tactics Checklist, was not designed for a language learning context, but it is appropriate to use for this study because it was designed for assessing course materials (primarily written materials, but it can also be used for videos or other formats) that are used asynchronously (Keller, 2010). Other instruments, such as Guilloteaux and Dörnyei's (2008) Motivation Orientation of Language Teaching observation scheme, were designed to assess motivational strategies in a language learning context; however, none were found that were designed specifically for course materials, rather than classroom teaching. However, Keller's original checklist includes 73 strategies and was too long to be effectively used for this study. Therefore, the checklist was shortened to create the Adapted Motivational Tactics Checklist.

The checklist was adapted to ensure that it was a manageable length for use in this study and to ensure that there was an equal number of motivational strategies in each of the four categories (Attention, Relevance, Confidence, and Satisfaction) for more effective comparisons. Strategies that did not apply to language learning and that did not apply to the types of course materials in German 201 were removed based on prior knowledge of the course. The checklist was reduced from 73 strategies to 36 strategies, with 9 strategies in each category. The original checklist had three subcategories for each category of the ARCS model, and at least one checklist item from each subcategory was retained, though it was not possible or reasonable to keep three strategies from each subcategory. Finally, while the original checklist suggests assessing whether the given materials have a satisfactory, deficient, or excessive amount of the listed strategy, this adapted checklist was primarily used to assess presence or absence of the

strategies. The Adapted Motivational Tactics Checklist consists of 36 yes-or-no questions and is available in Appendix A.

Student Survey

While the Adapted Motivational Tactics Checklist was used for the course analysis portion of data collection, other sources of information were needed for collecting information about student engagement and perceptions of the activities. The first source of information used to collect student data was a survey that consisted of the Online Student Engagement Scale (OSE) and questions specific to the course. The OSE was created by Dixson (2015) to measure student engagement in online courses, and it consists of 19 Likert scale items. Students chose how well the described behaviors, thoughts, and feelings described them from "not at all characteristic of me" to "very characteristic of me."

Though the German 201 course is not a fully online course (the Winter 2021 sections met synchronously via videoconferencing, but the Fall 2020 sections met in person), the OSE is appropriate for use with this course and this study because it focuses on how students interact with the course in an online environment, so it can be used to gauge student engagement with the online course materials of the blended course for each unit. While not all of the phrasing and listed behaviors apply exactly to this course, it was beneficial to use an already-validated instrument to measure student motivation for Research Question 2.

The OSE is valid and reliable for measuring overall student engagement, but it was insufficient for this study, which also required data about student perceptions of activities specific to this course. Thus, the survey given to students also asks students to identify the types of activity that they find most and least useful for their language learning and the types of activity that they find the most and least motivating. The surveys also include free response

questions that ask students to explain why they found those activities useful or motivating (or

lacking in those categories). The terms "useful for language learning" and "motivating" are

vague and could be interpreted many ways, but this wording was chosen purposefully because

motivation can vary greatly from student to student. Though the student responses will not give a

complete view of how students conceptualize motivation, the free response survey questions

allow students to explain their own perceptions of what makes activities motivating and useful.

The full student survey can be found in Appendix B.

Canvas LMS Usage Data

Because student engagement involves behaviors as well as mental and emotional

responses to the course, it was useful to gather Canvas LMS log data that reports on student

behavior while using the online course materials. The usage data gathered for this study included

the total amount of time students spent logged into the Canvas course and the number of times

they viewed each page. The time in course is also called "total activity" by the LMS, and this

duration includes "any time spent viewing course content that exceeds two minutes" (*How do I

use the People page in a course as an instructor?*, 2020). Not all time spent working on course

assignments would necessarily be included in this duration, and the duration likely includes time

when a student had the Canvas webpage open but was working on another task. However, this

data can give some information about how much time the students spent on this course

throughout the semester.

A more specific measure of student behavior is the number of times a student viewed

each page, called "page views" by both Canvas and this study. According to the LMS, a page

view is recorded for each request to the server (*Analytics page views and participations*, 2019).

Though this means that the number of page views can be inflated either by differences in student

behavior or by differences in students' technology, this is useful for understanding which activities students use the most often.

Data Collection

With three main sources of information, there were also three main stages of data collection for this study: distributing the student surveys, downloading the Canvas data, and analyzing the course materials.

Student Surveys

The first general step of data collection was distributing the student surveys. Students were invited to participate through a pre-recorded video shown during class (Fall 2020) or a brief visit to their virtual class session by the researcher (Winter 2021). Students who chose to participate were emailed a link to the student engagement survey through Qualtrics at the end of each of the four units. Students were asked to complete the survey based on their actions and experiences with the Canvas portions of the blended German course during the unit that was just completed. Reminder emails were sent to students who had not yet completed the surveys after a few days and thank-you emails were sent to students who completed the surveys. The names of students who completed the surveys were also given to the instructors so that the participating students could receive extra credit points for completing the surveys.

Canvas Data

In addition to participating in the four surveys, students who agreed to participate agreed to allow the researcher to access the Canvas usage data about the number of times they viewed each page and the total amount of time they spent online. At the end of each semester, the researcher downloaded the Canvas usage data for the participating students at noon on the day after final exams ended. Afterwards, each student's page views report was organized by unit to

find the total number of page views that were logged for that student in each of the four units. The number of page views for each of the specific activities analyzed in this study was also identified, as described in the Course Materials Analysis section below.

Participants. The participants in this study were a convenience sample of the students in the blended German 201 courses at Brigham Young University during the Fall 2020 and Winter 2021 semesters. In the Fall 2020 semester, there were 28 students across two sections of the course, and 20 students chose to participate in the study. In the Winter 2021 semester, there were 10 students across two sections of the course, and 7 students chose to participate in the study. While information about proficiency and class standing were not collected from these students, students in this course generally range in ACTFL proficiency levels from Novice High to Intermediate Mid and range in class standing from freshman to senior. Canvas log data was collected from all 27 participants, but some participants did not complete any of the surveys, and several students skipped one or more surveys. Of the 27 participants, 24 responded to the Unit 1 survey, 17 responded to the Unit 2 survey, 18 responded to the Unit 3 survey, and 15 responded to the Unit 4 survey. Thus, there were 74 survey responses out of a possible 108 responses, based on the number of students who participated in the study.

Course Materials Analysis

After collecting student data, the final stage of data collection for this study was analyzing the course materials for the motivational strategies that they used. First, each unit's activities in the Fall 2020 version of the course were sorted into 11 categories based on the type of activity. Afterwards, a random number generator was used to select two activities from each category for each unit. If a category only contained one activity, only one activity was selected for that unit. Nineteen activities were selected for Units 1–3 and eighteen were selected for Unit

4, which did not have an activity for the Cumulative Mastery Quiz category. Therefore, 75 total activities were analyzed for this study.

After selecting the activities, these course activities were analyzed by looking at the instructions, formatting, lessons, and quizzes and rating the materials based on the presence or absence of each strategy listed on the checklist. For activities that included a quiz, one randomized version of the quiz was generated using the Student View feature to determine what types of questions were on the quiz, what kind of instructions students were given, and what kind of automatic feedback students would receive. Because of the high quantity of possible quiz questions for some of the assignments, it was not reasonable to look at all of the possible quiz questions. If a motivational strategy was present in the course materials, the materials received a point on the checklist. For activities where more information than just presence or absence of a given strategy would be helpful, memos were written about why it was decided that strategy was present or absent. After analyzing all of the activities, the earliest checklists were reviewed, and any inconsistencies were corrected.

In addition to analyzing a sample of the activities, the unit as a whole was rated on its usage of the motivational strategies based on the introductory materials for each unit and the overall list of assignments. If a motivational strategy was present in any of the activities in the unit, the unit received a point for that strategy on the checklist. If any other activities or course materials included strategies on the checklist, the unit also received a point for those strategies.

Finally, the activities that were analyzed in the Fall 2020 version of the course were compared to their corresponding pages in the Winter 2021 version of the course. From this comparison, a small number of grammar assignments were found that had been altered in the more recent iteration of the course, and some of the cultural discussions were deleted from the

more recent version. Based on this information, new activities were selected that were used in both versions of the course and new checklists for those activities were completed to ensure that the activities analyzed for this study would have been available to all of the participants.

Data Analysis

After the data collection was complete, the quantitative data were entered into SPSS databases. The data were analyzed using descriptive and inferential statistics. After the surveys from both semesters were collected, the responses were anonymized. The written responses to the open-ended questions were organized by unit. The responses were analyzed for patterns of what students commonly said was useful or motivating about the different types of activities, and memos were recorded based on these patterns and notable quotes. The findings of these statistical tests and the qualitative analysis are shown in the next chapter.

Chapter 4: Findings

This chapter will review the findings of this study. One section is devoted to each of the four research questions with information about the motivational strategies used in the online materials of this blended German course, how engaged the students were with the online course materials, how students perceived the online activities, and the relationship between the motivational strategies and student behavior and perceptions.

