Investigating Learner Beliefs Using the Lego Serious Play Method

Eine Untersuchung der Auffassungen von Sprachenlernenden durch die Anwendung der „Lego Serious Play" Methode

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

The study of L2 learner beliefs explores the attitudes, knowledge, and assumptions students adopt when they learn a language (Kalaja & Barcelos, 2006). Previous research had focused on learner differences in areas like motivation, aptitude, and strategy use, but often did not consider that individual learner beliefs vary widely and cannot be captured in predefined categories.

Discovering what students believe about the learning process, and how this may impact their learning, requires qualitative research designs that focus on individual learners and their beliefs; researchers often employ questionnaires or interviews.

In my study, I introduce a new method of inquiry; a problem-solving method called "Lego Serious Play" (LSP). I first introduce LSP, which was originally created for use in business management, and discuss how it can be applied to language education.

I have designed a task that requires learners to represent their learning and understanding of German. Specifically, participants are invited to construct Lego models of aspects of their general beliefs about learning German, and to explain their respective models to their peers. These models reveal many individual differences, and the participants' verbal explanations offer unique insights into their beliefs, and help decode the metaphorical constructions of their learning experiences.

I argue that this research design is effective for understanding where students may be facing challenges in their understanding and learning of a foreign language. This project demonstrates how studying learner beliefs is advantageous for improving how we teach language.

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1. Introduction

The Lego Serious Play (LSP) Method is a "thinking, communication, and problem-solving approach" that involves the systematic use of Lego bricks to solve complex problems and promote team work. It was originally created for use in business management and is endorsed as a solution to dull, unproductive meetings. The method's founders claim that LSP can help managers achieve three key goals: (1) creating what they call "leaning in," that is, increasing employee participation; (2) unlocking new knowledge; and (3) breaking habitual thinking. While these goals are attractive to company leaders, they also can also be aligned with the goals of researchers in the social sciences, particularly in the field of Applied Linguistics, who wish to explore individual beliefs and thinking. I have chosen to adopt the LSP method in order to study a specific area of Applied Linguistics, namely, learner beliefs. Using LSP as a research method seems promising as it has the potential to increase respondent participation and tap into the knowledge and ideas of language learners.

LSP appears to be useful for the study of learner beliefs in several ways. First, its strong focus on the individual, and that he or she has something to contribute, mirrors current trends in studies of learner beliefs. Second, I questioned whether the shared system of knowledge that results from a LSP workshop could benefit language learners. Finally, LSP contributes to the study of learner beliefs in that it requires participants to express their views and experiences of language learning in unique ways, namely, through constructing Lego models (which can be interpreted as metaphorical constructs), and verbal explanations of the models and their personal relevance. Therefore, the central research question of this Master's thesis is: How can Lego Serious Play (LSP) contribute to understanding more about learners' beliefs and experiences with German language education?

I have chosen to apply LSP to elicit learners' beliefs about their experiences learning German, that is, how they conceptualize their learning. Because Lego Serious Play has not been applied to language education before, a concrete answer to my research question is difficult to predict in a single statement. I am interested in exploring the potential Lego Serious Play can offer for eliciting students' beliefs about learning German. Therefore, I have not developed a definitive hypothesis, which is limited to being proven right or wrong, but have decided to leave this question open for exploration.

The following chapters describe how I will use LSP to study learner beliefs. In Chapter 2, I describe the theoretical context, beginning with an in-depth description of LSP, followed by an explanation of the study of individual learner beliefs, including how this field of study originated. This chapter also includes information about the importance of metaphors in our understanding of the world, which is also crucial to the execution of a successful LSP workshop. In Chapter 3, I explain the methodology used in this study. As already mentioned, I use LSP as a method for eliciting learner's individual beliefs about their own learning. However, it is important to note that the original method was adapted to suit the constraints of my research. The exact details of my own LSP workshops are therefore provided in this chapter. Chapter 4 contains the results of the two LSP workshops that I have carried out. This includes a brief description of the models produced during the workshops as well as photos. A selection of the models produced are then analyzed in detail in the second part of Chapter 4. A discussion of the meaning and implications of the LSP workshops is found in Chapters 5 and 6.

2. Context

This chapter provides the theoretical context within which this study is situated. I begin with a description of LSP, followed by a brief introduction to the study of learner beliefs in Second Language Acquisition (SLA), including a definition of learner beliefs. I then describe the three approaches to studying learner beliefs as outlined by Barcelos (2006): the normative approach, the metacognitive approach, and the contextual approach. This is prefaced by a discussion of the literature on the 'Good Language Learner' (e.g., Stern, 1975), which can be seen as a precursor to learner beliefs research. Finally, I discuss the significant role that metaphor plays in our conceptual system by examining some of the research about metaphor as well as its use in previous studies of learner beliefs (e.g., Kramsch, 2006; Ellis, 2001).

2.1 Lego Serious Play

The LSP method was introduced in the book "Building a Better Business with Lego Serious Play" by Kristiansen and Rasmussen in 2014, but it was developed over the course of 15 years. The concept for LSP was first envisioned by the former CEO of The Lego Group, Kjeld Kirk Kristiansen, and it was developed with the help of several other contributors. According to Kristiansen and Rasmussen (2014), Kjeld Kirk Kristiansen had always seen Lego bricks as "a language that can help unlock human potential," and realized that he could "bring this language into the boardroom" (p. vii). The method's founders therefore began looking for a way to create a more innovative and productive meeting for their workplace, one in which all members were willing to contribute, and complex problems could be solved by accessing the potential of everyone's knowledge. Their solution was Lego Serious Play, the systematic process which involves building with Legos to share ideas. According to the authors, the classic Lego brick is the perfect building material for this kind of work; it allows the user to create physical models of

both the tangible and intangible world, with the added benefit that it may be easily disassembled and reconstructed. Although it seems simple, the value of using LSP lies in the fact that there is seemingly no limit to what participants can build. For instance, just eight classic Lego bricks can be combined in a total of 915,103,765 different ways (Kristiansen & Rasmussen, 2014; p. 27), which means that the user is free to build whatever he or she pleases.

LSP was designed to be led by a facilitator in meetings or workshops during which everybody can take part. The method itself is made up of what is referred to as a core process and seven application techniques (Table 1), as described by Kristiansen and Rasmussen (2014). The core process consists of four parts: (1) posing the question, (2) construction, (3) sharing, and (4) reflection. In part (1), the facilitator presents an open-ended question or prompt to the participants. During part (2), participants are given a limited time period to build a Lego model which embodies their response. In part (3), participants share the story behind their own personal model. Part (4) involves reflecting on what others have said and asking questions.

Application Technique	Description
AT 1: Building Individual Models and Stories	Everyone builds a unique model and brings individual knowledge into the physical world
AT 2: Building Shared Models and Stories	Individual models are brought together and shared understandings are highlighted
AT 3: Creating a Landscape	Collection of models is analyzed; patterns, similarities, differences are recognized
AT 4: Making Connections	Physical connections are made between the different models
AT 5: Building a System	An extension of AT 4, unforeseen impact of connections is considered

AT 6: Playing Emergence and Decision	Participants use strategy to explore how system may be impacted by certain events
AT 7: Extracting Simple Guiding Principles	Guiding principles support strategic decision making, emerge through execution of AT 7

Table 1 The Application Techniques used in Lego Serious Play

It is important to note that the role of the facilitator is not to convey his or her own knowledge to the participants by means of the LSP method; it is not a teaching tool. Rather, participants are meant to discover their own knowledge and ideas and to learn to see things from different perspectives by taking part in LSP. As a rule, participants must be given sufficient time to explain the story behind his or her model; each model is unique to the individual, and is meaningful to the builder's own thoughts and ideas. It is therefore important that each person's story be accepted as valid by both the facilitator and the other participants. In other words, if a participant says that their tower of bricks represents a teacher, they can not be told that this is wrong. There are no right or wrong answers in LSP, and participants are encouraged to use their imaginations and let their hands guide them.

Although there are no limits to what participants in LSP can build, the facilitator should provide sufficient instruction and guidance. The method is more likely to be successful if the LSP workshop is structured and organized. Moreover, although the method is based on the concept of play, it is important to keep in mind that LSP in action requires direction from the facilitator. The authors explain that play of all kinds is not frivolous and that also children's play has "some sort of developmental purpose" (Kristiansen and Rasmussen, 2014; p. 39). However, they describe the characteristics of "serious play," or, "play with an explicit purpose" as follows: (1) it is an intentional gathering to apply the imagination; (2) it is exploring and preparing, not implementing; and (3) it follows a specific set of rules or language (Kristiansen and Rasmussen,

2014; p. 40). In short, participants are encouraged to open their imaginations, but should not lose sight of the fact that they are also applying their imaginations to a real issue or task.

In explaining the theoretical considerations of LSP, the founders cited theories about play, for example the work of Huizinga (1955) and Brown (2009). However, they have also referred to theories about the link between memory and interaction with the physical world. For example, the theories of constructivism and constructionism. Constructivism, coined by the developmental psychologist Jean Piaget, concerns how we acquire and store knowledge (see, for example Piaget & Maschler, 1970; Furth, 1969). According to Piaget, children, or anyone learning something for the first time, do not just acquire knowledge in little pieces. Rather, they "use their experience in the world to construct coherent, robust frameworks called 'knowledge structures'" (Kristiansen and Rasmussen, 2014; p. 81). Similarly, the theory of constructionism was built on constructivism by Seymour Papert (1991) and is more closely associated with learning by doing: "if we believe that we hold knowledge as structures based on our interaction with the world, then we can *create knowledge* faster and better … when we are engaged in constructing a product" (Kristiansen and Rasmussen, 2014; p. 82). Put simply, "When you build in the world, you build in your mind" (p. 82). These theories of learning support the use of LSP for eliciting the beliefs of language learners, as this may also aid learners in deepening their understandings of their own attitudes towards learning and the origins of their beliefs. In addition to the theories described here, Kristiansen and Rasmussen support the benefits of LSP by explaining the neuroscientific background of the mind of the builder. While this knowledge may be useful for a facilitator or to strengthen the legitimacy of Lego Serious Play, the extensive neuroscientific details of the process goes beyond the scope of this thesis.

The problem-solving and strategizing approach Lego Serious Play has been developed over the course of over 15 years by various contributors. In this time, the method has been proven to create more productive and innovative meetings for the businesses that employ it. I would like to explore how LSP can be helpful for understanding the individual beliefs of language learners. First, I will describe how learner beliefs have been investigated in previous research.

2.2 The Study of Learner Beliefs in SLA

Interest in the beliefs of language learners is relatively new; the discipline only entered language education in the 1980s (Barcelos, 2006). This area of Applied Linguistics is used to study what beliefs, attitudes, and opinions individual language learners have about their own learning. Kalaja and Barcelos (2006) highlight the importance of this area of research, i.e., to better understand "mismatches between teachers' and learners' agendas in the classroom; […] students' use of language learning strategies; […] learners' anxiety; and […] autonomous learning" (Kalaja and Barcelos, 2006; p. 1).

Learners' beliefs about their own language learning is a vital component in the study of Second Language Acquisition (SLA), but the study of these beliefs has been considered "messy" due to their paradoxical nature (Barcelos, 2006; p 7), and some scholars have suggested that learners' understandings of language learning are "wrong" or less valuable than scientific theories (Barcelos, 2006). However, it can not be discounted that learners' beliefs are real to them and influence their success and their individual progress in acquiring a second language. Moreover, many studies have demonstrated how students' and teachers' beliefs differ in conceptualizing the role of the student, the teacher, and the actual learning process (see, for

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example, Ellis, 2001; Kalaja, 2006; Wan et al., 2011). A more thorough understanding of how learners conceptualize their language learning could have a substantial effect on language education in the future. I now turn to the main approaches used to study learner beliefs.

2.3 Approaches to Studying Learner Beliefs

Since the beginning of the study of learner beliefs in the 1980s, several methods have been used. The precursor to this field of research is known as the 'Good Language Learner' literature, which appeared in the mid- to late-1970s. The subsequent approaches are not easily sorted chronologically, therefore, I have chosen to summarize the previous research methods according to Barcelos (2006). Her chapter makes up a comprehensive account of the most commonly used methodologies in learner beliefs research which she has categorized into three approaches: the normative approach, the metacognitive approach, and the contextual approach. The distinctions between these approaches can be drawn back to the pioneering research in the field, namely the work of Horwitz (1985; 1988) and Wenden (1986). Their research about students' beliefs about language learning have been considered the starting point for learner beliefs research which had ultimately set up the initial understandings and assumptions about beliefs and how to study them. Before coming to these approaches, I first explore the 'Good Language Learner.'

2.3.1 The Good Language Learner

In the mid- to late-1970s, scholars began to raise questions such as "what makes good language learners tick? What do they do that poor learners don't do?" These particular questions were brought up by Naiman (1996), and they make up the foundation of the notion of the 'Good Language Learner' (GLL). The idea that a theoretically perfect language learner exists was first

established in studies by Stern (1975) and Rubin (1975). In GLL studies, the attributes of a model 'good' learner were identified. The GLL literature describes factors such as personality traits, introversion/extraversion, motivation, aptitude, and learning environment as significant. For instance, Rubin (1975) stated that good language learning is dependent on three variables: "aptitude, motivation, and opportunity" while Naiman (1996) identified the following characteristics as having the greatest effect on language learning: "cognitive factors, such as intelligence and language aptitude, […] personality factors and cognitive style, and […] attitudes and motivation" (p. 8). Regardless of which factors were said to influence learning most, it was the resulting learner behaviour patterns that were of greatest interest to researchers; the observation of good learner behaviour has ultimately led to a strong focus on strategy use.

A wide range of learning strategies used by the GLL was identified by Rubin (1975) and Stern (1975), for example, "the good language learner is a willing and accurate guesser" and "the good language learner has a strong drive to communicate, or to learn from communication" (Rubin, 1975). In her article, Rubin stated that "if we knew more about what the 'successful learners' did, we might be able to teach these strategies to poorer learners to enhance their success record" (Rubin, 1975; p. 42). Sykes (2015) confirmed this understanding when he wrote that "the purpose in understanding what makes a Good Language Learner is, ultimately, to identify personality traits and strategy use that can be conveyed to, and developed in, language learners through learner training programmes" (p. 713). Similarly, in Naiman's (1996) studies of adult learners and school-age children, the goal was to "investigate the conditions under which successful language learning took place and what kind of strategies and techniques were developed and employed to achieve this goal" (p 15). Again, in these studies, the researchers were concerned with identifying the learning strategies most used by successful language

learners. The goal of the GLL research has been to explore which strategies are used by successful learners. Scholars have believed that these strategies and behaviours could simply be taught to less successful learners, however, as I show below, this assumption is problematic.

There are several issues with the notion of the GLL. First and foremost, the classification of language learners as either 'good' or 'poor' is both dangerous and ambiguous. It suggests that 'good' learners only demonstrate 'good' behaviours, and 'poor' learners only demonstrate 'poor' behaviours. A cut-off point between these two extremes has not been identified in the literature. This classification also treats 'good' learners as a homogenous group and ignores the possibility of individual differences. Norton and Toohey (2001) found that even within a group of 'good' learners, some were more successful in acquiring the L2 than others.

Secondly, the possibility of simply transplanting learning strategies from 'good' to 'poor' learners has been questioned. Take, for example, the following learning strategy identified by Naiman (1996): "GLLs actively involve themselves in the language learning task […] by responding positively to the given learning opportunities or by identifying and seeking preferred learning environments and exploiting them" (p. 30). It is probable that learners who employ strategies like this are successful in their L2 learning; however, it is less likely that this strategy would be appropriate for *every* learner. 'Poor' learners may struggle to simply respond positively to any given learning opportunity, especially if their past experiences with language education differ greatly from their current L2 learning environment. Similarly, when observing learning behaviour, Naiman (1996) asked questions such as "do good students volunteer more frequently than poor students?" Such questions do not account for other factors such as student anxiety, past experiences with language learning, or cultural differences. Accordingly, Griffiths (2015) called

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the ability to teach strategies into question, and Porte (1988) acknowledged that it may not be enough to simply have poor learners adopt behaviours from good learners, but that the focus should be on helping poor students to refine their own current strategies to make them more successful. This suggests that it may be necessary to search beyond strategy use as the best way to teach 'poor' learners.

Ultimately, the notion of the GLL has become outdated since its genesis in the 1970s and should be abandoned in favour of a more comprehensive understanding of language learning. Sykes (2015) admitted that the GLL "cannot fully represent a real second language learner because it necessarily cannot account for all the individual differences" (p. 716). Norton and Toohey (2001) and Griffiths (2015) have suggested that understanding language learning is more complex than simply looking at strategy use; rather, the focus should be directed to learners' identities. For instance, Griffiths (2015) stated that "learners' sense of identity is critical to whether they become successful language learners or not" (p. 430) and that "a much more holistic answer is required which not only involves the strategies, but also the learners' unique characteristics, the context from which the learners originate and in which they are trying to learn, and the goal to which the learners aspire" (p. 432). A focus on learner identity rather than on individual strategy use allows researchers to account for the wide range of individual differences in learners. Such a focus would be appropriately studied under the contextual approach, which I describe in a later section. The study of learner beliefs has since focused on a broader scope of individual factors. I will now highlight the three more recent approaches to studying learner beliefs identified by Barcelos (2006), beginning with the normative approach.

2.3.2 The Normative Approach

Barcelos (2006) first described the normative approach and its assumptions about learner beliefs. Studies pursuing this approach generally see students' beliefs as predictors of their future behaviours and successes. Beliefs, which can also be understood as preconceived notions, myths, or misconceptions, are considered stable, cognitive entities contained in the minds of learners. It was Horwitz (1988) who developed this approach and whose work was very influential. She investigated the beliefs that first-year university students of foreign languages bring to their German, French, and Spanish classes. She demonstrated that a student who believes learning new vocabulary to be an important part of learning a new language will likely spend most of her time doing so. However, this understanding of beliefs does not account for the possibility that the student's beliefs may change as she progresses through the course and interacts with other learners. Under the normative approach, it has also been understood that learners' beliefs are heavily influenced by culture, for example, Horwitz (1988) mentioned that many students' beliefs may be shaped by preconceptions held by the culture at-large, and argued that these beliefs could influence learners' use of strategy and/or success in the course. We can see that scholars within the normative approach have recognized students' beliefs and their effects on student behaviour. In spite of this, learner beliefs have often been discredited as being incorrect: "[t]he implicit assumption is that students' beliefs are wrong or false and the opinions of scholars are right and true" (Barcelos, 2006; p. 11).

The most commonly used methodology adopted have been Likert-scale questionnaires, such as the Beliefs About Language Learning Inventory (BALLI) developed by Horwitz (1985). It is made up of 37 Likert-scale items which were developed from the beliefs of foreign language teachers and their students. The BALLI assesses learners' beliefs in five major areas: 1)

difficulty of language learning; 2) foreign language aptitude; 3) the nature of language learning; 4) learning and communication strategies; 5) motivations and expectations (Horwitz, 1988; p. 284). This questionnaire has been widely popular, as illustrated by Horwitz (1999), who examined seven studies which employed the BALLI across different cultures and learning environments. The use of a questionnaire such as this is popular due to its ease of distribution and administration to large participant groups, as well as its convenience for use over different time periods. However, a disadvantage is that learners' responses are often limited due to the constraints of the questionnaire items. Learners are unable to express their beliefs in other ways, and students may have different interpretations of the statements which have been predetermined by researchers. This could lead to less reliable results. On the other hand, the methodology used will depend on the goals of the researcher. Victori (1999) addressed the limits of questionnaires, but also pointed to their usefulness for describing or contrasting beliefs of groups of learners. She recommended using open-ended items on a questionnaire and triangulation of methods as options which could make learner responses more reliable.

2.3.3 The Metacognitive Approach

The second approach described by Barcelos (2006) is the metacognitive approach, which was largely developed by Wenden (1986, 1987, 1998, 1999). It takes beliefs to be synonymous with metacognitive knowledge, or the knowledge that learners have about language learning. Wenden (1986) investigated what learners know about their own learning, and argued that students' beliefs go beyond knowledge about strategy use, which had been in the focus of earlier research. She found that learners also had ideas about the language, their proficiency in the language, the outcome of the learning endeavors, their role in the language-learning process, and how to best approach language learning. According to the metacognitive approach, similar to the

normative approach, beliefs are defined as static cognitive entities that may sometimes be incorrect. Specifically, beliefs are described as "the stable, statable, although sometimes incorrect knowledge that learners have about language, learning and the language learning process" (Wenden, 1987; p. 163). Beliefs are also understood as indicators of learner success. However, a main distinction between the normative and metacognitive approaches is a focus on improving student autonomy. Barcelos (2006) stated that "the connection between beliefs and autonomous behaviours is much stronger within the normative approach" (p.17).

Although metacognitive views of beliefs resemble those of the normative approach, the approaches differ in methodology. Frequently used methodologies under the metacognitive approach are semi-structured interviews and learners' self-reports, which are analyzed through content analysis. In these, students can use their own words to describe their beliefs, and are not limited by the wording of questionnaire items. However, Barcelos (2006) considers the fact that beliefs are inferred solely from students' statements to be a disadvantage. Moreover, the metacognitive approach does not consider the role of contextual factors which will be explored in the following section.

2.3.4 The Contextual Approach

The third approach according to Barcelos (2006) is the contextual approach. This approach can be simply summarized as "combining different methods to interpret students' beliefs in their contexts" (p. 20). Beliefs are not seen as static, cognitive entities, as in the previous approaches; studies within the contextual approach do not aim at generalizing about beliefs about SLA. Instead, scholars are less concerned with uncovering a one, true definition of beliefs, and are more interested in exploring individual learners' own beliefs and perspectives as

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they exist within a certain context. For example, Kalaja (1995) first proposed the use of

discourse analysis for studying learner beliefs. She was critical of early studies (which we now

classify into the normative and metacognitive approaches) and argued that beliefs should not be

understood as static, cognitive entities, but as changing and context-dependent. In keeping this

understanding of beliefs, methods such as questionnaires are not considered to be suitable

because they offer only a cross-sectional snapshot of students' beliefs. The alternative that Kalaja

put forth was to view students' beliefs as "socially constructed, emerging from interaction with

others" (Kalaja, 1995; p. 196) which should be studied through discourse analysis. Specifically,

Kalaja called for an alternative approach that would consider "naturalistic discourse data from

students" (Kalaja, 1995; p. 197) which would then be analyzed from a social psychological

perspective. The aim of a new approach would be to "provide contextualized accounts of […]

beliefs and their role in interaction, rather than generalizations to confirm or disconfirm theories"

(p. 198). Furthermore, researchers could "not only try and find out what the beliefs in discourse

are, but also to what ends students use these in talk or writing" (p. 200). An understanding of

beliefs as situated in interaction would allow scholars to better understand how learners use the

expression of their beliefs to shape their learner identities.

Studies within the contextual approach are highly diverse in terms of how beliefs are

defined as well as the means of collecting and analyzing data. Therefore, a variety of methods

has been used to investigate beliefs such as discourse analysis (for example, Wetherell & Potter,

1988; Riley, 1994; Kalaja, 1995), observations, interviews, diary studies, and metaphor analysis

(Ellis, 1999; 2001), which are then analyzed via interpretive analysis. The main advantage of

these methods is that they take the context of students' words and actions into consideration.

Additionally, Barcelos (2006) pointed out that this methodology also allows researchers to see

the paradoxical nature of students' beliefs. However, a drawback of the contextual approach may be that such methods are often time-consuming and better executed in small participant groups.

The contextual approach is now considered most appropriate to research individual learner beliefs about SLA, and most of the recent research falls into this approach. For example, all of the studies in the 2011 special issue of *System* on *Beliefs about Second Language Acquisition (SLA)* are categorized as falling into the contextual approach. Interviews have been the most commonly used methodology for most of these papers; however, this is often paired with another method such as journals, classroom observation, self-reports, sentence-completion tasks, drawings, and questionnaires, among others. Similarly, the present study employs a mixture of data collection methods. By using Lego Serious Play, the researcher has access to several sources of data simultaneously: the physical model built by the learner, the metaphorical comparison made by the learner, and the verbal explanation. In the following section, I will focus on one particular methodology within the contextual approach which is also used in my study: metaphor analysis.

2.4 Metaphor Analysis

A key component of my study is the understanding of metaphors and their impact on our conceptual systems. Not only has metaphor analysis been used to study learner beliefs, metaphors also make the LSP method possible because of their ability to explain one thing in terms of another. Understanding both how metaphors have been used in the realm of learner beliefs research, as well as the impact metaphors have on our understanding of the world is a critical component of analyzing Lego models, as metaphors provide the common ground between these two fields. Let us look at some examples from the learner beliefs research.

Metaphors can be a valuable tool for studying learner beliefs about language learning; however, as Barcelos and Kalaja (2011) have pointed out, metaphors have "so far been little used in research on beliefs about SLA, but […] have proven to be of great value" (p. 282). Several studies have used metaphor analysis (for example, Kramsch, 2006; Saban et al., 2007; Wan et al., 2011; Ellis, 2001) to understand how both language learners and teachers conceptualize their learning, as well as how they perceive their own and each other's roles in the language classroom. Such studies will often triangulate their data by employing several methods of data collection. Common tools for eliciting learners' beliefs in these studies have been questionnaires, interviews, and studies of diary entries or essays. For example, Kramsch (2006) distributed a questionnaire (N=1496) with the completion task, "Learning a language is like …" which she supplemented through studying students' essays and interviews. In doing so, she aimed to investigate which semantic domains learners draw on in order to construct their experience with language learning. Similarly, Saban et al. (2007) used a short questionnaire (N=1142) with the task, "A teacher is like … because …". In both studies, the metaphors collected were sorted and classified based on similarities between them and were analyzed quantitatively. Wan et al. (2011) also use the questionnaire "A teacher is like … because …", but with a different participant breakdown. They distributed the questionnaire to 35 first-year English students, 35 third-year English students, and 33 English teachers, to explore the different metaphors used between groups. Ellis (2001) also used metaphors to investigate differences in beliefs between groups of participants; he studied the metaphors used by SLA researchers in scholarly articles (N=9) as well as those used by students of German in their diary entries (N=6).