Research Question 1

The first research question was, "What motivational strategies, as identified using the Adapted Motivational Tactics Checklist, are employed in the online activities in this blended German course?" The first way that this question was investigated was by looking at the results for the Adapted Motivational Tactics Checklist that applied to each of the four units as a whole. These results are shown in Table 1. For the checklists that analyzed the units as a whole, all units used all 9 Attention strategies. The units also used an average of 8.5 Relevance strategies, 7.5 Confidence strategies, and 7.25 Satisfaction strategies. All units used at least 31 of the 36 possible strategies, and two units used 33 strategies.

Table 1

Number of Strategies in Each Category for the Overall Units

Unit	Attention	Relevance	Confidence	Satisfaction	All Categories
1	9	7	7	8	31
2	9	9	8	7	33
3	9	9	7	8	33
4	9	9	8	6	32
M	9	8.5	7.5	7.25	32.25
SD	0	1	.58	.96	.96

Because there was little variation between the units, it will be more useful to investigate this question by looking at the results for the individual activities. On average, each activity had 4.71 Attention strategies, 3.96 Relevance strategies, 4.91 Confidence strategies, and 4.05 Satisfaction strategies, with notable differences between different types of activities (see Table 2). Cultural Discussion activities had the highest average number of Attention strategies (6.75), and Performance Prep activities and Crafting Paragraphs activities had the highest average number of Relevance strategies (5.25). Performance Prep activities also had the highest average number of Confidence strategies (5.88) and Satisfaction strategies (5.13).

Table 2

Average Total Strategies in Each ARCS Category for Different Activity Types

		Attention		Relevance		Confidence		Satisfaction	
Activity Type	N	M	SD	M	SD	M	SD	M	SD
Vocabulary practice and quizzes	8	5.50	0.93	5.00	1.20	5.75	0.46	4.88	1.13
Grammar practice and quizzes	8	4.75	1.67	3.25	2.71	5.13	0.84	4.75	1.40
Performance prep activities	8	4.50	1.07	5.25	1.39	5.88	0.35	5.13	0.35
Cultural discussions	8	6.75	1.28	5.13	1.36	4.25	0.71	4.88	0.35
Imitating sentences	8	5.25	1.17	3.25	0.71	4.88	0.64	4.00	0.54
Film worksheets	8	4.75	1.03	2.50	1.93	3.88	1.64	1.00	1.93
Crafting paragraphs	4	5.00	1.41	5.25	1.26	5.00	1.41	4.25	0.50
Narrative writing	8	3.88	1.89	4.50	1.69	4.00	0.00	4.13	1.25
Film performance project	8	3.25	1.91	2.88	1.25	4.88	1.25	3.88	1.25
Cumulative mastery quiz	3	3.33	0.58	3.33	0.58	5.33	0.58	3.33	0.58
Unit practice test	4	3.50	0.58	3.00	0.82	5.75	0.50	4.00	0.00
All activities	75	4.71	1.63	3.96	1.79	4.91	1.08	4.05	1.54

Note. N = Number of activities analyzed of that type

After investigating the types of strategies that were used frequently in the units and in different types of activities, it is useful to look at the specific motivational tactics that were used

the most and least frequently in the various activities in this blended course. Frequency tests of

the checklist data showed that 34 of the 36 motivational strategies described by the checklist

were found in the activities selected for this study. Five strategies were present in more than 90%

of the activities. Table 3 shows the most commonly used strategies in the activities that were

analyzed (those that were used in 90% or more of the activities), and Table 4 shows the least

commonly used strategies (those that were used in 10% or fewer of the activities). Frequency

data for all 36 strategies can be found in Appendix C.

Table 3

Most Frequently Used Strategies

Strategy Number	Description	Percent of Activities that Used the Strategy
A6	Are there variations in layout (e.g., variation in spatial location of blocks of information)?	96.0%
R5	Are exercises included that allow for personal goal setting, record keeping, and feedback?	96.0%
C1	Are there clear statements, in terms of observable behaviors, of what is expected of the learners as evidence of successful learning?	92.0%
C4	Are the exercises consistent with the objectives, content, and examples?	98.7%
C8	Are learners allowed to go at their own pace?	100.0%

Note. A = Attention Strategy, R = Relevance Strategy, C = Confidence Strategy.

Table 4

Least Frequently Used Strategies

Strategy Number	Description	Percent of Activities that Used the Strategy
A3	Are step-by-step procedures or relationships among concepts made more concrete by use of flow charts, diagrams, cartoons, or other visual aids?	5.3%
A5	Is a sense of mystery evoked by describing unresolved problems which may or may not	9.3%

	have a solution?	
C2	Is there a means for learners to write their own learning goals or objectives?	0.0%
C9	Are learners given opportunities to record comments on how the materials could be improved or made more interesting?	0.0%
S4	Are learners asked, or informed, about how they might continue to pursue their interest in the topic?	6.7%
S5	Are games with scoring systems included to provide an extrinsic reward system for routine, boring tasks such as drill and practice?	5.3%
S7	Are reinforcements used more intermittently as learners become more competent at a task?	4.0%

Note. A = Attention Strategy, C = Confidence Strategy, S = Satisfaction strategy.

Research Question 2

The second research question to be investigated was, "How engaged are the students in the blended German course, as measured by the Online Student Engagement Scale, course page views, and time spent in the online course?" This will be investigated by first examining the results from the student surveys for each unit. On the Online Student Engagement scale part of the survey, students answered 19 Likert scale items describing thoughts, behaviors, and feelings that they may have experienced during the online portions of the blended course. Students responded to the items based on how well the items described them: "not at all characteristic of me," "not really characteristic of me," "moderately characteristic of me," "characteristic of me," or "very characteristic of me." Prior to data analysis, these descriptions were converted into number values, with "not at all characteristic of me" corresponding to a score of 1 and "very characteristic of me" corresponding to a score of 5. Then, the scores were analyzed with descriptive statistics.

When using the OSE, the sum of a student's responses can be used as a measure of overall student engagement. The mean total scores in Units 3 and 4 were higher than those in

Units 1 and 2. Unit 1 had the lowest mean total score (66.75) and unit 3 had the highest mean

total score (69.67). The item with the highest mean score in Unit 1 was "Putting forth effort"

with a score of 4.25. In Unit 2, "Putting forth effort" and "Staying up on the readings" both had

the highest mean score (4.06). In Unit 3, "Doing well on the tests/quizzes" had the highest mean

score (4.22). In Unit 4, the item with the highest mean was once again "Putting forth effort"

(4.2). In all four units, "Looking over class notes between getting online to make sure I

understand the material" had the lowest mean score. In Unit 1, "Posting in the discussion forum

regularly" shared the lowest score (2.96). Unit 1 had the highest number of survey responses

(24), and Unit 4 had the lowest (15). These results are shown in Table 5 and Figure 1.

Table 5

Online Student Engagement Scale Results

	Unit 1		Unit 2		Unit 3		Unit 4		All Units	
Item	M	SD	M	SD	M	SD	M	SD	M	SD
1. Making sure to study on a regular basis	3.50	0.93	3.65	0.93	3.78	1.00	3.73	0.96	3.65	0.94
2. Putting forth effort	4.25	0.61	4.06	0.83	4.11	0.58	4.20	0.78	4.16	0.68
3. Staying up on the readings	3.75	1.15	4.06	0.75	3.89	1.02	4.07	0.96	3.92	0.99
4. Looking over class notes between getting online to make sure I understan	2.96	1.20	2.88	1.17	3.06	1.21	2.93	0.88	2.96	1.12

d the material										
5. Being organized	3.08	1.18	3.47	1.13	3.50	1.15	3.73	0.88	3.41	1.11
6. Taking good notes over readings, PowerPoints, or video lectures	3.13	0.99	3.29	1.05	3.44	1.15	3.00	1.25	3.22	1.09
7. Listening/ reading carefully	4.00	0.72	3.94	0.75	4.00	0.97	3.93	0.80	3.97	0.79
8. Finding ways to make the course material relevant to my life	3.46	0.83	3.59	0.87	3.67	1.09	3.87	0.99	3.62	0.93
9. Applying course material to my life	3.38	0.97	3.76	0.66	3.78	1.06	3.67	0.90	3.62	0.92
10. Finding ways to make the course interesting to me	3.75	0.94	3.82	0.81	3.89	1.08	3.93	0.88	3.84	0.92
11. Really desiring to learn the material	4.12	1.04	4.00	0.79	4.17	0.99	3.87	1.13	4.05	0.98

12. Having fun in online chats, discussions or via email with the instructor or other students	3.38	1.10	2.94	1.35	3.33	1.03	3.00	1.00	3.19	1.12
13. Participating actively in small-group discussion forums	3.29	1.12	3.06	1.25	3.33	0.97	3.40	1.18	3.27	1.11
14. Helping fellow students	3.42	0.97	3.18	0.73	3.56	1.04	3.53	0.83	3.42	0.91
15. Getting a good grade	4.12	0.99	4.00	1.06	4.11	1.02	4.00	1.13	4.07	1.02
16. Doing well on the tests/quizzes	4.08	0.88	3.94	0.75	4.22	0.65	4.07	1.10	4.08	0.84
17. Engaging in conversations online (chat, discussions, email)	3.08	0.93	3.12	1.05	3.39	1.09	3.27	1.03	3.20	1.01
18. Posting in the	2.96	1.00	3.24	1.25	3.28	1.32	3.27	1.10	3.16	1.15

discussion forum regularly									
19. Getting to know other students in the class	3.04	1.00	3.00	1.32	3.17	1.15	3.33	1.11	3.12	1.12
Total	66.75	10.78	67.00	10.72	69.67	12.09	68.80	12.40	67.93	11.27
Number of responses	24		17		18		15		74	

Note. "Not at all characteristic of me" = 1, "Very characteristic of me" = 5.

Figure 1

Mean Scores on the Online Student Engagement Scale for All Units
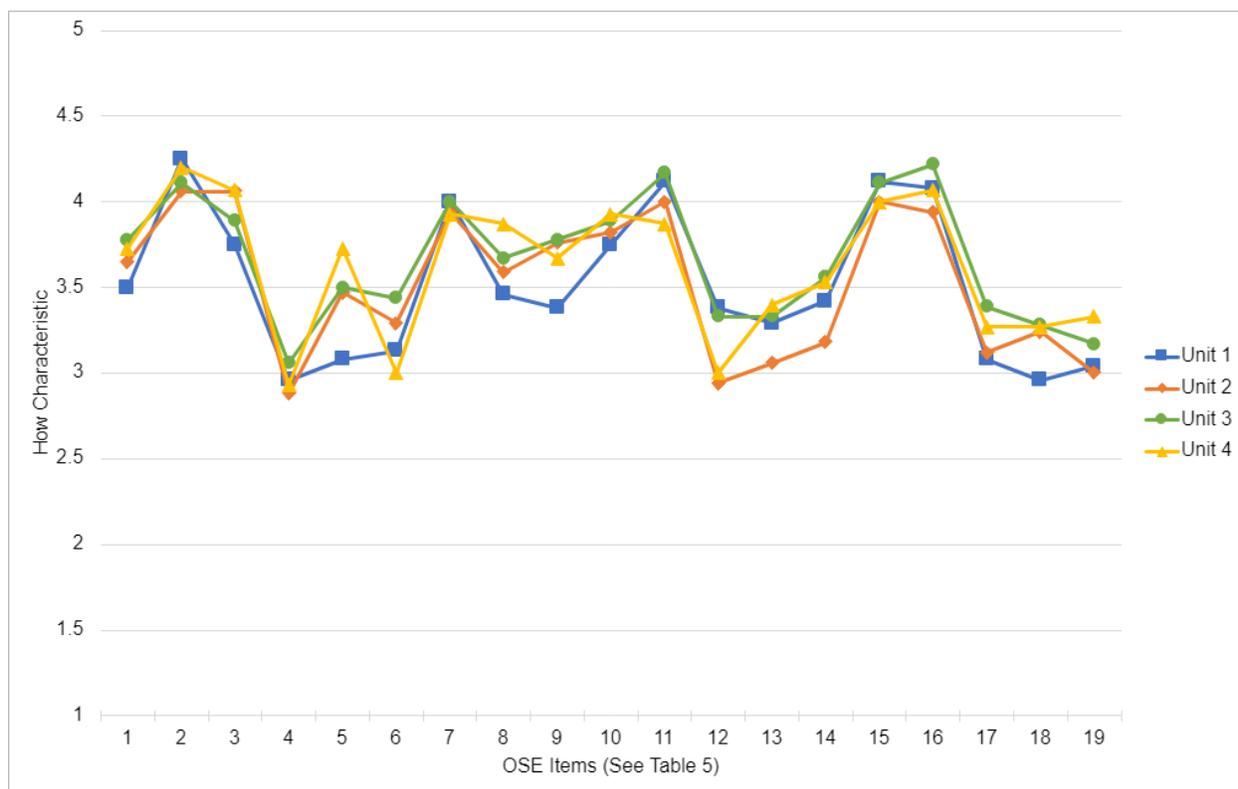
Note. "Not at all characteristic of me" = 1, "Very characteristic of me" = 5.

In addition to measuring student engagement using the OSE, this study also used Canvas

log data to measure student behavior as one element of student engagement. Table 6 shows the

descriptive statistics of the data collected from the Canvas usage logs about the time students

spent in the online course and how many times they viewed course pages in each unit. For the

semester as a whole, the average number of hours spent online was 234.87, and the median was

168.70. On average, students also had 1804.30 page views over the whole semester (median

1779). Both the median and the mean number of page views for each unit decrease over the

course of the semester, from an average of 521.67 page views and median of 481 page views in

Unit 1 to an average of 390.89 page views and median of 374 page views in Unit 4. For all

Canvas usage data, there is a large difference between the minimum and the maximum values.

Table 6

Canvas Usage Data for All Students

Usage Measure	Min.	Max.	M	SD	5% Trimmed Mean	Median
Hours in online course	49.72	860.76	234.87	187.67	214.05	168.70
Unit 1 total page views	234	1201	521.67	205.64	503.42	481
Unit 2 total page views	184	1010	488.48	202.39	478.07	478
Unit 3 total page views	106	796	403.26	167.18	398.07	378
Unit 4 total page views	25	987	390.89	209.92	379.27	374
Whole course total page views	837	3994	1804.30	748.53	1747.32	1779

Note. Min. = Minimum, Max. = Maximum

Research Question 3

In addition to measuring student engagement, the student surveys also included questions

about student perceptions of the different types of online activities in the course. These questions

give information to answer research question 3, "What online activities do students find the most

motivating and useful for their language learning, as identified through student perception

surveys?" The surveys asked students to rank the activities based on how useful the activities

were for their language learning and how motivating the activities were. For both usefulness and

motivation, the students ranked the top three activity types and the bottom three activity types in each category. Prior to data analysis, these rankings were converted into numerical scores. Activities that were in a student's top three for either usefulness or motivation were given a score of 2, and activities that were in a student's bottom three for either category were given a score of 0. Activities that were not assigned a rank were given a score of 1.

When students ranked activities based on how useful they were, the grammar activities consistently received the highest mean scores, as shown in Table 7. In all four units, the vocabulary activities received the second highest mean scores for usefulness, and in Unit 3, the Narrative Writing activities also had the second-highest mean rating (1.39). The cumulative usefulness rating (the sum of the mean scores from all four units) for the grammar activities was 7.12 out of a possible 8, and the cumulative usefulness rating for the vocabulary activities was 6.13. The Performance Prep and Film Performance Project activities were given the lowest or second-lowest mean ratings for usefulness in all four units. The Film Performance Project activities received a cumulative rating of 1.51, and the Performance Prep activities received a cumulative rating of 1.52.

The scores for how motivating the activities were show slightly more variance than the usefulness scores. Overall, the grammar activities were rated as the most motivating, with a cumulative rating of 5.83. The vocabulary activities were rated as the second-most motivating, with a cumulative rating of 5.54. The film worksheets were the least motivating (2.75), and the cultural discussions were the second-least motivating (2.86).

Table 7

Student Ratings of How Useful Various Activity Types Are

Activity Type	Unit 1 Rating		Unit 2 Rating		Unit 3 Rating		Unit 4 Rating		
	M	SD	M	SD	M	SD	M	SD	Total Rating
Vocabulary practice and mastery quizzes	1.61	0.50	1.53	0.52	1.39	0.70	1.60	0.52	6.13
Grammar practice and mastery quizzes	1.74	0.45	1.73	0.46	1.78	0.43	1.87	0.35	7.12
Performance prep activities	0.52	0.59	0.27	0.46	0.33	0.59	0.40	0.35	1.52
Cultural discussions	0.65	0.78	0.73	0.70	0.78	0.65	0.53	0.52	2.69
Imitating sentences	0.96	0.77	0.93	0.80	1.11	0.68	0.93	0.70	3.93
Film worksheets	0.74	0.75	0.40	0.63	0.61	0.78	0.73	0.80	2.48
Crafting paragraphs	1.09	0.67	1.13	0.64	0.83	0.51	0.8	0.56	3.85
Narrative writing	1.26	0.54	1.33	0.62	1.39	0.61	1.13	0.35	5.11
Film performance project	0.39	0.66	0.33	0.49	0.39	0.70	0.40	0.63	1.51
Cumulative mastery quiz	1.17	0.58	1.40	0.51	1.22	0.43	1.33	0.62	5.12
Unit practice test	0.87	0.55	1.20	0.41	1.17	0.62	1.27	0.59	4.51

Note. "Total" is the sum of each unit's mean value.