Each of the above-mentioned studies has explored the beliefs of language learners by studying the metaphors learners or teachers produce to describe themselves and their learning

experience. In this context, studying metaphors can be especially beneficial as they reveal beliefs that are not easily expressed in literal language. This is comparable to how LSP allows participants to build physical models of the intangible world. In the same way that metaphors allow learners to express beliefs in non-literal language, LSP allows learners to make abstract ideas into physical models. Moreover, as stated by Kristiansen and Rasmussen (2014), the focus of LSP is not on the models themselves, but the stories they create. The Lego models therefore act as a basis on which learners can draw as they discursively construct their beliefs through spoken explanations. However, this would not be possible without the use of metaphors.

Using metaphors as a tool to elicit learners' beliefs is also beneficial for other reasons. Not only do metaphors allow us to express ideas and beliefs that are otherwise difficult to express in literal terms, they can also be helpful as a consciousness-raising device. For example, Wan et al. (2011) expressed the hope that "engagement with […] metaphors will raise consciousness about different conceptualisations or beliefs between different participant groups, or about any teaching/learning problems, and as a result lead to changes in behaviour" (Wan et al, 2011; p. 404). Similarly, Aragao (2011) stated that "reflecting on beliefs is considered one of the major aspects that create optimal conditions for change in the process of language learning" (p. 310). Moreover, research has shown that metaphors are more than just figurative language, rather, they help shape our conceptualization of the world, as I discuss below.

The scope of research about the concept of metaphor is quite extensive, as scholars have investigated what metaphors are, how they can be used, as well as how they influence our conceptual systems. Traditionally, metaphors have been viewed as no more than a figurative stylistic device; their place has been in literary studies and poetry, rather than in the sciences.

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The language of science, which describes the world's physical reality, is usually thought to be precise and unambiguous. Therefore, as Ortony (1993) described, such literal language "has often been thought the most appropriate tool for the objective characterization of reality" (p. 1). In most of the literature about metaphor, however, scholars have been keen to replace this misleading conception with evidence of the importance of metaphors for communication, problem-solving, learning, and making sense of the world (see, for example, Ortony, 1975; Ortony, 1993; Johnson, 1987; Lakoff and Johnson, 1980). Ortony (1975) claimed that "metaphor is an essential ingredient of communication and consequently of great educational value" (p. 45). Additionally, Lakoff and Johnson (1980) stated that "our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature" (p. 3). The traditional view, that the world should be described literally and unambiguously, is rooted in the assumption that there exists one true objective reality. Mark Johnson (1987) described this tradition of thought as 'Objectivism,' and described how its assumptions are pervasive in most of Western philosophy. Objectivism treats meaning and rationality as "purely conceptual, propositional, and algorithmic, and therefore in no way dependent on metaphorical extensions of nonpropositional image schemata" (Johnson, 1987; p. xxi). Johnson further explained that an Objectivist view would support the claim that "humans have access to a value-neutral, ahistorical framework for correctly describing reality" (p. xxi). Moreover, as the results of the LSP workshops illustrate, learners' individual beliefs deny the existence of a one true objective reality. Furthermore, Johnson demonstrated that our perceptions of the world are embedded in our own embodied experiences. A similar view had been explained in Lakoff and Johnson (1980) with the introduction of orientational metaphors ('happy is up; sad is down') which are formed around a physical basis. With respect to my study, it is important to keep the relationship between

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physical reality and orientational metaphors in mind, as evidence of such a connection could be present in the participants' Lego models as well.

Within the broad scope of literature on metaphor, researchers have developed numerous definitions and classifications to better understand how we conceptualize metaphors and what role they play in our minds. Schön (1993) made the distinction between what he called the "generative metaphor" and other metaphors. He described the generative metaphor as a way of "seeing-as," or a carrying-over of frames or perspectives "from one domain of experience to another" (Schön, 1993; p.137). In other words, a generative metaphor is a metaphor which allows us to see something *as something else*. Schön gave the example of a team of researchers whose goal was to improve their design of a synthetic-bristle paintbrush. Only when one of the team members observed that "a paintbrush is a kind of pump," did they notice that it was actually the channels created between the bristles, rather than the bristles themselves, that needed to be changed. This is the kind of 'frame restructuring' that Schön values in the use of generative metaphor. He stated that "when we see *A* as *B*, we do not necessarily understand *A* any better than before, although we understand it differently than before" (Schön, 1993; p. 148). This would explain the benefit of using metaphors as a consciousness-raising device, as described above. Similarly, if learners choose to express their beliefs using generative metaphors during a LSP workshop, then it is also possible that the other participants could learn to conceptualize their learning in other ways.

Regardless of how metaphors may be classified, it is generally agreed upon that metaphor involves the recognition of some common ground between information or knowledge which can be transferred between two different domains. This is confirmed in Johnson (1987) for example

in the following excerpts: "metaphorical projections cross categorical boundaries – they cut across experiential domains of different kinds" (p. 66) and "our ability to process the metaphor depends upon our seeing that the A-domain […] shares certain properties and relations with the B-domain" (pp. 67-68). The fact that metaphors allow us to discover similarities across different domains of knowledge has led many scholars to suggest the usefulness of metaphors in problem-solving, understanding, and learning. For example, Schön (1993) took issue with the notion of problem-solving itself. He claimed that rather than solely seeking a solution for a problem, it is beneficial to reframe the problem. This kind of frame restructuring can allow us to understand the problem differently than before. Again, this may be useful for the participants of a LSP workshop; if struggling learners can learn to reframe the problems they have with language learning, they may have less trouble with these problems in the future.

The research has shown that metaphors go beyond poetic language. They shape our conceptualization of the world, are rooted in our own physical experiences, are helpful for expressing ideas in non-literal terms, and allow us to solve problems by transferring information across various domains of knowledge. As mentioned above, looking at the use of metaphors has been proven useful for understanding the beliefs of second language learners. Based on this research, it is likely that Lego Serious Play (LSP) will be a helpful tool for understanding learner beliefs and for helping them restructure their conceptualizations of language learning as they share their beliefs with their peers. This is promising, as the goal of this study is to determine whether LSP will be helpful for investigating learner beliefs.

3. Methodology

Research for this project began in the Summer of 2016. I began by reading Kristiansen and Rasmussen's (2014) publication "Building a Better Business with Lego Serious Play." After developing an interest in the Lego Serious Play method, I began exploring various ways to adapt the method for use in language education. Initially, my goal was to implement LSP into language teaching by combining it with task-based language teaching (TBLT) methods. However, one of the distinctive features of TBLT is that it allows for an integration of form and meaning, i.e. students get to work on a task collaboratively that requires them to use the target language in the course of task completion. Using LSP for TBLT would therefore have required learners to use the German while taking part in the workshops. Because the majority of my target participants were beginner students of German, I thought the use of English would be more appropriate, and TBLT was therefore abandoned in this study. My interest then shifted to use LSP in two different ways: (1) to investigate individual learner beliefs, and (2) to investigate learners' conceptualizations of grammar. The latter continued to be a part of this project; workshops focusing on a grammar task were also carried out. However, after all the workshops were completed, it was found that the thesis' argument would be stronger with a focus on only one task. Therefore, because my initial research about learner beliefs had been completed, I chose to investigate only the learner beliefs task in this thesis, which allowed me to focus on a more precise objective.

According to my research, the Lego Serious Play (LSP) method appears to be an attractive tool for studying the beliefs of language learners. It is my goal to determine how LSP would yield insights into learners' beliefs and what beliefs they would share through building and describing the models. Therefore, I have chosen to hold my own LSP workshops with

groups of language learners. Although the LSP method has already been described in detail by Kristiansen and Rasmussen (2014), some alterations were made to the original method to fit with the needs of this study. This chapter describes how LSP has been adapted from its original purpose for use in Applied Linguistics research and provides information about those learners who participated in the workshops.

3.1 Using Lego Serious Play to Study Beliefs

Based on current trends in the research about the individual beliefs of language learners, as well as research on the concept of metaphor, LSP is an ideal means by which to study learner beliefs. First, the goals of LSP are similar to the goals of many researchers in Applied Linguistics. According to Kristiansen and Rasmussen (2014), the goals of LSP are: creating 'leaning in,' unlocking new knowledge, and breaking habitual thinking. 'Leaning in' was described by the authors as encouraging participation; more specifically, as avoiding a situation in which one or two participants do most of the talking, while the others contribute less. Creating 'leaning in' is also a desirable goal for researchers, who often ensure their results are complete by filtering out incomplete responses. Moreover, Kristiansen and Rasmussen (2014) define 'unlocking new knowledge' as accessing the potential knowledge of each participant. This is also sought out by researchers, who often attempt to find out as much as they can about their participants by using multiple methods or by using deceptive techniques. Furthermore, breaking habitual thinking may not be as salient a goal for researchers as it is for marketing teams; however, this could challenge language learners to discuss their beliefs in ways they never have.

In addition to the shared goals of LSP and researchers, LSP can help researchers gather data about beliefs more efficiently. As already mentioned, researchers often triangulate their data

by using several methods; however, these methods usually take place at different times. LSP is efficient in that it combines three methods of data collection simultaneously in one workshop. Namely, the products of a workshop include Lego models, metaphorical comparisons, and verbal explanations of the models, which often include why the learner chose a particular metaphor.

Finally, as I have illustrated in the previous chapter, LSP offers potential benefits for struggling learners. Because each learner's model is shared with the rest of the group, the other participants have the opportunity to learn something from the others, or to reframe the way they conceptualize their own learning. A learner who has spent his or her entire language course conceptualizing the language as an enemy may benefit from listening to others describe how the language can also be conceptualized as a friend. Moreover, each student has a different linguistic background and a different understanding about language in general, which they may not realize is unique to them. This benefit, along with those listed above, are some of the reasons I have chosen to hold my own LSP workshops to study the beliefs of language learners.

3.2 Adaptation of the Original Method

I have already described the details of the LSP method in Chapter 1, including the four core processes and seven application techniques outlined by the method's founders. For the purposes of my study, however, it was necessary to adapt the original technique to fit the constraints of my research. In the original method, a LSP workshop is carried out over the course of several hours and can take an entire day to complete. During this time, the facilitator guides the participants through each of the application techniques and the group works towards finding a solution for the originally proposed problem. For my project, I decided to hold shorter workshops and to forego some of the application techniques. One reason for this was to respect

my participants' time; however, the main reason for this decision related to the novelty of this method in collecting learners' beliefs about language learning. LSP had never been used in this context before, thus a main goal of this study was to determine whether it would even be successful for eliciting learner beliefs. Had LSP been ineffective in this regard, the seven application techniques could not be used, as they eventually involve combining the models into a single landscape. Considering the goals of this project as well as time restrictions, I felt that these changes were appropriate.

3.3 The LSP Workshops

The data used for this project were collected during two Lego Serious Play (LSP) workshops which took place on the University of Waterloo campus. Each workshop lasted approximately one hour in length and was led by myself as a workshop facilitator. All of the materials for the workshops were provided by the facilitator; participants' only responsibility was to attend. The Legos used for the workshops came from a large personal collection which was borrowed from a colleague. Although the two workshops took place on different days, the same agenda was followed for both (see Appendix A for a detailed plan). The workshops began with a warm-up activity during which participants were instructed to build a bridge out of Lego blocks. The bridge needed to be large enough so that the facilitator could fit her hand underneath it, and participants were given only four minutes to complete this task. The purpose of this fast-paced warm-up was for students to get used to Lego blocks as a building material and to start building without thinking or planning too much. Unplanned building and simply 'letting your hands do the work' was encouraged by Kristiansen and Rasmussen (2014), who believed that participants would form the best ideas this way. This is because the purpose of LSP is for participants to engage in 'serious *play*;' and play is, by nature, unplanned and exploratory. After

the warm-up finished, participants disassembled their bridge models and were given the prompt for the main building task. Participants were given the prompt "Learning German is (like)…" and were asked to build a Lego model to depict a response to this. Approximately 25 minutes of building time was given to complete this task, after which every participant had completed his or her own unique model. This building phase was followed by the sharing phase, during which each person shared the story behind his or her model. This typically involved a description of the general meaning behind the Lego structure as well as the significance of smaller details. The workshop facilitator often asked participants to elaborate or clarify certain explanations, and invited fellow participants to ask questions about the models built by their peers. After everyone had shared their model, a brief discussion took place during which participants reflected on similarities between models as well as their experience in the workshop.