Table 8

Student Ratings of How Motivating Various Activity Types Are

Activity Type	Unit 1 Rating		Unit 2 Rating		Unit 3 Rating		Unit 4 Rating		
	M	SD	M	SD	M	SD	M	SD	Total Rating
Vocabulary practice and mastery quizzes	1.43	0.79	1.20	0.78	1.18	0.81	1.73	0.46	5.54
Grammar practice and mastery quizzes	1.48	0.79	1.33	0.62	1.35	0.79	1.67	0.49	5.83
Performance prep activities	0.96	0.71	0.73	0.88	0.88	0.78	0.80	0.94	3.37
Cultural discussions	0.87	0.76	0.80	0.86	0.59	0.71	0.60	0.74	2.86
Imitating sentences	1.04	0.71	1.27	0.59	1.41	0.71	0.93	0.59	4.65
Film worksheets	0.83	0.65	0.60	0.51	0.65	0.70	0.67	0.62	2.75
Crafting paragraphs	0.74	0.62	1.2	0.56	0.88	0.60	0.73	0.49	3.55
Narrative writing	0.65	0.83	0.93	0.88	0.88	0.78	0.87	0.74	3.33
Film performance project	0.96	0.77	0.87	0.83	1.00	0.87	0.93	0.80	3.76
Cumulative mastery quiz	1.00	0.60	1.00	0.76	1.00	0.50	1.07	0.70	4.07
Unit practice test	1.04	0.56	1.07	0.59	1.18	0.53	1.00	0.66	4.29

Note. "Total" is the sum of each unit's mean value.

In their survey responses, students described why they did or did not find the various types of activities useful and motivating. Students described the grammar and vocabulary activities as "the backbone of the class" and said that they were useful because they helped them prepare for the exams and learn new concepts. Students also appreciated activities that helped them notice the gaps in their language learning. Most often, those were the grammar and vocabulary activities, but some students applied that descriptor to the Cumulative Mastery Quiz and Narrative Writing activities. Students also liked the way that the grammar and vocabulary activities helped them see how they were improving. Students praised the combination of randomized questions and unlimited practice as both a way to learn and as encouragement to improve, and they cited the score expectations on these quizzes as a strong motivating element. However, when students expressed displeasure and frustration with these activities, it was often because they felt frustrated by needing to take a quiz repeatedly to reach a certain score, especially shortly after being introduced to a grammar concept or to new vocabulary.

When assessing both usefulness and motivation, students were concerned about the relationship between time spent on an activity and the activity's perceived benefits. Some students found the memorization activities (the Performance Prep and Film Performance Project activities) helpful for their language learning, but a larger group of students believed that memorizing a text would not be helpful outside of this course and took too much time away from other assignments. Some students also reported not using the Performance Prep activities because they had other preferred memorization techniques or did not have time for optional assignments. Students also said that they believed the Film Worksheet and Cultural Discussion activities took too much time for the benefits that they gave. While some students noted that the film worksheets improved their comprehension of the films, others reported frustration at

needing to frequently pause and rewind the films to find the answers to the questions, which made the task more time-consuming than watching the films without a worksheet. Others said that the film worksheets felt like "copy and paste" activities that did not require productive language use. For the Cultural Discussion activities, some students expressed frustration at the amount of time it took to research and write their posts, as well as needing to revisit the discussions multiple times to wait for classmates to respond and the difficulty of discussing complex topics with limited language proficiency. While some students expressed high levels of interest in learning about the cultural topics, others felt like these discussions were a distraction from the more useful grammar activities. Overall, student perceptions of the different types of activities were varied, but they seemed to value activities that taught new vocabulary and grammar, helped them know how to improve, and did not take too much time to complete.

Research Question 4

The final research question to be investigated combines elements of the motivational strategies and student engagement discussed in the previous sections. This question is, "What is the relationship between the motivational strategies used in the activities, as identified using the Adapted Motivational Tactics Checklist, student perceptions of how useful and motivating the activities are, as measured by student surveys, and student usage of the course materials, as measured by course page views?"

The findings for RQ2 included information about the number of times that students viewed course materials in each unit, but the findings so far have not shown how often a given activity was viewed by all students. Thus, the first step to investigating this research question is looking at the descriptive statistics for the page views for the different types of activities. Table 9 has the average number of page views per student for the most viewed and least viewed activity

of each type, as well as the median average number of page views for that type of activity. On average, the Cultural Discussion activities were viewed the most by students, with a higher minimum, median, and maximum number of mean page views than any other activity category. The vocabulary activities consistently had the second highest values for minimum, median, and maximum number of mean page views. The Performance Prep and Narrative Writing categories shared the lowest median value (an average of 3.26 page views per student for those two activities), and the lowest maximum value was also an activity in the Performance Prep category. On average, students used those activities much less frequently than they did the cultural discussions or the vocabulary activities.

Table 9

Mean Page Views per Activity per Student for Activities of Various Types

Activity Type	Min.	Med.	Max.
Vocabulary practice and mastery quizzes	8.41	11.83	18.89
Grammar practice and mastery quizzes	4.44	9.98	13.26
Performance prep activities	3.04	3.26	3.81
Cultural discussions	17.59	21.52	28.85
Imitating sentences	5.30	8.85	11.30
Film worksheets	3.33	4.00	4.70
Crafting paragraphs	4.63	6.41	8.11
Narrative writing	0.48	3.26	5.41
Film performance project	2.41	4.50	6.07
Cumulative mastery quiz	5.33	8.44	10.63
Unit practice test	4.37	4.65	7.44

Note. Min. = Minimum, Med. = Median, Max. = Maximum

While preparing to examine the relationship between the number of views for each activity and the other measures of motivational strategy and student perceptions of usefulness

and motivation, preliminary analyses determined that the total number of page views for each

activity did not meet the assumption of normality and included potentially disruptive outliers.

However, the square root of the total number of page views for each activity eliminated the

outliers and was more normally distributed (see Table 10). This transformed variable was used in

the subsequent correlations and regressions when a measure of page views was needed.

Preliminary analyses determined that the average ratings for how useful and motivating the

activities were met the assumptions of normal distribution required for parametric statistical

tests. Other preliminary analyses were conducted to ensure no violation of the assumptions of

normality, linearity, multicollinearity, and homoscedasticity. This establishes that it is

appropriate to use parametric tests to determine the correlations between the motivational

strategies in the activities, student perceptions of the activities, and student usage of the

activities.

Table 10

Distribution of Total Page Views per Activity

Variable	Min.	Max.	M	SD
Total views	13	779	217.81	160.98
Square root of total views	3.61	27.91	13.88	5.04

Note. Min. = Minimum, Max. = Maximum.

After conducting the preliminary analyses, the Pearson product-moment correlation

coefficient was used to investigate the relationship between the motivational strategies used in

the activities (as measured by the total number of strategies identified with the Adapted

Motivational Tactics Checklist in the categories of Attention, Relevance, Confidence, and

Satisfaction), student perceptions of the activities (as measured by the student rankings on the

perception surveys of how useful and motivating the activities were), and student usage of the

course materials (as measured by the number of page views logged by the Canvas LMS). This is shown in Table 11. For the motivational strategies used in the activities, all types of strategies were significantly correlated with each other except for Attention and Confidence. There was a medium positive correlation between total Attention strategies and total Relevance strategies, $r = .423$, $p < .01$, as well as between total Attention strategies and total Satisfaction strategies, $r = .341$, $p < .01$. Total Relevance strategies was correlated strongly with total Satisfaction strategies, $r = .662$, $p < .01$, and weakly with total Confidence strategies, $r = .243$, $p < .05$. Total Confidence strategies was also correlated strongly with total Satisfaction strategies, $r = .506$, $p < .01$. In almost all cases, the presence of more strategies in one category was correlated with the presence of more strategies in the other categories.

Other than the correlations between the types of motivational strategies, there were also notable correlations between the types of motivational strategy and the measures of student perception and engagement. There was a strong positive correlation between total Attention strategies and the square root of page views, $r = .604$, $p < .01$. There was also a medium positive correlation between the total Satisfaction strategies and the square root of page views, $r = .339$, $p < .01$. Higher numbers of Attention and Satisfaction strategies used in the activities are correlated with higher square roots of the number of page views for those activities.

Finally, there are the correlations including the measures of how the students perceived the activities. There was a medium positive correlation between total Confidence strategies and the average motivating rank, $r = .363$, $p < .01$. There was also a small positive correlation between total Satisfaction strategies and the average motivating rank, $r = .290$, $p < .012$. High perceptions of motivation were associated with more Confidence and Satisfaction strategies in those activities. There were only weak and nonsignificant correlations between the average

usefulness rank and any of the ARCS categories. However, there was a strong correlation

between the average usefulness rank and the average motivating rank, $r = .713$, $p < .01$. High

usefulness ratings for activities are correlated with high motivating ratings for those same

activities.