3.3 Participants

The LSP workshops were attended by a total of nine participants over two days. After being approved by the Office of Research Ethics at the University of Waterloo (ORE #21945), recruitment for participants was started. Recruitment took place in various undergraduate German classes at the University of Waterloo; I visited the classes personally and, after a brief introduction to the project, invited interested students to sign up with their email addresses. Although recruitment took place in undergraduate classes, not all participants were undergraduate students; two graduate students enrolled in beginner German courses were recruited, and one graduate student in German was asked to participate as well. Based on the level of interest, two workshop dates were created and interested students were invited to reserve a place online via the online planning service Doodle ("Doodle," n.d.). To avoid exceeding my desired time limit, I limited the capacity of both workshops to ten participants each. Three

participants attended the first workshop; six participants attended the second workshop. Because I am interested in exploring the diversity of beliefs held by learners, no exclusions were made in the recruitment of participants. As a result, the nine total participants had varying levels of German proficiency as well as different academic backgrounds, programs of study, and experience learning German. The learners varied widely in terms of heritage vs. non-heritage learner, classroom experience with German, reasons for learning, and experience learning German abroad. As I illustrate in the following chapter, the diverse group of participants has resulted in a diverse group of Lego models. In order to best investigate learners' beliefs, both LSP workshops were video and audio recorded, and photos of participants' Lego models were taken. These photos, as well as transcriptions of the recorded explanations of Lego models, make up the data set which will be analyzed in the following chapter. The spoken data were transcribed according to the *cGAT Minimaltranskript* convention (Schmidt at al., 2015). This convention was chosen for two reasons: 1) due to my interest solely in what speakers are saying rather than how they say it, the fine level of detail used in other conventions was not necessary for my analysis, and 2) this is the convention with which I have the most experience.

3.4 Analysis

A grounded theory approach was taken in the analysis of the data (e.g., Riazi, 2017; Glaser, 1992). The data were coded based on the metaphors used in the explanations of the Lego models as well as the individual elements of both the models and the spoken explanations. Data were then categorized as similarities were found between the participants' responses. Salient aspects of the spoken explanations were investigated in further detail and related back to the participant and his or her own experience learning German.

4. Results

The two LSP workshops held on campus at the University of Waterloo resulted in nine unique Lego models built by the workshops' participants. Each model was constructed within the allotted time and uses one or more metaphors to portray the beliefs of the builder, based on the builders' explanations. Although the participants sometimes needed a few minutes to think and plan their model, all the Lego models were created without difficulty. In the first part of this chapter, which begins on the following page, I provide a brief overview of all nine Lego models as well as photographs of each one. Accompanying each model is a description of what was built, why, and the metaphor used to express the builder's beliefs about learning German. A summary of participant information is provided in Table 2. In the second part of the chapter, I focus on three models which are analyzed in detail, including some examples from the transcribed data.

4.1 Overview of Lego Models
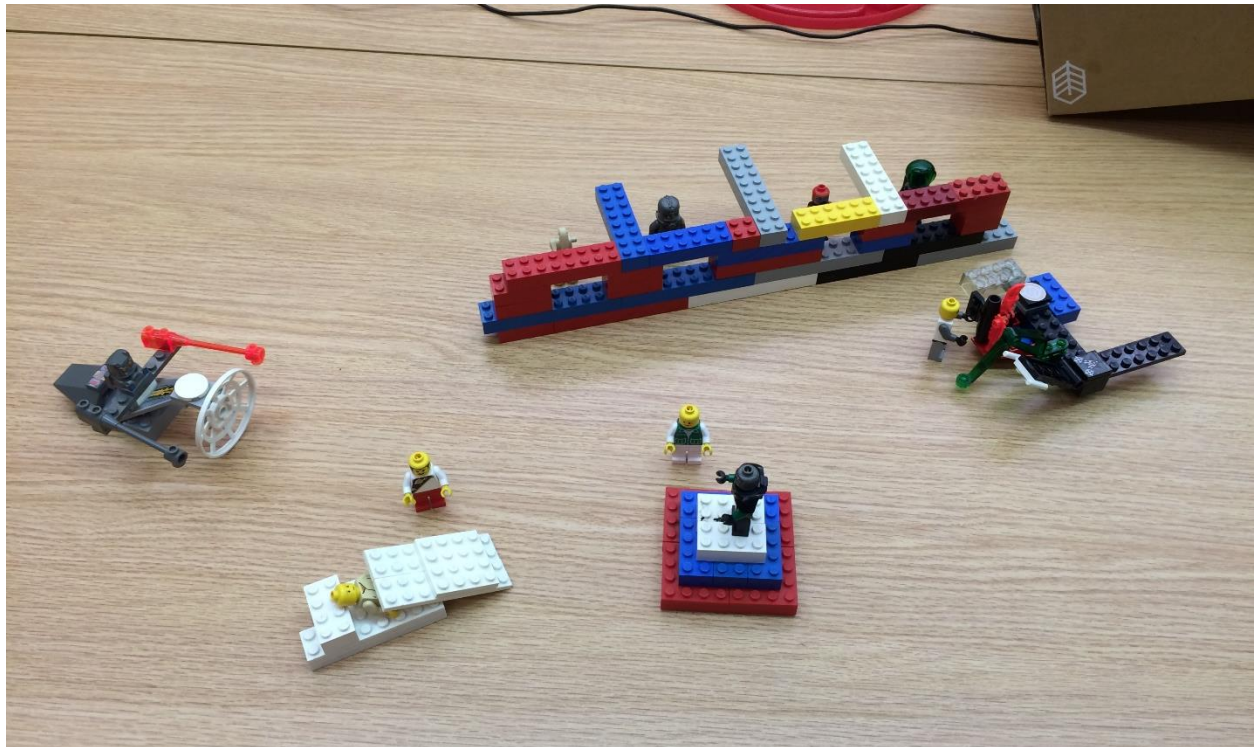
Model 1: Jacob

Figure 1 Jacob's model depicts learning German, comparing it to scientists studying aliens

The first model was built by Jacob, a first-year mechanical engineering student. Jacob's model depicts a scenario in which scientists are studying aliens in order to learn from them. He explained that the aliens arrive at unexpected times via their ship (left). The scientists capture them and separate the aliens into cells (back) so that they do not ban together and escape. The three scientists shown in the model are said to be building a cyborg robot, healing diseases, and building tools. In Jacob's model, the underlying metaphor compares learning German grammar in class with an alien invasion; they both arrive unexpectedly and can be used to increase knowledge and perform various tasks.
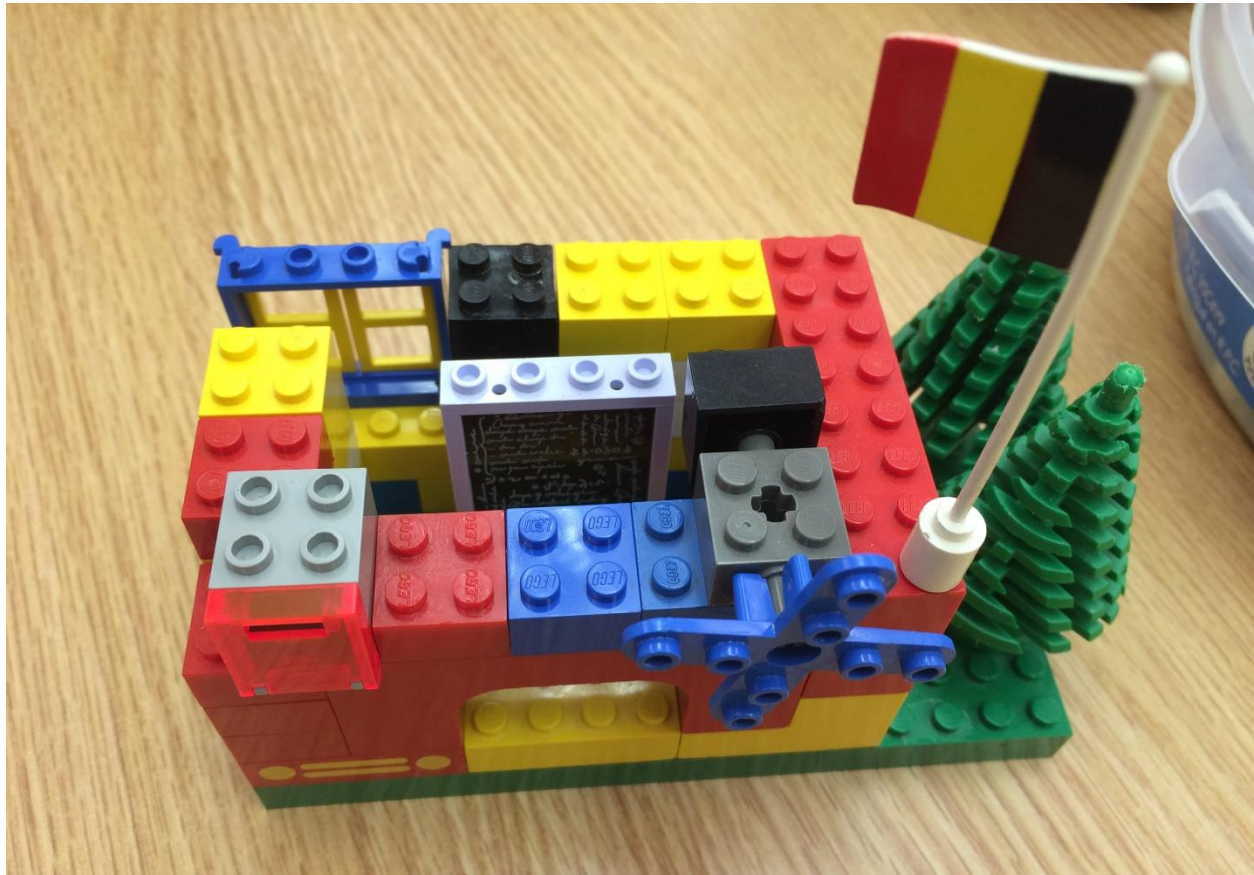
Model 2: Rob

Figure 2 Lego model built by Rob depicting German learning as a house

The next model was built by Rob, a graduate student in Math, and shows German

learning as a house. He attributed the systematic nature of his metaphor to the fact that he studies

math. Rob explained by comparing the parts of building a house to the parts of learning German,

for example, a house begins with a (physical) foundation just as a language begins with basic

skills such as pronunciation. As the walls of Rob's house get higher, the blocks he used become

more visually interesting, which he said represents more complex language use. The propeller

Rob added to the house represents the necessity to fly to German-speaking countries in order to

continue learning. The underlying metaphor is that learning German is like building a house;

both require a sturdy foundation to build on.

Model 3: Sarah

Figure 3 Sarah's model depicts herself and German-speaking family members in front of an unfinished house

Sarah's model represents her conceptualization of German learning as an experience closely associated with home and her family. Like Rob, she has also constructed a house; however, her reason for building this differs. Sarah described that as one learns, the house becomes taller (hence the two floors). She also described that there is room for the house to be built outwards, which is why her house is open on one side. She explained that she associates learning German with her home and family; she has used Lego men to depict herself and the people she associates with speaking German, her mother and her sister. A simplified version of the underlying metaphor in Sarah's model is that learning German is like building a house; however, this simple sentence does not capture the complexity of Sarah's beliefs about learning German.

Model 4: Jeff

Figure 4 Jeff's model depicts German learning as a collaborative process

The next model was built by Jeff. Like Rob and Sarah, Jeff has also constructed a house

to depict his conceptualization of learning German. Jeff has depicted himself in the model with a

Lego man standing inside an unfinished house that is under construction. He explained that he

sees learning German as adding new parts to the house with each new thing he learns. The other

people in the model represent the fact that language learning is a collaborative process, and stand

for his teachers and German-speaking friends. Therefore, the underlying metaphor of Jeff's

model is that learning German is like building a house; it's a collaborative process and, although

it may not be finished, it can still be a comfortable place to live.
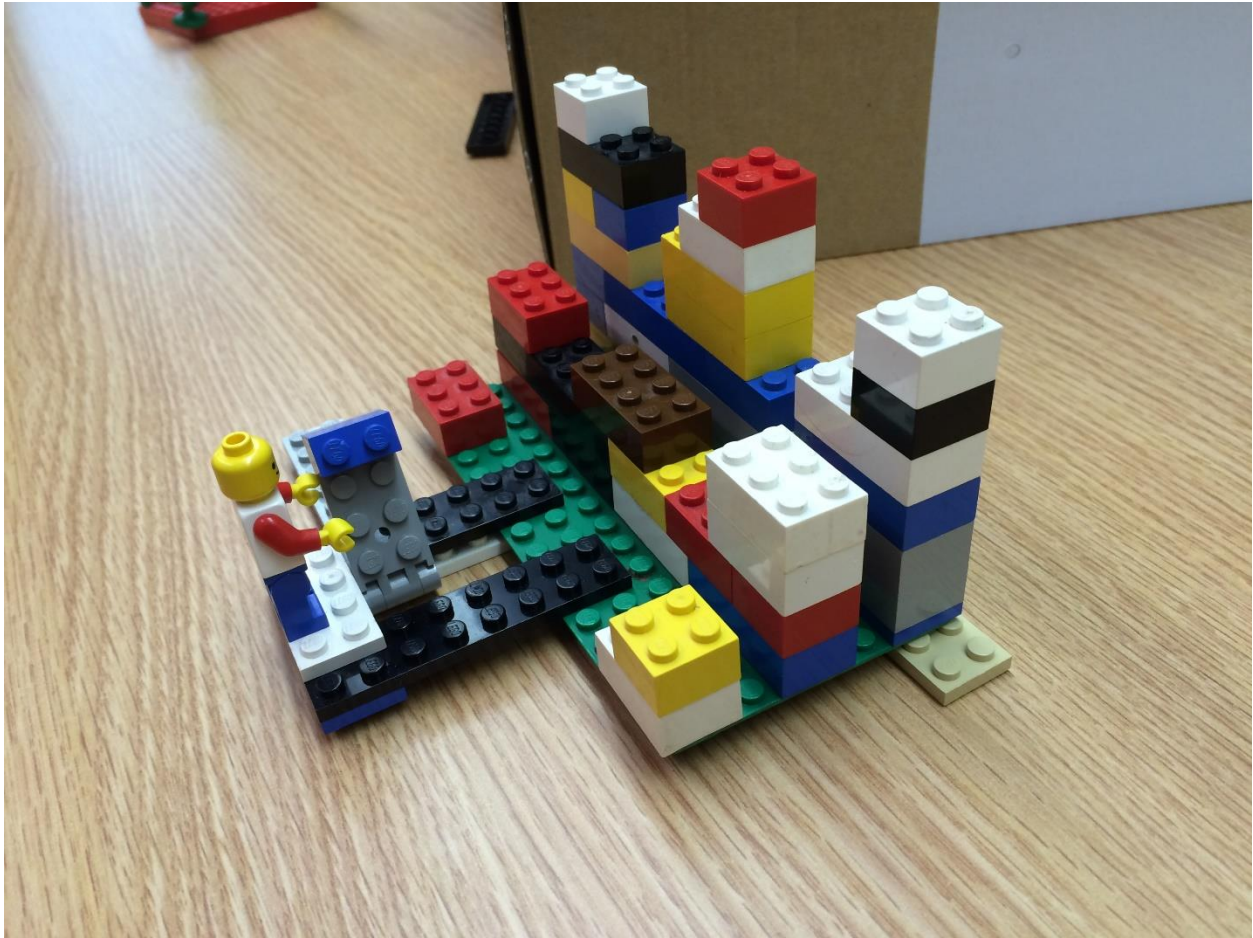
Figure 5 Nathan's model depicts himself tearing down walls

Nathan used the metaphor of tearing down walls to describe his experience learning German. He explained that he had to learn to read German as part of his study of Music. In his model, he included three walls of different heights. The first and shortest wall represents his ability to read German; the second wall represents his listening comprehension skills; the last and tallest wall represents his speaking/pronunciation skills. He attributed most of his difficulty with speaking German to a lack of confidence. The underlying metaphor of Nathan's model is that German is like a series of obstacles to be broken down.

Model 6: Kevin
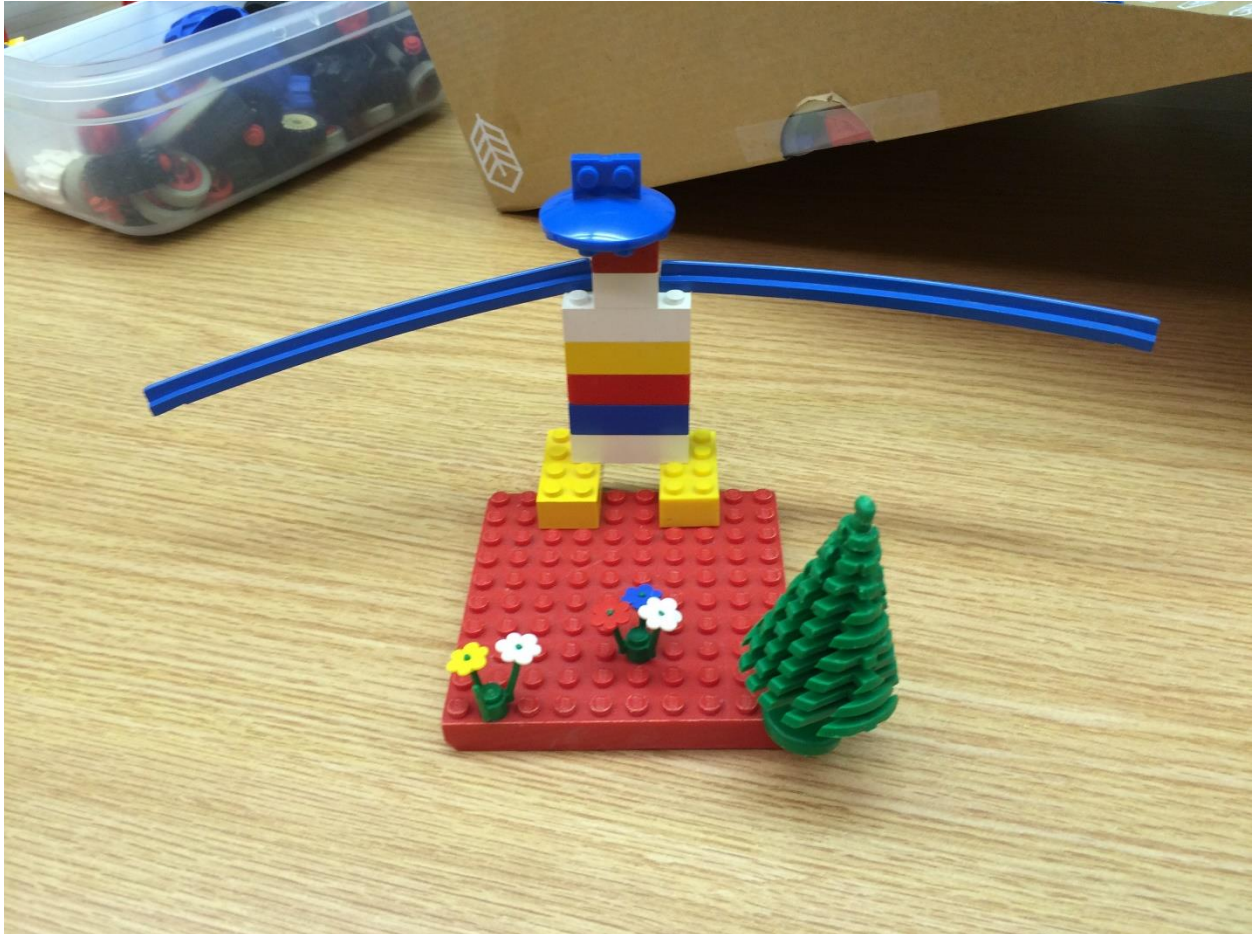
Figure 6 Kevin's model depicting learning German as entering a new world

This model was built by Kevin and represents his beliefs about learning German. He explained that he sees German as entering a new world, and has therefore constructed a figure, which represents himself, at the edge of a foreign land. Kevin explained that learning German has allowed him to enter the German online community. The underlying metaphor in Kevin's model therefore compares entering a new imagined community with entering a new physical place; there are new things to explore which had formerly been inaccessible to him.

Model 7: Sonia

Figure 7 Sonia's model of learning German as climbing

This model was built by Sonia, a first-year student of Accounting and Financial

Management. Her model depicts the metaphor underlying it: learning German is like climbing;

the process has its challenges but making progress is always very satisfying. She has constructed

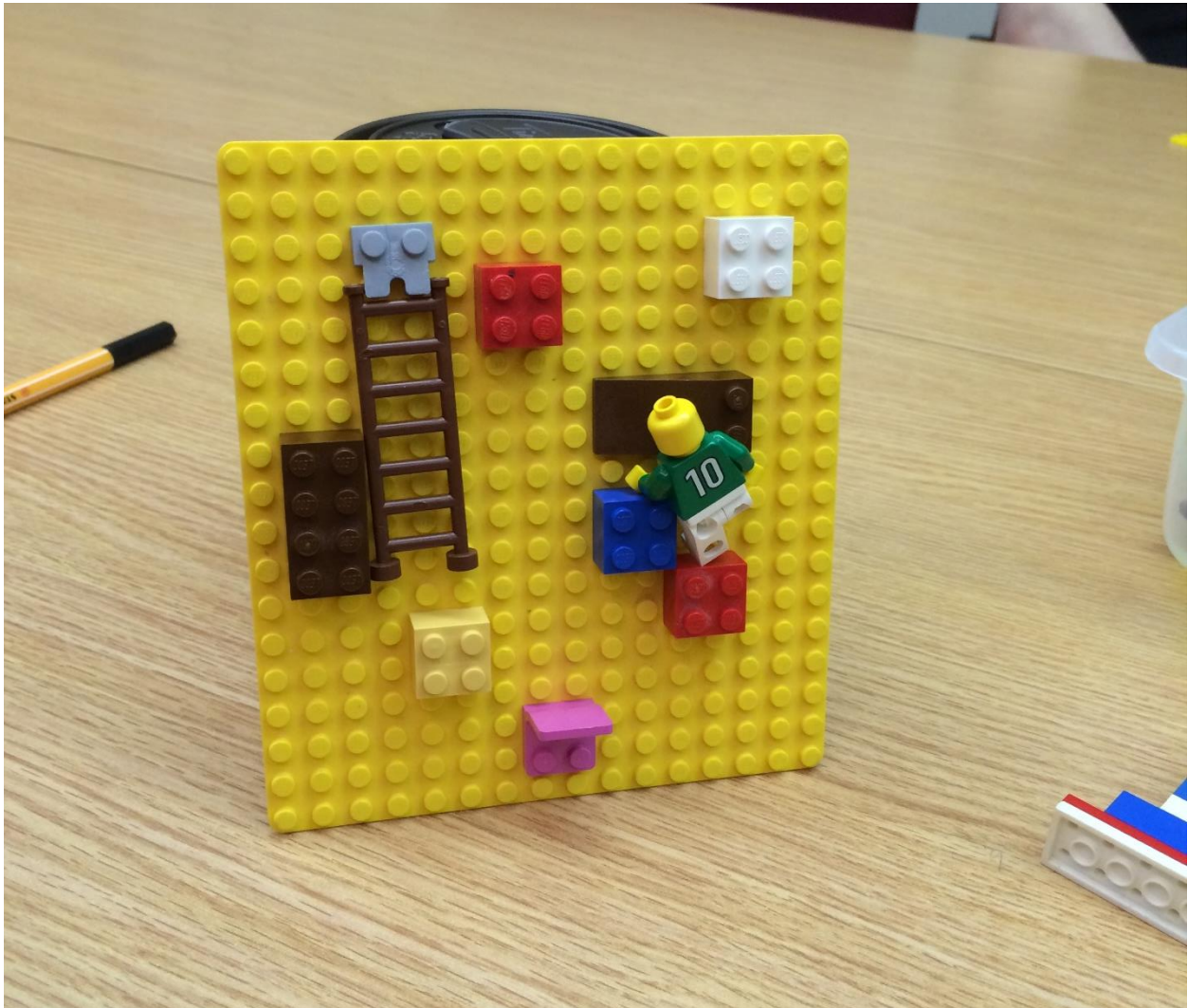her model on a vertical plane and supported it with her coffee cup to illustrate the upward

journey.