Table 11.

Pearson Correlations Between Motivational Strategies, Student Perceptions, and Student Usage

of Individual Activities

Variable	A	R	C	S	V	U	M
A	1						
R	.423**	1					
C	-0.17	.243*	1				
S	.341**	.662**	.506**	1			
V	.604**	0.195	0.049	.339**	1		
U	0.055	0.037	0.132	0.207	0.22	1	
M	-0.051	-0.04	.363**	.290*	0.176	.713**	1

Note. A = Total number of Attention strategies, R = Total number of Relevance strategies, C =

Total number of Confidence Strategies, S = Total number of Satisfaction strategies, V = Square

root of total page views, U = Average usefulness score, M = Average motivating score.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

To further investigate these relationships, standard multiple regressions were done to

explore which variables best predicted student perceptions and student usage of the course

activities. First, a standard multiple regression was used to assess the ability of four control

measures (total Attention strategies, total Relevance strategies, total Confidence strategies, total

Satisfaction strategies) to predict the square root of the number of page views for an activity. The

total variance explained by the model was 39.6%, $R = .655$, Adjusted $R^2 = .396$, $p < .0005$. Only

total Attention strategies and total Relevance strategies had a statistically significant effect, with

Attention recording a higher beta value (*beta* = .652, *p* < .05) than Relevance (*beta* = -.266, *p* < .05), which also had a negative beta value.

Next, a standard multiple regression was used to assess the ability of four control measures (total Attention strategies, total Relevance strategies, total Confidence strategies, total Satisfaction strategies) to predict the average usefulness score for an activity. The total variance explained by the model was 0.8%, *R* = .248, Adjusted R^2 = .008, *p* = .341. This model was not a significant predictor of usefulness, and no individual variables had a statistically significant effect.

Finally, a standard multiple regression was used to assess the ability of four control measures (total Attention strategies, total Relevance strategies, total Confidence strategies, total Satisfaction strategies) to predict the average motivating score for an activity. The total variance explained by the model was 17.9%, *R* = .473, Adjusted R^2 = .179, *p* = .001. Only total Relevance strategies and total Satisfaction strategies had a statistically significant effect, with Satisfaction recording a higher beta value (*beta* = .409, *p* < .05) than Relevance (*beta* = -.377, *p* < .05), which also had a negative beta value.

In the next chapter, the meaning of these findings will be discussed, as well as pedagogical implications, limitations of the study, and possibilities for further research.

Chapter 5: Discussion

Based on the findings in the previous chapter, this chapter will discuss the meaning of the findings in the context of this study. There is a section devoted to each research question, with discussions of what motivational strategies were used in this course, how engaged the students were, how the students perceived the activities, and the relationships between those variables.

Research Question 1

The first research question that was investigated was, "What motivational strategies, as identified using the Adapted Motivational Tactics Checklist, are employed in the online activities in this blended German course?" The data from the unit checklists showed that each unit included more than 31 of the 36 motivational strategies investigated in this study. The number and types of strategies used was also relatively consistent, which suggests that all four units in this course included a variety of motivational strategies to encourage student understanding and engagement.

While each unit contained an overall high number of motivational strategies, different types of activities had varying amounts of motivational strategies. Cultural Discussion, Crafting Paragraphs, and Performance Prep activities all had the highest mean number of strategies in one or more ARCS categories compared to the other types of activities. While some of this was related to the tasks in these activities, these activities also consistently had introductory information that reminded students of the purpose of the activity, activated students' background knowledge, or encouraged effort and curiosity. The Cultural Discussion activities were particularly effective at including Attention strategies because they frequently related the new cultural topic to a cultural or historical concept that the students were already familiar with and might want to know more about. The Performance Prep activities, which had high numbers of

Relevance, Confidence, and Satisfaction strategies, reminded students of the importance of practice and effort for lasting learning. These activities also allowed for student autonomy in learning, since students could choose to memorize the assigned text through the optional quizzes or through another method. The Crafting Paragraphs activities contained a high number of Relevance strategies because students could choose from a variety of methods to complete the assignment, and students were encouraged to think about the intrinsic value of being able to write sophisticatedly. While the introductory information for the Cultural Discussion activities was adapted to each specific topic, the information about the value of the Performance Prep activities and the Crafting Paragraphs activities was identical each time. This means that students who read carefully would receive consistent reminders of the motivational strategies in the text, but students who skimmed the introductory information might not receive the same benefits. However, regardless of how students used these assignments, the activities that had introductory texts included more motivational strategies on average than other activities because they described the benefits of the assignment or related the assignment to what students had already learned.

In addition to looking at the assignments with the highest numbers of motivational strategies, the study looked at the motivational strategies that were used in the course the most and least often. This helps to describe ways that this course has effective motivational design and ways that it could improve. Table 3 (in Chapter 4) shows the most frequently used strategies in the assignments that were analyzed. The vast majority of the activities had enough variation in layout to be visually appealing and not overwhelming. The activities also had clear learning objectives, exercises that matched the objectives, and opportunities for students to practice and see their progress. The learners were also able to go at their own pace for all of the activities—

students could take a longer or shorter amount of time to complete an assignment or take a quiz as few or as many times as they needed to demonstrate mastery of the concepts.

However, even though the course analysis using the checklist reported the frequent use of these motivational strategies, it is possible that the students did not perceive the activities the same way. The course was analyzed from an instructor perspective with only binary options for reporting the presence or absence of a motivational strategy, but students experience a course differently from an instructor, and their experiences with the strategies were more nuanced than the checklist allowed. For example, all activities fulfilled Confidence strategy 8, "Are learners allowed to go at their own pace?", including timed quizzes. This was judged appropriate for even the timed quizzes since students could learn the material at their own pace before starting the quizzes, retake the quizzes multiple times, and take the quiz at their own pace within the time limit. However, some students expressed concern and frustration about the time limits. One student said that timed quizzes were unmotivating because, "The quizzes are just difficult enough that you really have to work to learn the information before. As someone who is a slow test taker, having so many of the quizzes be timed was awful. The dread of taking one often made me turn the assignments in late." For this student, the time limits interfered with feeling like they could go at their own pace, and the anticipatory dread contributed to the student waiting longer to complete the assignments. This tension between the instructor perspective and the student perspective must be considered, and future users of the Adapted Motivational Tactics Checklist or the ARCS model of motivational design should consider that different students may need different amounts of the various motivational strategies to feel successful and confident.

Beyond the strategies that were used most consistently, to varying degrees of success, the type of motivational design present in this blended course can be better understood by looking at

the motivational strategies that were used least often. The least frequently used strategies can be found in Table 4 (Chapter 4). Very few activities that were analyzed included diagrams or visual aids, though these were found in some grammar activities. Few activities evoked a sense of mystery by describing unsolved problems. No analyzed activities asked students to write their own objectives or give feedback on the materials, though students did have the opportunity to give feedback through surveys in Unit 2 and 4 and informally by contacting the instructor, as described in the syllabus. Few activities asked or informed students about how they could continue to learn about the activity's topic, and only some vocabulary activities included games through the embedded Quizlet study sets. Finally, few activities that were analyzed use reinforcements more intermittently as students became more competent at a task, particularly because some later activities still used the same question banks as the early activities, so the feedback could not be adjusted at different points in the semester. Some of these motivational strategies would be simpler to include more often, and some would be more difficult, but these strategies were not prioritized during the creation and design of these activities.

Research Question 2

After discussing the motivational strategies that were used in this blended German course, the next research question to discuss is "How engaged are the students in the blended German course, as measured by the Online Student Engagement Scale, course page views, and time spent in the online course?". Overall, the results of the OSE show that students were generally engaged in the course. Students reported putting in effort, performing well on tests and quizzes, and getting good grades in the course. Students were less engaged in looking over their notes between getting online, but that could have been partially because many online materials were meant for practice and review of new concepts.

When looking at the change in engagement over time, all mean scores were relatively close to each other, though the mean total engagement scores reported from the OSE portion of the student surveys showed that the students reported higher average engagement in the online portions of the course in the last two units than in the first two units. This differs from previous studies that reported decreasing student motivation in language courses over time, even over the course of a single semester (Busse & Walter, 2013; Williams, Burden & Lanvers, 2002). However, multiple explanations for this phenomenon are possible. Firstly, the number of survey responses decreased after the first survey, with the most responses in Unit 1 and the least responses in Unit 4. It is possible that the less engaged students may have chosen not to fill out the other surveys, thus skewing the data towards higher engagement levels. Secondly, motivation is only one part of student engagement. It is possible that other elements of student engagement, such as consistent study habits, compensated for any possible decrease in motivation. More analysis or an alternate study design would be needed to determine if student motivation remained as consistent as average student engagement according to the OSE.