Model 8: Andrew
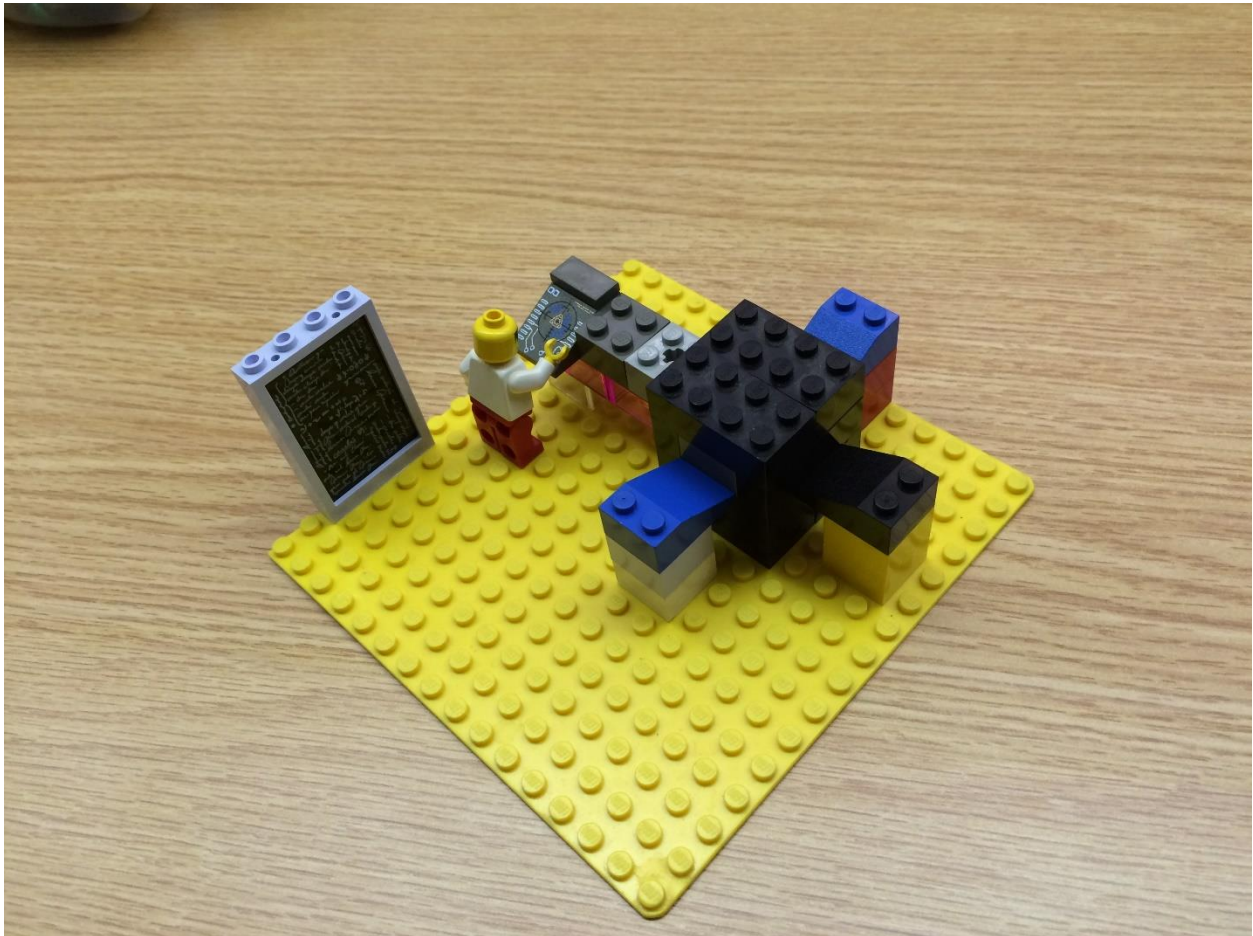
Figure 8 Andrew's model depicting German learning as researching alien knowledge

This model was built by Andrew, a first-year student of Computer Science. Similar to

Jacob's model (Figure 1), Andrew's model depicts a scientist researching alien knowledge. He

explained that the black box represents an alien monument that needs to be researched, and that

learning German is like trying to piece together what has already been given to him. The

underlying metaphor is therefore a comparison of understanding the German presented in class

with the process of learning about an alien artefact; both are foreign and take time and effort (and

presumably also intelligence) in order to be understood.

Model 9: Kenneth

Figure 9 Kenneth's Lego model depicts himself, his teachers, and his impressions of Germany

The final model was created by Kenneth, a second-year psychology student. He is

completing a minor in German and has also attended the Bamberg Summer School offered at the

University of Waterloo. His model depicts himself, represented by the robot R2D2, separated

from the world of German by a tall, jagged wall. On top of the wall are Kenneth's first-year

German instructor and teaching assistant, who shaped his first experience with the language. The

world of German on the other side of the wall is filled with representations of his memories and impressions of Germany, for example a man lying down representing a dog "because there are a lot of dogs there." The underlying metaphor in Kenneth's model is not easily summarized in a single statement. It also does not provide a way of "seeing-as," otherwise known as a generative metaphor, described by Schön (1993). In spite of this, we can understand Kenneth's beliefs about his experience learning German based on the physical model he has constructed and his explanation thereof.

The nine models described above demonstrate how LSP has been applied to investigate the individual beliefs of language learners. A summary of this information as well as further details about each of the participants can be found in Table 2.

Pseudonym	Field/Major	German Learning Background	Summarized Metaphor: Learning German is (like)…
Jacob	Mechanical Engineering (undergraduate)	Heritage Learner; attended Waterloo Saturday School; now taking elementary German for fun	…capturing aliens and learning from their knowledge
Rob	Math (graduate)	Self taught; has taken courses at the Goethe Institut and university	…building a house; it increases in complexity as it is built
Sarah	Environment and Business; German minor (undergraduate)	Heritage speaker; started taking courses at university	…building a house/home; it gets higher/wider as knowledge increases
Jeff	German Studies (graduate)	Started learning German in high school; has a B.A and M.A in German Studies	…building a house; it is a collaborative process
Nathan	Math (graduate)	Started learning (reading) German alongside Music studies; now taking elementary German for fun	…tearing down walls
Kevin	Computer Science (undergraduate)	Started learning German at university	…entering a new world
Sonia	Accounting and Financial	Started learning German at university	…climbing; challenging but satisfying

	Management (undergraduate)		
Andrew	Computer Science (undergraduate)	Started learning German at university	…studying alien monuments to learn from them
Kenneth	Psychology; German minor (undergraduate)	Started learning German at university; attended German summer school in Bamberg	…being separated from the world of German by a wall

Table 2 Summary of participant information

4.2 Analysis

Each of the models listed above was built by a learner of German who expressed their beliefs by building a Lego model and explaining it with a metaphor. I have provided a brief description of the models, however, there are many attributes of each model and its accompanying description which can be better understood after a detailed analysis. Unfortunately, a full analysis of every model would exceed the scope of this thesis. Therefore, I have chosen to do more in-depth analyses with just three models from the LSP workshops; specifically, those built by Rob, Jeff, and Nathan. I chose to focus on these three models due to the similarities in the metaphors that were used to describe them. These similarities allow us to compare the individual students' beliefs and analyze them accordingly; despite the reference to similar metaphors, they differ considerably. Although all three models were built by male graduate students, this was purely coincidental and did not influence the decision to select these for analysis. Furthermore, the learners' level of proficiency in German did not play a role in the selection process, as my focus was on how the individual's experience was reflected in each model, regardless what that experience was. The following analyses include an in-depth description of the physical model and an analysis of the verbal explanation. Excerpts of the transcribed descriptions are included to provide context for each example with the most relevant text to the analysis in bold. The analyses consider the individual learners and how their unique

experiences can be observed in the models they have built. For example, did the learner choose to focus their model primarily around the learning process, the learner/self, or something else? Which metaphorical dimensions are offered by the builder, and how do these contribute to the observer's understanding of the builder's beliefs? How is each learner's learning history reflected in the model that he or she has created? These factors will be considered in the following analyses.

4.2.1 Rob's Model

Rob has created a small structure resembling a house to represent his conceptualization of the process of learning German. The metaphor underlying Rob's model is that learning German is like building a house; it needs a strong foundation before expanding. This can be classified as a 'generative metaphor' which was discussed in Chapter 2. This type of metaphor enables one to see something *as something else.* By understanding what Rob has built, as well as his explanation thereof, we can see learning German as the construction of a house. More specifically, we can attribute the parts of a house to the elements of the language to be learned. Rob has done precisely this in his explanation of the model, a picture of which can be seen in Figure 2 on page 30. He identified the following physical characteristics of his model, each which represents a different aspect of his understanding of learning German:

(i)   *Base:* Rob's model is built as a single structure (i.e., there are not several separate parts) on a Lego base plate. The foundation of the house represents the need to build a solid foundation when learning German. Rob explained that this foundation may consist of establishing correct pronunciation, being able to form simple sentences,

and understanding that nouns have genders, for example: "you start by building your foundation … how do you make sentences" (P12, line 10).

(ii)   *Lower bricks:* the Lego bricks near the bottom of the structure are relatively 'plain' or 'normal'; they are of assorted colours but do not have special functions. Rob did not explicitly state the metaphorical significance of these blocks; rather this was done implicitly by contrasting the lower bricks with those above them.

(iii)   *Upper bricks:* the Lego bricks near the top of Rob's model are more visually interesting than those below and some have moving parts; for example, the pink and grey container on the front or the window on the back. These are said to represent the more advanced use of the German language, for example the ability to put together "a really long clever sentence," (P12; line 35) the ability to use the subjunctive, or the ability to use figures of speech that do not exist in English.

(iv)   *Trees:* the trees on the right side are the only pieces not attached to the house. Rob explained that trees and fancier details (such as those represented by the upper bricks) are the kinds of things that get added to a house after the necessary structural elements have been built: "once you've built it in such a way that it won't collapse … you can start doing you know, fancier stuff" (P12; line 30). Like the upper bricks attached to the house, they represent the ability to use the German language stylistically and beyond simply what is necessary to communicate.

(v)   *Propeller:* the propeller is attached to the front of the house on top of a wall. According to Rob, this represents the fact that "every so often you're goin to have to fly your house to Germany or Austria or Switzerland and then you're gonna have to learn there" (P12 line 16).

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(vi)   *Belgian flag:* the selection of flags in the Lego inventory was limited, so Rob chose a Belgian flag to represent the German flag after explaining the necessity to go abroad: "we'll have to pretend this is a German flag" (P12, line 16).

(vii) *Blackboard:* the blackboard has been positioned inside the house. This represents Rob's belief that a learner of German will spend a lot of time reading and writing since the learning takes place outside of the German-speaking world: "you're gonna be reading and writing a lot so there's a … blackboard" (P12, line 16)

In addition to the details of Rob's Lego model, there are some aspects of his spoken response that I would like to address. First, Rob attributes the systematic nature of his model to the fact that he studies math, as in the following excerpt:

```
001 ROB ok ahm ok so this h° ah might be the worlds most
        painfully obvious ah metaphor but it it does
        ah (0.67) it does make sense since (0.73) because i
        learned german in a very systematic way which is the
        sort of thing you would do when you have a bunch of math
        degrees
```

Based on this introduction to Rob's explanation, it seems that he is attempting to justify why he chose to build the model the way he did. He does so by focusing on an aspect of his identity, namely, his field of study. In prefacing his story with this statement, he positions himself to the facilitator and to the other participants as a typical 'math student.' This may be understood as somebody who fits the stereotype of the 'analytical learner,' or, someone who is thought to prefer sequential order, pay attention to detail, and be self-motivated and logical (Boneva & Mihova, 2012). This contrasts the task at hand, which involves being creative and abstract and talking about personal beliefs. This could be a reason for Rob's justification. Rob again reflects

on his 'math student' identity in line 10 when he explains his first contact with German as a

foreign language:

```
010 ROB so (0.99) you know you it_s like building a house you
        start (.) by (.) building your foundation which
        is (0.25) ok well it was sor whats the internal
        logic (by) this language how do you pronounce words
        ahm (0.68) ah how do you make sentences
```

Rob explains how he begins to learn a language by asking himself about the 'internal logic' of

the language. As this is not normally something explicitly talked about in a language class, we

can assume that Rob's own personal way of approaching language learning is to be systematic

and logical. Moreover, Rob's model is based on the metaphor that learning German is like

building a house in the sense that it must first have a strong foundation before increasing in

complexity. This aligns with Rob's background in Math; in mathematics, it is also necessary to

start with the basics (simple addition/multiplication) before learning to use the more complex

functions used in algebra or calculus, for example.

Another interesting aspect of Rob's explanation is his use of the generic 'you' throughout

his description. The generic use of this second-person pronoun is often used in spoken English in

place of the impersonal pronoun "one" as in "one should study to get good grades." Take the

following excerpt, for example, in which the generic 'you' is seen in bold:

```
016 ROB because (0.34) every so often youre goin to have to fly
        your house to germany or austria or switzerland and then
        youre gonna have to learn
        there (0.36) ahm (0.89) also (0.31) ahm (.) because (.)
        youve spent a lot of your time learning this language
        outside the german speaking world part of the world
        youre gonna be reading and writing a lot so there_s a
        whiteboard (ins) blackboard actually inside your house
```

In this passage, Rob is describing his own experiences learning German; he has experience studying German in Germany and he began learning by reading short stories in German. However, statements such as "you've spent a lot of your time learning this language outside the German-speaking world" imply that this is a common experience. By using the generic "you" in this context, Rob addresses his peers as a group, constructing what he sees as shared knowledge amongst them. The use of the token "you" is therefore representative of his peer group, or learners of German in general, and allows him to draw on the presumed shared narrative that one goes abroad when learning German. Rob does not account for other learners who may have experience learning German solely in a German-speaking country, or for those learners who have primarily learned through spoken interaction. Similarly, when Rob states that "you're goin to *have to* fly your house to Germany or Austria or Switzerland," he implies his belief that learning German cannot be successful without spending time in a German-speaking country. This demonstrates the value that Rob places on his own study-abroad experiences. Rob's use of the generic 'you' suggests that his beliefs and assumptions about the process of learning German are heavily influenced by his own personal experiences.

A final aspect of Rob's explanation that I would like to address is the fact that his model of a house is complete. That is, according to Rob, the final stage of building a metaphorical house is the addition of fancy bricks and décor such as a garden with trees. In this sense, Rob's house model is complete. The completed house could be an indication of Rob's confidence in speaking and learning German, or simply demonstrate that he believes to know the steps necessary to learn. Rob appears to believe that full mastery of the German language can be achieved by following the system of improving and building on what is already there. Rob did not state whether or not he considers his own learning as 'complete,' however, his metaphor and

model suggest that he believes that learning German can some day achieve a final, complete state. For Rob, this state may occur once a learner can successfully use the most advanced linguistic forms accurately and appropriately. This belief is especially interesting for this analysis because it contrasts with the belief held by Jeff, whose response is described in the following section.

Rob has put together a model which demonstrates his beliefs about a systematic way to learn German. He does not frequently discuss his own personal experiences explicitly, rather, he uses the generic 'you' to describe how he believes one should learn the German language. Although not spoken explicitly, Rob's model suggests that a final state of perfected German may some day be achieved. His metaphor could be helpful for some learners who struggle to learn German and may not recognize problems with their own 'foundational knowledge' of the language. For this reason, the generative metaphor becomes especially useful for learners.

4.2.2 Jeff's Model

As previously mentioned, the models chosen for close analysis were chosen based on similarities in the metaphors chosen by the participants. Although Jeff's model resembles Rob's model in terms of the underlying metaphor used to describe the process of learning German, as I will now demonstrate, the two responses also differ. Like Rob, Jeff chose the metaphor "learning German is like building a house," however, Jeff has chosen to focus on his own personal experience. Jeff's house metaphor can also be considered a generative metaphor as various parts of the model can represent factors of learning German. The following physical attributes of the model, seen in Figure 4 on page 32, were identified by Jeff along with their figurative significance:

(i)   *Walls:* The walls of Jeff's house are small because they are incomplete. They are only two or three bricks tall, representing the fact that the house is in the process of being built: "I tried to show like people building a house" (P14, line 10).

(ii)   *Lego men:* The Lego man standing inside of the house represents Jeff himself. Jeff emphasized that he has placed himself inside the house because the house belongs to him. The other Lego men represent Jeff's teachers, German-speaking friends, or even the resources he uses to interact with German, such as books. He stated that he is not alone in the model because he considers learning German to be something he does along with others rather than alone: "it's a collaborative process like I'm not just sitting here learning German myself" (P14, line 10). All three Lego men are holding small blocks, which represent the contributions to Jeff's learning: "things I know but haven't been worked into my German yet" (P14, line 24). Jeff explained that he and the other Lego men are contributing to his house/knowledge of German by building up the walls and filling in the gaps.

(iii)   *Holes/problems:* Jeff stated that the holes in the walls represent the problems or imperfections one can encounter while building a house. For example, the house "can have draughts," or it "leaks sometimes" or in the shower "the water's either scalding hot or super cold" (P14, line 10). This is also represented through the open windows and doors on the model. Jeff explained that despite these problems in a house, it can still be a comfortable home to live in. He described his own experiences speaking German in a similar way; "I know I'm always gonna make mistakes but regardless I still like it and I'm still comfortable speaking it" (P14; line 10).

Jeff's model and its underlying metaphor are relatively straightforward and uncomplicated. However, an interesting aspect of Jeff's explanation of the model is that he uses an second metaphor in his spoken explanation that we do not see in the Lego model: the puzzle metaphor. Before mentioning anything about the house, Jeff begins by explaining that he sees learning German grammar as acquiring new pieces of a puzzle. For example, in the following excerpt:

```
001 JEF like my experience learning german i really like from the
        get go i really liked the grammar which is a very (.) odd
        sentence to say (0.28) uhm (0.28) like really i always
        felt like every week we (learned/had) a new grammar
        concept its like i was getting like a little
        like (0.49) inkling about how the language works and how
        ahm like another (little) like new (.) I always thought
        it was a new piece of the puzzle
```

Here, Jeff does not describe that he has always envisioned learning German as a house under construction, rather, he has always seen it as completing a puzzle. He expands on this a few lines later:

```
008 JEF uhm its a piece of the puzzle but the more i learn abou
        learn a learn about it the more i realize there are
        always gonna be pieces that are missing
```

We can see from these statements that there is another metaphor underlying Jeff's conceptualization of learning German: that of putting together a puzzle which Jeff believes will never form a complete image.

```
010 JEF in the puzzle so were never gonna have like (0.31) ah a
        whole complete image (0.69) but (0.44) it_s still
        something i like to do so what i did was (.) i (0.29) i
        tried to d like show like people building a house
```

We can see that Jeff primarily conceptualizes learning German as putting together a puzzle. In the excerpt above, he explains that he tried to depict this metaphor physically by relying on the house metaphor. It is possible that Jeff's use of an additional metaphor was due to a limitation of the building material, which is three-dimensional by nature. It may have been easier for Jeff to portray his puzzle metaphor spatially by using another, similar metaphor. This is an excellent example of the generative metaphor; Jeff's understanding of learning German can be *seen as* putting together a puzzle or as building a house. This is summarized in Table 3, which shows how the concept of learning German relates to the concepts of putting together a puzzle and building a house, including how the components of each concept relate to each other as well as Jeff's perceived outcome of each.

From the examples in Table 3, we see three different ways of framing the same idea. The incomplete puzzle metaphor coincides with the incomplete house metaphor, and both metaphors represent Jeff's belief that he will never achieve a state of "completeness" with his German. He seems comfortable with the idea that, as a non-native speaker of German, there will always be gaps in his German knowledge and he will always make mistakes. Despite this belief, however, Jeff emphasized on several occasions throughout his explanation that he is very comfortable speaking German although it is not perfect. For this reason, the right column of Table 3 displays a justification for each concept. This was included because it seemed to be important to Jeff to emphasize that he enjoys learning German despite his belief that his German proficiency will never be perfect. He included a justification while explaining each metaphor as well as his ideas about learning German. For example, although the house has leaks, it can still be a comfortable place to call home. In providing these justifications, Jeff draws attention to his belief that learning German is an enjoyable process for him, regardless of the eventual outcome.

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Concept	Components	Outcome	Situation	Justification
Learning German	Grammar concepts	Imperfect speaker	"i know im never gonna speak german perfectly i know im always gonna make mistakes" (P14; line 10)	"im still comfortable speaking it and im comfortable (.) with german" (P14; line 10)
Putting together a puzzle	Puzzle pieces	Incomplete image	"in the puzzle so were never gonna have like (0.31) ah a whole complete image" (P14; line 10)	"but (0.44) it_s still something i like to do" (P14; line 10)
Constructing a house	Bricks/ materials	Holes, leaks, draughts	"i left holes cause there_s there_s so many imperfections in the house (0.29) and like in the house can have draughts or it can like it leaks sometimes" (P14; line 10)	"it can still can be a home it can still be somewhere im really comfortable in" (P14; line 10)

Table 3 Comparison of Jeff's Metaphors

Jeff's belief that his German will never be complete contrasts with Rob's conceptualization of learning German as outlined in the previous section. Rob's model represents a complete image of the process of learning German from start (foundation) to finish (fancy décor). Rob's house metaphor is consistent with how a house is planned and built in theory: it begins with a foundation, and continues to be built up until, at some point in time, it is finished. This contrasts with Jeff's conceptualization represented with an unfinished house. His house metaphor seems to be more consistent with the idea that, in practice, building a house may not go as planned and mistakes might be made. Neither metaphor is necessarily more correct than the other; however, they do demonstrate how even the most similar metaphors can differ greatly. As

these metaphors also represent the beliefs of the builders, we can therefore also see how even beliefs about learning German that appear similar can differ conceptually. In the case of Rob and Jeff, it is likely that these differences are a result of their varying individual experiences with learning German and learning about language learning. Similarly, Nathan's own experiences learning German are unique to him and influence his beliefs about doing do. In the next section, I describe Nathan's Lego model, which uses a different metaphor, yet displays some similarities to the models by Rob and Jeff.

4.2.3 Nathan's Model

Nathan described the process of learning German as tearing down a series of walls, as seen in Figure 5 on page 33. The primary focus of this model is on the language itself, which has been divided into the three skills of reading, listening, and speaking. He explained that he overcomes the barriers created by the walls by tearing them down piece by piece. Nathan identified the following physical attributes of his Lego model:

(i) *Himself:* Nathan has used a Lego man to depict himself standing on a platform facing the walls he described. The Lego man is holding some bricks, which he will throw at the walls to tear them down: "I'm throwing sort of a brick at the wall" (P15, line 46). No other people are present in the description of his model.

(ii) *Wall #1:* The first of three walls is difficult to notice as it is made up of only three bricks. In the story of Nathan's model, it has been almost entirely destroyed. This wall represents Nathan's proficiency in reading German, which he considers to be his strongest skill, which he describes as "kind of okay" (P15, line 37). Because Nathan already the most experience with reading, this barrier is smaller than the others.

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(iii)   *Wall #2:* The second wall sits in the centre of the model and is medium-sized, relative

to the other walls. It represents Nathan's listening comprehension skills in German.

He explained that he finds understanding spoken German to be "a bit worse" than

reading, however, this is not the highest wall he has built.

(iv)   *Wall #3:* The third, final, and tallest wall sits at the back of Nathan's model, furthest

from the Lego man. It represents his ability to speak German, which he described as

being the most difficult for him due to his lack of confidence. This discussed further

below.

In addition to the physical attributes of Nathan's model, I would also like to address some

aspects of his spoken description, as in the previous examples. First, I will focus on Nathan's

own evaluation of his learning experience. He begins by stating that he is learning German for

fun, then prefaces his model description by explaining that he has experience learning other

languages because he studied music:

```
003 NAT so you have to (.) have a reading knowledge of like a
        bunch of different languages so
004 INT mm hm
005     (0.38)
006 NAT ahm ive learnt french and spanish for many years i also
        have reading knowledge of italian and german was one of
        them so i decided to learn how to (.) speak it
```

In describing his experience with several other languages, Nathan makes it known to the other

workshop attendants that he is a competent language learner. However, as Nathan continues, he

explains the difficulties he has had learning German. For example, he described learning German

as a "hard journey so far" (line 8) and as "really difficult" (line 23) due to the differences in

pronunciation and sentence structure. Nathan attributed his difficulty with speaking to a lack of confidence, as illustrated in the following excerpt:

```
030 NAT yeah (.) uhm most (.) ly (0.56) hardest thing for me is
        confidence really (0.35) like i can think of things in my
        head but (0.64) before i say them i think okay well thats
        stupid maybe not
```

Here, Nathan describes that his lack of confidence holds him back when trying to speak German. This is reflected in Nathan's Lego model in the tall walls which also hold him back from being a successful speaker of German. Despite this lack of confidence, however, Nathan's first wall, which represents reading, has been almost completely destroyed, indicating that he may feel more comfortable with his reading ability. Nathan's ideas about learning show a stark contrast to those of the other participants described here, for example Jeff's description of his feelings about speaking German. Jeff had explained that, despite the mistakes he knows he makes, he is still very comfortable speaking German and enjoys doing so.

Next, I would like to discuss the way Nathan conceptualizes the language. Nathan has broken down learning into the different skills of reading, listening, and speaking; he did not mention writing in his description. Because he has separated the language into skills represented by walls, we can better understand how Nathan sees German as not only a single barrier to be overcome, but a series of barriers. This also demonstrates the fact that he may have several different opinions about the language. This forms an interesting comparison to the models built by Rob and Jeff. For example, Rob had built his conceptualization of German as a single unit, specifically a house. When it comes to dividing the language into smaller components, Rob had divided the language according to its complexity, beginning with a foundation made up of basic language skills, and continuing with more complex language. Moreover, Jeff's model of a house

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did not separate the language into skills or any other components. Rather, he explained that the language simply gets built up piece by piece; the pieces were not said to have any special significance. These differences demonstrate the subtle differences that can exist in learners' conceptualizations of a language and of learning a language.

Based on the model that Nathan has built as well as the accompanying description, we can understand more about how he conceptualizes learning German. Nathan sees learning German as a series of obstacles to be overcome, which is done by tearing them down. His lack of confidence with speaking German appears to be an issue for him, especially considering his previous successful encounters with other languages such as French or Spanish. Unlike some of the other models we have seen, Nathan's model does not illustrate building up one's skills in learning German, but tearing down the barriers that block the way to his learning goals.

5. Discussion

Most of the results of this LSP study were are consistent with the previous literature about learner beliefs, the research about metaphor, as well as with the goals set by the founders of LSP. However, some aspects of the findings were unexpected, which will be discussed below. In spite of this, none of the results from the study conflicted with the previous research. The findings support the current trends in learner beliefs research, namely, the definition of beliefs as well as methodological considerations.

Because LSP was used in an unconventional context, and due to the modifications to the LSP workshops, it was possible that the initial goals set by the founders of the LSP method (creating 'leaning in,' creating new knowledge, and breaking habitual thinking) would not be achieved. Nevertheless, it was not unexpected that the use of LSP in this study was successful in that all participants took part and built a model which metaphorically represented his or her own beliefs about learning German. The overall goal of my workshops was not to solve a complex problem, as in the original method's description. Nevertheless, the findings support the notion that participants created 'new knowledge' in that they shared ideas about their learning that may not have otherwise been discussed outside of an LSP workshop. The goal to break habitual thinking was also achieved, as learners were forced to think about their learning from a novel perspective when they began building.