While the mean values for student engagement remained relatively consistent, the Canvas usage data shows more variation in student usage of the online materials both between students and across the four units of the semester. The number of hours spent in the online course has a particularly wide range, and even the mean is higher than the amount of time that students are expected to spend on classwork by both the course designers and the university. The university expects that students will spend three hours per week per credit hour on work for a given course (*Registration*, n.d.). German 201 is a four-credit course, so it is expected that students would spend approximately 180 hours on course work over the semester (including time spent in synchronous class meetings). The syllabus for German 201 suggests spending 60-75 minutes

studying a day, or approximately 100 hours outside of class throughout the semester. The mean number of hours that Canvas logged for a student was 234.87 hours, and the 5% trimmed mean is 214.05 hours. These high values suggest that the Canvas data for time spent online are not completely reliable, and these numbers are likely inflated by time spent on non-course work with the course pages still open (such as answering emails, spending time on social media, or working on other classes' homework) that Canvas cannot distinguish from time spent looking at the course materials. However, the differences between the minimum number of hours logged in the course and the mean number of hours logged in the course suggests that some of the variance is due to differences in study habits, and it is also possible that some of the high values are also from students spending more time than expected on the course's activities.

While the time logged by Canvas only gives a limited amount of information about how students use the course materials, the page views give a more accurate picture of how students use the activities, though this measure is still somewhat unreliable. For the page views per student per unit, both the mean and the 5% trimmed mean (which excludes the most extreme outliers) decrease from each unit to the next. In Unit 1, the mean number of page views per student was 521.67 (5% trimmed mean of 503.42), and in Unit 4, the mean number of page views per student was 390.89 (5% trimmed mean of 379.27). This could suggest decreasing student engagement in a way that was not reflected in the survey data. It could also reflect students reviewing material learned in previous units, such as while preparing for the final exam. While there may be some amount of unreliability in this measure based on differences in technology instead of differences in student behavior, this measure of student behavior is more reliable than the data about time spent in the course. Overall, for student engagement and student usage of the course materials, there were wide differences between students, and student usage of

the course materials likely decreased by the end of the semester, but the levels of student

engagement reported by the OSE portion of the student surveys remained relatively consistent in

all four units.

Research Question 3

While the results of the OSE portion of the student surveys was used for the second

research question, the results of the course-specific portion were used to investigate the third

research question, "What online activities do students find the most motivating and useful for

their language learning, as identified through student perception surveys?" Based on the results

described in Chapter 4, the activities that were rated as the most motivating were the grammar

activities. The vocabulary activities were the second-most motivating. This is a somewhat

unexpected result because few language instructors believe that students like learning about

grammar (Schulz, 1996). Because the grammar activities were rated as the most useful and the

vocabulary activities were rated as the second-most useful, and because the correlations for RQ4

showed a strong and significant correlation between usefulness and motivating scores ($r=.713$, p

$< .01$), it is likely that students found the grammar and vocabulary activities motivating because

they found them useful. The high perceptions of usefulness for these activities may have been

because of the explicit instruction in the lessons, the instant corrective feedback, and because

these activities were more common than most of the other types of activities. The perception of

grammar activities as useful also matches other studies of student perceptions of grammar, which

found that students tend to think of grammar as useful and important to their language learning,

even when their teachers believe that other language learning activities are more important

(Brown, 2009; Schulz, 1996). This was confirmed by the written responses to the student

surveys, where students said they believed that grammar was foundational to learning German

and to succeeding in the course. This could be an example of washback, in which students prioritize the things that they know will be assessed. The grammar and vocabulary activities were also the most common activities with computerized feedback, which means that students could get instant positive reinforcement when they were successful and instant corrective feedback when they had errors. In the written surveys, students said that the grammar and vocabulary activities helped them see the gaps in their language skills. The instant corrective feedback and the opportunity to repeat the quizzes are both important elements of the way that these quizzes can be both a tool for both practice and formative assessment for students. From a combination of these likely factors, students in this blended German course generally found the grammar and vocabulary activities more motivating and more useful for their language learning than the other online activities in this course.

While students found the grammar and vocabulary activities both useful and motivating, other activities were ranked as the least useful or the least motivating. The Film Worksheet and the Cultural Discussion activities were ranked as the least motivating activities. However, both activities also had relatively low usefulness scores. Both of these activities also lack the possibility of instant feedback. In addition, while these activities are likely to be used as the basis for in-class discussions, information from these assignments is less likely to be included in assessments than information from the grammar and vocabulary activities, so students may perceive these activities as less relevant to their success in the course. The student surveys also confirmed that these activities were frustrating to some students because they believed the activities took too much time for too little benefit. While not all assignments need to be possible to finish quickly, students might have been more motivated by these activities if they took less time or if their usefulness and importance was more obvious.

Finally, students ranked the Film Performance Project and the Performance Prep activities as the least useful types of activities. Because the performance prep activities were optional and meant to prepare students for the film performance project, these ranks are certainly connected. Both of these activities focus on memorization and pronunciation. Memorization might help student fluency and grammatical accuracy, but, according to student surveys, the emphasis on memorization frustrated students who found grammar activities or creating with the language more useful for language learning. The suggested performance prep may have been ranked as not very useful by students who preferred other memorization methods and did not use the activities frequently. Students mentioned avoiding these activities because they were optional. In addition, the film performance project may have been ranked as not very useful by students who felt that the time and effort required by this activity did not match the benefits to language learning. Overall, it appears that students perceived grammar and vocabulary as useful to their language learning and memorization as not useful to their language learning. For motivation, they seem to value instant feedback and applicability to exams and to creating with the language.

Research Question 4

The final research question to be discussed is, "What is the relationship between the motivational strategies used in the activities, as identified using the Adapted Motivational Tactics Checklist, student perceptions of how useful and motivating the activities are, as measured by student surveys, and student usage of the course materials, as measured by course page views?" While there was a strong correlation between activities that were rated as useful and activities that were rated as motivating, there was no significant correlation between any of the ARCS model motivational strategies categories or the number of page views. In addition, the

model predicting usefulness was very weak and nonsignificant. These results are reasonable because students' ratings of what is useful for language learning is based on their experiences as language learners, and the ARCS model and the original Motivational Tactics Checklist were designed for all learners, not just language learners. This instrument was not designed to evaluate the efficacy of language pedagogy. Any instructors or designers who choose to apply elements of the ARCS model of motivational design should ensure that their tasks at the core of the materials are pedagogically sound for language learning in addition to motivational. Other instruments are needed to assess or predict how useful students will find course activities for their language learning.

While there were no significant correlations for the ARCS categories with usefulness, there were significant correlations with the measure of student usage through page views. The square root of total page views was strongly and significantly correlated with the number of Attention strategies ($r=.604, p < .01$), and there was also a medium significant correlation with the number of Satisfaction strategies ($r=.339, p < .01$). The model generated by a standard multiple regression explained 39.6% the variance in page views ($R = .655$, Adjusted $R^2 = .396, p < .0005$), with higher numbers of page views predicted by higher numbers of Attention strategies (*beta*$= .652, p < .05$). In this model, high numbers of Relevance strategies predicted lower numbers of page views (*beta*$= -.266, p< .05$). Generally, it seems that the number of page views is more likely to be related to the type of activity that students are completing and why they are referencing that page. The two types of activities with the highest average number of page views, cultural discussions and vocabulary activities, are also the types of activities with the highest average number of Attention strategies. Based on assignment requirements or the content those pages teach, students may need or want to refer to those pages more than others. The lower

number of Relevance strategies might be required by the model because the activities with the highest number of Relevance strategies are either optional or less likely to have information that students would want to refer to later. However, more than the strategies in the other categories, the Attention strategies tend to be more concerned with both ease of use and fostering interest. If an activity is immediately interesting to students and is structured in a simple, straightforward way, students may be more likely to continue an assignment or refer to the information on the page if they need it later. Thus, it is possible that including more Attention strategies will increase student usage of online activities.

Finally, there were significant correlations and a significant predictive model for how motivating students found the activities. There was a medium correlation between the number of Confidence strategies and the average motivating rank and a weak correlation between the number of Satisfaction strategies and the average motivating rank. The model from the standard multiple regression predicted 17.9% of the variance ($R = .473$, Adjusted $R^2 = .179$, $p = .001$), with a higher number of Satisfaction strategies predicting higher perceptions of motivation (*beta* $= .409$, $p < .05$). In addition, higher numbers of Relevance strategies predicted lower perceptions of motivation (*beta* $= -.377$, $p < .05$). This finding about the Relevance strategies could be related to the fact that the activities with the highest number of Relevance strategies did not have high average motivating ranks. In addition, the most motivating activities have some of the highest numbers of Satisfaction strategies, which include strategies such as allowing students to use a skill in a realistic context, giving students frequent reinforcements, and having final exercises that are consistent with the preceding exercises. It is also important to note that the correlations of the average motivating rank with the ARCS categories are medium, weak, or nonsignificant, while the correlation with the average usefulness rank is strong and significant. The various

motivational strategies on the checklist have different levels of influence on how motivating any given activity is, but overall, including more of these motivational strategies does not necessarily make an activity more motivating. For this course, students are most likely to find an activity motivating if they feel that it is useful for their language learning. While including more motivational strategies may improve a given activity, students base their perceptions of the activities more on the task and its impact than on how an activity is presented.

After the discussion of this research in the study's original context, the following chapter will discuss how these principles might be applied to other courses or studies.

Chapter 6: Conclusion

After discussing the significance of the findings of this study, it is important to look at how this research of motivational strategies and student engagement could apply to other courses and contexts. This chapter concludes the discussion of the research by discussing the study's limitations, offering suggestions for future research, and identifying the pedagogical implications of the research.

Limitations

While this study was designed to be as valid and reliable as possible, it does have limitations. The student sample size was relatively small, and the survey response rate dropped from approximately 89% for the first survey to approximately 56% for the final survey. The differences between the Fall 2020 and Winter 2021 sections, such as different instructors, different meeting modality, and different number of meetings per week, could have also added variables that affected the results of the study in unexpected ways. This study focused on the online course material portions of this blended course, but it is of course possible that the synchronous, teacher-led portions or the instructor feedback had an unexpected influence on the results.

There are also possible sample size concerns for the activities that were chosen for the course materials analysis. The activities that were analyzed were chosen to approximate a representative sample of each activity type, but the set of the analyzed activities was not representative of which types of activities students were assigned most often. The sample sizes within each activity type were also small, which may mean that the correlations and regressions are less likely to be generalizable. Additionally, the course analysis using the Adapted Motivational Tactics Checklist could have been made more valid and reliable by involving more

raters and ensuring inter-rater reliability. As previously discussed, the course analysis through the checklist was limited by its binary nature and lack of alignment between student and instructor perceptions of the motivational strategies.

Finally, while the inclusion of Canvas log data gave useful information about students' usage of the course materials, the measures of time in course and views per page were limited and not perfectly reliable. The measure of views per page is more likely to be reliable than the measure of time spent in the course, but it is possible that inflation of these measures affected the results.

Suggestions for Further Research

Based on what has been discovered through this study, several other studies could be conducted using similar methodologies. A similar combination of course analysis and student survey distribution could be conducted with another language course with different types of activities to determine if the findings are consistent with this study or if these findings depend greatly on this specific course. A similar study could also collect the Canvas log data each week for more precise information about how the students use the course materials throughout the semester.

Similar studies in the future could also analyze the data in ways that were beyond the scope of this current study. For example, researchers could conduct a more in-depth qualitative study of what students find useful and motivating about this (or a similar) course, potentially with a combination of surveys and interviews. Researchers could also use the OSE to investigate possible relationships between individual students' engagement and the rankings they gave various activities, or students' engagement and the number of page views they logged for the

various activities. These questions could also be investigated using the OSE subcategories that correspond to different facets of student engagement (Dixson, 2010).

Finally, future researchers could further investigate the Adapted Motivational Tactics Checklist, particularly as applied to language learning or blended learning. A study of this could involve conducting a factor analysis to validate the Adapted Motivational Tactics Checklist so that it can be further used by researchers and classroom teachers.

Pedagogical Implications

This study has many pedagogical implications. Students reported being very engaged in the online portions of this blended language course and putting in a great deal of effort. Though blended courses involve less synchronous class time than traditional courses, this does not mean that the students will become less engaged or not participate in the online portions of the course.

Another important implication of this study is that many students prefer grammar and vocabulary activities. Instructors and course designers should offer students sufficient resources and practice so that they feel like they are improving in these important areas. Instructors should also help students see how their increased grammar and vocabulary skills can be used when creating with the language and increasing their overall language proficiency.

The results of this study suggest that it can be particularly useful to include Attention and Satisfaction strategies in the design of online materials for blended language courses. In this study, the activities that had more Attention strategies were likely to be used more often, and the activities that had more Satisfaction strategies were likely to be viewed by students as more motivating. To encourage students' curiosity and make the materials more accessible, educators can include Attention strategies such as presenting problems that the new skills can help solve, giving concrete examples of new ideas, and varying the tone of the instructional materials.

Students may feel more motivated by more Satisfaction strategies, such as when they have prompt opportunities to use their new skills in a realistic setting, when they can learn through games, and when the actions that led to their success are acknowledged.

Finally, when designing or improving online course materials, language educators should keep in mind that, while motivation can vary greatly from student to student, students are more likely to be motivated by tasks and activities that they believe are useful for language learning. If students do not understand why a certain task contributes to language learning, it may be important for the materials to include details about how the activities are beneficial, or the instructor could discuss this with students directly. If an instructor is interested in further supporting student motivation through motivational design, the instructor can consult an instrument such as the Adapted Motivational Tactics Checklist for ideas of how the materials might be improved to be easier to use or more encouraging to students.

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Appendix A: Adapted Motivational Tactics Checklist

Based on Keller's Motivational Tactics Checklist found in *Motivational Design for Learning and Performance* (2010, pp. 287-291)

Attention Strategies

A1. Are general principles, ideas, or other abstractions illustrated with concrete examples or visualizations?

A2. Are items in a series presented in a list format rather than paragraph format?

A3. Are step-by-step procedures or relationships among concepts made more concrete by use of flow charts, diagrams, cartoons, or other visual aids?

A4. Are topics introduced or developed problematically (i.e., is a sense of inquiry stimulated by presenting a problem which the new knowledge or skill will help solve)?

A5. Is a sense of mystery evoked by describing unresolved problems which may or may not have a solution?

A6. Are there variations in layout (e.g., variation in spatial location of blocks of information)?

A7. Are there variations in types of material (e.g., alternations between blocks of text, figures, tables, pictures)?

A8. Is there variation in tone (e.g., serious, humorous, exhortation)?

A9. Is there variation between content presentations and active response events (e.g., questions, problems, exercises, puzzles)?

Relevance Strategies

R1. Are comments, anecdotes, or examples included that stress the intrinsic satisfactions of the subject of instruction?

R2. Are there statements describing what the learner will be able to do after finishing these instructional materials?

R3. Is the learner encouraged to think of this instruction as contributing to the development of an intrinsically interesting area of study and development?

R4. Is the learner encouraged to visualize the process of achieving and succeeding, and the feelings associated with it?

R5. Are exercises included that allow for personal goal setting, record keeping, and feedback?

R6. Are exercises included that require cooperative work groups?

R7. Are there explicit statements about how the instruction builds on the learner's existing skills or knowledge?

R8. Is the learner given choices in the content of assignments (e.g., is the learner allowed to choose examples and topics of personal interest for at least some of the assignments)?

R9. Is the learner given choices in the type of assignment (e.g., is the learner allowed to select from a variety of means to accomplish a given end)?

Confidence Strategies

C1. Are there clear statements, in terms of observable behaviors, of what is expected of the learners as evidence of successful learning?

C2. Is there a means for learners to write their own learning goals or objectives?

C3. Are the tasks sequenced from simple to difficult within each segment of the materials?

C4. Are the exercises consistent with the objectives, content, and examples?

C5. Are methods for self-evaluation, such as answers to exercises, provided?

C6. Is confirmational feedback provided for acceptable responses, and corrective feedback provided for responses that do not meet criteria?

C7. Are learners given choices in sequencing; i.e., how they can sequence their study of different parts of the material?

C8. Are learners allowed to go at their own pace?

C9. Are learners given opportunities to record comments on how the materials could be improved or made more interesting?

Satisfaction Strategies

S1. Is the student given opportunities to use a newly acquired skill in a realistic setting as soon as possible?

S2. Are there opportunities for learners who have mastered a task to help others who have not yet done so?

S3. Are there acknowledgements of any actions or characteristics that were necessary for success?

S4. Are learners asked, or informed, about how they might continue to pursue their interest in the topic?

S5. Are games with scoring systems included to provide an extrinsic reward system for routine, boring tasks such as drill and practice?

S6. Are reinforcements used frequently when learners are trying to master a new skill?

S7. Are reinforcements used more intermittently as learners become more competent at a task?

S8. Are the content and types of problems in the final exercises and posttests consistent with the knowledge, skills, and practice exercises in the materials?

S9. Is the level of difficulty on final exercises and posttests consistent with preceding exercises?

Appendix B: Student Survey

Likert items are the Online Student Engagement Scale (OSE), from Dixson (2015).

German 201 Student Engagement Survey - Unit [1,2,3,4]

This survey will ask questions about your thoughts, feelings, and behaviors about the Canvas

portions of your German 201 course. Answer the questions based on Unit [1,2,3,4] of this course.

If you have any questions, please contact Elizabeth Moye-Weaver at emoye@byu.edu.

In the online (Canvas) portions of your blended German course, how well do the following

behaviors, thoughts, and feelings describe you?

	Not at all characteristic of me (1)	Not really characteristic of me (2)	Moderately characteristic of me (3)	Characteristic of me (4)	Very characteristic of me (5)
Making sure to study on a regular basis (1)	○	○	○	○	○
Putting forth effort (2)	○	○	○	○	○
Staying up on the readings (3)	○	○	○	○	○
Looking over class notes between getting online to make	○	○	○	○	○

sure I understand
the material (4)

Being organized
(5)

◯ ◯ ◯ ◯ ◯

Taking good
notes over
readings,
PowerPoints, or
video lectures (6)

◯ ◯ ◯ ◯ ◯

Listening/reading
carefully (7)

◯ ◯ ◯ ◯ ◯

Finding ways to
make the course
material relevant
to my life (8)

◯ ◯ ◯ ◯ ◯

Applying course
material to my
life (9)

◯ ◯ ◯ ◯ ◯

Finding ways to
make the course
interesting to me
(10)

◯ ◯ ◯ ◯ ◯

Really desiring to learn the material (11)	○	○	○	○	○
Having fun in online chats, discussions or via email with the instructor or other students (12)	○	○	○	○	○
Participating actively in small-group discussion forums (13)	○	○	○	○	○
Helping fellow students (14)	○	○	○	○	○
Getting a good grade (15)	○	○	○	○	○
Doing well on the tests/quizzes (16)	○	○	○	○	○
Engaging in conversations	○	○	○	○	○

online (chat,

discussions,

email) (17)

Posting in the

discussion forum   ○   ○   ○   ○   ○

regularly (18)

Getting to know

other students in   ○   ○   ○   ○   ○

the class (19)

In the questions that follow, you will rate the online activities you have engaged in during Unit

[1,2,3,4] according to their usefulness for language learning and how much they motivated you.

There may be overlap in these two ratings, but be sure to think about how valuable activities

were in terms of helping you learn the language for the first set of ratings and how motivating

they were to continue your studies for the second.

In Unit [1,2,3,4], which types of activities did you find to be the most and least **useful for your language learning**? Drag and drop the three most useful and the three least useful activities into the appropriate boxes. Then, drag the activity names to rank the activities within the boxes.

Three most useful activities for language
learning (#1 is most useful)

_____ Vocabulary practice and mastery
quizzes (1)

_____ Grammar practice and mastery
quizzes (2)

_____ Performance Prep activities (3)

_____ Cultural discussions (4)

Three least useful activities for language
learning (#1 is least useful)

_____ Vocabulary practice and mastery
quizzes (1)

_____ Grammar practice and mastery
quizzes (2)

_____ Performance Prep activities (3)

_____ Cultural discussions (4)

_____ Imitating sentences (5)   _____ Imitating sentences (5)

_____ Film worksheets (6)   _____ Film worksheets (6)

_____ Crafting paragraphs (7)   _____ Crafting paragraphs (7)

_____ Narrative writing (8)   _____ Narrative writing (8)

_____ Film performance project (9)   _____ Film performance project (9)

_____ Cumulative mastery quiz (10)   _____ Cumulative mastery quiz (10)

_____ Unit practice test (11)   _____ Unit practice test (11)

Why did you find the three most useful activities to be more valuable than the others?

What distinguished your top choice from the others?

Why did you find the three least useful activities to be less valuable than the others?

What caused your lowest choice to sink to the bottom?

In Unit [1,2,3,4], which types of activities did you find to be the most and least **motivating**? Drag and drop the three most motivating and the three least motivating activities into the appropriate boxes. Then, drag the activity names to rank the activities within the boxes.

Three most motivating activities (#1 is most motivating)   Three least motivating activities (#1 is least motivating)

_____ Vocabulary practice and mastery quizzes (1)   _____ Vocabulary practice and mastery quizzes (1)

_____ Grammar practice and mastery quizzes (2)   _____ Grammar practice and mastery quizzes (2)

_____ Performance Prep activities (3)   _____ Performance Prep activities (3)

_____ Cultural discussions (4)   _____ Cultural discussions (4)

_____ Imitating sentences (5)   _____ Imitating sentences (5)

_____ Film worksheets (6)   _____ Film worksheets (6)

_____ Crafting paragraphs (7)   _____ Crafting paragraphs (7)

_____ Narrative writing (8)   _____ Narrative writing (8)

_____ Film performance project (9)   _____ Film performance project (9)

_____ Cumulative mastery quiz (10)   _____ Cumulative mastery quiz (10)

_____ Unit practice test (11)   _____ Unit practice test (11)

Why did you find the three most motivating activities to be more motivating than the others?

What distinguished your top choice from the others?

Why did you find the three least motivating to be less motivating than the others?

What caused your lowest choice to sink to the bottom?

Appendix C: Motivational Strategy Frequency Tables

Table 12

Frequency of Attention Strategies in the Analyzed Activities

Strategy Number	Description	Percent of Activities that Used the Strategy
A1	Are general principles, ideas, or other abstractions illustrated with concrete examples or visualizations?	33.3%
A2	Are items in a series presented in a list format rather than paragraph format?	78.7%
A3	Are step-by-step procedures or relationships among concepts made more concrete by use of flow charts, diagrams, cartoons, or other visual aids?	5.3%
A4	Are topics introduced or developed problematically (i.e., is a sense of inquiry stimulated by presenting a problem which the new knowledge or skill will help solve)?	24.0%
A5	Is a sense of mystery evoked by describing unresolved problems which may or may not have a solution?	9.3%
A6	Are there variations in layout (e.g., variation in spatial location of blocks of information)?	96.0%
A7	Are there variations in types of material (e.g., alternations between blocks of text, figures, tables, pictures)?	86.7%
A8	Is there variation in tone (e.g., serious, humorous, exhortation)?	70.7%
A9	Is there variation between content presentations and active response events (e.g., questions, problems, exercises, puzzles)?	66.7%

Table 13

Frequency of Relevance Strategies in the Analyzed Activities

Strategy Number	Description	Percent of Activities that Used the Strategy
R1	Are comments, anecdotes, or examples included that stress the intrinsic satisfactions of the subject of instruction?	41.3%
R2	Are there statements describing what the learner will be able to do after finishing these instructional materials?	84.0%
R3	Is the learner encouraged to think of this instruction as contributing to the development of an intrinsically interesting area of study and development?	37.3%
R4	Is the learner encouraged to visualize the process of achieving and succeeding, and the feelings associated with it?	26.7%
R5	Are exercises included that allow for personal goal setting, record keeping, and feedback?	96.0%
R6	Are exercises included that require cooperative work groups?	21.3%
R7	Are there explicit statements about how the instruction builds on the learner's existing skills or knowledge?	29.3%
R8	Is the learner given choices in the content of assignments (e.g., is the learner allowed to choose examples and topics of personal interest for at least some of the assignments)?	42.7%
R9	Is the learner given choices in the type of assignment (e.g., is the learner allowed to select from a variety of means to accomplish a given end)?	17.3%

Table 14

Frequency of Confidence Strategies in the Analyzed Activities

Strategy Number	Description	Percent of Activities that Used the Strategy
C1	Are there clear statements, in terms of observable behaviors, of what is expected of the learners as evidence of successful learning?	92.0%
C2	Is there a means for learners to write their own learning goals or objectives?	0.0%
C3	Are the tasks sequenced from simple to difficult within each segment of the materials?	52.0%
C4	Are the exercises consistent with the objectives, content, and examples?	98.7%
C5	Are methods for self-evaluation, such as answers to exercises, provided?	82.7%
C6	Is confirmational feedback provided for acceptable responses, and corrective feedback provided for responses that do not meet criteria?	42.7%
C7	Are learners given choices in sequencing; i.e., how they can sequence their study of different parts of the material?	22.7%
C8	Are learners allowed to go at their own pace?	100.0%
C9	Are learners given opportunities to record comments on how the materials could be improved or made more interesting?	0.0%

Table 15

Frequency of Satisfaction Strategies in the Analyzed Activities

Strategy Number	Description	Percent of Activities that Used the Strategy
S1	Is the student given opportunities to use a newly acquired skill in a realistic setting as soon as possible?	74.7%
S2	Are there opportunities for learners who have mastered a task to help others who have not yet done so?	26.7%
S3	Are there acknowledgements of any actions or characteristics that were necessary for success?	26.7%
S4	Are learners asked, or informed, about how they might continue to pursue their interest in the topic?	6.7%
S5	Are games with scoring systems included to provide an extrinsic reward system for routine, boring tasks such as drill and practice?	5.3%
S6	Are reinforcements used frequently when learners are trying to master a new skill?	89.3%
S7	Are reinforcements used more intermittently as learners become more competent at a task?	4.0%
S8	Are the content and types of problems in the final exercises and posttests consistent with the knowledge, skills, and practice exercises in the materials?	85.3%
S9	Is the level of difficulty on final exercises and posttests consistent with preceding exercises?	86.7%