It was also expected that using metaphors to talk about beliefs would be productive. Previous studies which employ metaphor analysis (for example, Kramsch, 2006; Ellis, 2001) have already shown that using metaphors can be an effective way for learners to describe and discuss beliefs. In addition to this, metaphor analysis has been shown to be effective for

researchers who wish to better understand the beliefs of language learners. Each of the participants of the LSP workshops contributed his or her own metaphor and used it to discuss beliefs that may not have been so easily expressed using literal language. These findings were consistent with the goals of LSP and the research about metaphor, including studies about beliefs that employ metaphor analytical methods.

A less expected finding of this study was the salience of participants' inclusion of their own fields of study in the explanations of Lego models. In several cases, learners used their own current or former field of study to justify parts of their models or explanations. For example, Rob's attribution of his "painfully obvious" metaphor to his study of math. Similarly, we have seen that Nathan justified his reason for learning German by explaining that it was a part of his former study of music. Furthermore, when explaining her model, Sarah justified her inclusion of a tree on the model by stating "the tree, nature, cause again it goes with my little E.B [Environment and Business] background" (P13, line 20). Although these findings seem to suggest that learners' fields of study may have an influence on their beliefs, it is perhaps more accurate to say that, beyond their fields of study, the learners are drawing on their own personal experiences when explaining their beliefs. It is possible that learners associate their fields of study with who they are, that is, their identities, especially if they have studied in this field for several years (as is the case of Rob, Nathan, and Sarah). It is also important to consider the possibility that learners may be keen to draw on their fields of study due to the time of year (the workshop took place just a few weeks before the beginning of final exams) or location of the workshop (on the University of Waterloo campus). Additionally, beyond just mentioning their fields of study in their explanations, we see that learners draw on other experiences as well. For example, Andrew's model was created to resemble a video game that he used to play, thereby

acting as a product of a different aspect of his identity, namely his own personal interest. Similarly, on Kenneth's model, he depicted a scene where he is shown with his teacher and teaching assistant from his first-year German course, i.e., something he experienced in the past. The findings further support the claim that learners' beliefs are based on their own experience; in Rob's case, his explanation of how to learn German reflects how he himself learned German.

On the other hand, the findings also demonstrate that learners' beliefs can be linked to ideas learners have that are not the product of what they have personally experienced. For example, Sonia explained her conceptualization of learning German as climbing, although she has not personally participated in climbing. While she herself is not a climber, she does have the experience of learning about climbing, understanding how climbing works, and anticipating the satisfying feeling of reaching the top. Similarly, several participants compared learning German to building a house, although it is unlikely that they have personally done this in the past. The experience of learning about house building as well as developing an understanding of what is involved allows the learners to make the connection between these two domains of knowledge. The findings therefore suggest that learners' beliefs about language learning may be based on their own personal experiences or on the ideas they have based on the knowledge they have about the world.

Another salient aspect of the results was fact that there were many similarities between the models built and metaphors created. There are several possible explanations for this. First, the learners did not build these models in isolation. Rather, because the workshops took place in a group setting, it is possible that learners took over ideas from the others or altered explanations of their own beliefs based on the explanations of their peers. It is therefore possible that the

beliefs of learners are not solely their own, rather a co-construction of the beliefs shared by the group. This could be further investigated by analyzing the video recordings of the workshops with a focus on how the participants interact with one another while building; specifically, by studying learner gaze, interactions with others, or alterations to model design. However, this would not account for the fact that learners used very similar metaphors across workshops. The ideas shared in the first workshop could not have influenced or altered the ideas shared during the second; none of the participants attended both workshops. An example of a similarity across workshops is seen in the models of Jacob and Andrew. Both learners constructed models which showed scientists working in a lab and studying a foreign object or being. Their models and the explanations thereof were strikingly similar. Although Jacob did not provide an explanation for *why* he chose to build his model this way, Andrew did explain that learning German reminds him of an old video game he used to play, supporting the claim that individual experience can influence the ideas and beliefs learners choose to share.

Another explanation for the similarities between models could lie in the nature of the building material. Many adults have had the opportunity to play with Lego blocks during their lifetime; there were no participants in either of the workshops who were unfamiliar with the popular toy. It is likely that the nature of the building material (i.e., blocks) influenced the ideas that learners had as they constructed their models. This could provide an explanation for the popular choice to build a house (Rob, Jeff, Sarah) or a wall (Nathan, Kenneth) to describe beliefs as these may be frequently built by children playing with Legos. Further evidence of this is seen in Jeff's model. In the verbal explanation of his model, he initially used the metaphor of a puzzle, however, his physical model depicted a house.

The findings from the study support the current research concerning the understanding of beliefs. As described in Chapter 2, under the contextual approach, beliefs are defined as "socially constructed, emerging from interaction with others" (Kalaja, 1995; p. 196) as opposed to earlier understandings of beliefs as static, cognitive entities. Under this approach, beliefs have also been described as paradoxical, which is also supported by the current findings. For example, in Jacob's explanation, he initially describes the grammar of his German lessons as coming unexpectedly, which is also how he describes the aliens in his Lego model. However, later in his description, Jacob states "I don't think German grammar is like aliens" (P11, line 24), thereby directly contradicting his initial comparison. This directly negates his previous description about his beliefs about learning German, and supports the understanding that beliefs changeable and situated in discourse.

The findings also support the research surrounding the notion of metaphor in that LSP has been effective for expressing ideas that are otherwise not easily expressed using literal language. Johnson (1987) made the point that metaphors are often rooted in our own experiences in the world, which is also supported by these findings. The metaphors used by the participants in this study were often tied to an individual experience held by the learner, whether directly or indirectly. Also, the learners have demonstrated the benefits of using generative metaphors as a way to reframe their conceptualizations of language learning by seeing it in terms of something else.

Overall, the results of the LSP workshops support the current trends in research about the beliefs about individual language learners. The LSP workshops have demonstrated the complexity of beliefs including their dynamic and paradoxical nature. The findings confirmed

the expectation that learners would produce Lego models with explanations that were metaphorical in nature. The fact that many learners incorporated aspects of their personal lives such as fields of study or personal experiences was not expected, but supports the notion that beliefs are very personal in nature. While it is possible that learners' expressions of their beliefs were influenced by their peers, it is unlikely that the group setting of LSP was responsible for all similarities between responses. Rather, this is more likely a product of the nature of the building material (Lego blocks) and the preconceived notions learners have about using Legos. The findings from this study raise many new questions for further research as well as support the use of LSP in language education, which will be discussed in the following chapter.

6. Implications and Conclusion

The goal of this study has been to introduce the problem-solving and strategizing method "Lego Serious Play" (LSP) into the study of individual learner beliefs. This was done in an empirical study which used the method as a tool for eliciting learners' beliefs about their own language learning. As this method had not formerly been used in the context of learner beliefs research or Applied Linguistics, the project was by nature exploratory. The primary goal of this study, to determine how LSP can be helpful for eliciting the beliefs of individual learners, was tested in short workshops, the results of which have demonstrated that individual beliefs are highly linked to individual experience. This was established by the examples of Rob, Jeff, and Nathan, who built models which shared some similarities. However, despite these similarities, each model differed from the others in that they were highly individual. In addition to this, the learners often attributed the physical characteristics of their models to aspects of their own identity, such as field of study, experience with language learning, or personal interests. In this chapter, I would like to discuss the implications of using LSP to elicit learner beliefs and for future research.

6.1 LSP for Learner Beliefs

The primary question I have attempted to answer in this study has been: How can Lego Serious Play (LSP) contribute to understanding more about learners' beliefs and experiences with German language education? After completing the workshops and analyzing the data from them, it can be confirmed that LSP is an effective tool for eliciting learner beliefs. It highlights beliefs that are otherwise not as easily explored through more traditional research methods (i.e., those named in Chapter 2), making it a complementary methodology for studying beliefs held by learners. LSP was helpful for understanding learners' beliefs for several reasons: learners often

provided a great deal of information about their ideas, beliefs, and opinions, even without being prompted to do so; the variety of data collected strengthened the validity of participants' responses and their analyses; and lastly, the aspect of play created a relaxed, yet productive atmosphere for participants.

First, LSP was effective for encouraging learners to participate. Just as Kristiansen and Rasmussen (2014) described, everybody who attended the workshops was very involved in the task that was assigned to them. After building their models, participants seemed to be willing to provide a large amount of information about their creations and their ideas about learning German. This was especially impressive due to how little was asked by the facilitator. As described in Chapter 3, the participants were given the prompt "Learning German is (like)…" and were instructed to complete the statement using Lego blocks. After the building phase had ended, the facilitator simply asked participants to tell the story behind their own model. Learners were never explicitly asked to describe how they conceptualize their learning; rather, in most cases, this could be easily inferred from the learners' spoken responses and physical models. Learners could decide how much detail they wanted to give about their ideas; the main task was to tell the story behind their Lego model and how it metaphorically represented their beliefs about learning German. In most cases, the explanation of the model seemed to encourage learners to share further details and emotional aspects of their beliefs in conjunction with the physical description and metaphor. In many cases, participants also offered a justification of their choice of metaphor and model. For example, some learners attributed aspects of their models to aspects of their identity, such as field of study in the case of Rob, Nathan, and Sarah. The details that participants chose to disclose while telling their stories highlighted what they considered important for understanding their German learning experience, which provided insight about

their beliefs. For example, during Nathan's explanation, he stated that confidence was a problem for him. This information was offered by Nathan; the facilitator had not asked any questions regarding Nathan's confidence or other emotions. This issue was important enough for him to include in the explanation of his Lego model.

Such detailed responses would be difficult to obtain using other methods for studying learner beliefs. For example, when designing a questionnaire, a researcher may be able to predict emotional challenges such as confidence issues in foreign language learners. However, it is more difficult for a researcher to predict how an issue of confidence might be dissected by a learner like Nathan. Nathan explained that his lack of confidence is mostly related to his ability to speak German; his confidence in reading German was much higher. Nathan's feelings towards speaking German may differ greatly from a heritage learner, who may speak with more confidence than she can read or write. This high level of distinguishable difference amongst learners simply cannot be collected via a questionnaire. Similarly, the desired amount of information can be difficult to acquire from learners in interviews. Block (1997) explained that within a 'hands-off' approach to interviewing, in which one asks few follow-up questions, informants may choose to say very little. In the LSP workshops, participants usually provided a great deal of information about their models, metaphors, and beliefs, even before the facilitator had asked follow-up questions. This is likely a result of the fact that learners actively construct beliefs in explaining the models, while using the model as a basis to expand on. For example, after explaining most aspects of his model, and without being prompted to do so, Rob stated, "I'm trying to think of how to expand more on this metaphor" (P12; line 23).

Another benefit of using LSP for studying learner beliefs is the wealth of information that can be collected in a single workshop. As discussed in Chapter 2, researchers have used a variety

of methods within several approaches to study the individual beliefs of learners, and often employ two or more methods of data collection. By holding just one LSP workshop, a researcher can access information from three different avenues: (1) the physical models that participants build with Lego blocks; (2) the metaphors learners use to describe their learning; and (3) the spoken explanations which provide more details about the model, the metaphor, and the learners' beliefs and emotions. From this perspective, LSP is an efficient method for collecting a variety of data about learners' beliefs.

Based on the two LSP workshops carried out for this study, it was found that LSP can be helpful for understanding learners' individual beliefs about language learning. It encouraged learners to engage with the task at hand and to provide many details about their beliefs and emotions about learning German. LSP can allow researchers to investigate aspects of learners' beliefs that are less accessible when using other methods, with the added benefit that LSP simultaneously creates three sets of data. This allows the researcher to get a well-rounded understanding of each learner's beliefs.

6.2 The Significance of Play

As the name suggests, the aspect of play has a key role in the Lego Serious Play method. As previously mentioned, Kristiansen and Rasmussen (2014) discuss the importance of play for the role it plays in our development, both as children and adults. When participating in LSP, participants should be creative and allow themselves to explore through play. Creativity is essential for the builders, who are given a limited period of time to build tangible models of the intangible world. However, creativity is also necessary for the listeners, who listen to the explanation of the model given by the builder. Often, the fantastical elements of the models add an extra level of detail and help in both explaining and understanding. For example, on Rob's

model, he built a propeller to illustrate his belief that, as a learner, it will sometimes be necessary to fly to Germany, Switzerland, or Austria, to continue learning. During the workshop, the other participants did not find this element of Rob's model to be strange. Yet, if we look at Rob's model from the perspective of his metaphor, that learning German is like building a house, we see that the propeller does not belong (as houses do not have propellers). The other elements of Rob's model were consistent with those of an actual house: a foundation, walls, extravagant details or décor, a garden. The elements of play and creativity allow the builder to bring in more figurative elements which add a level of complexity of the response. This detail of LSP allows us to see and understand more about the learners' beliefs than other methods for studying beliefs. Moreover, this resembles what we know about the function of metaphors, namely, that metaphorical language allows us to describe things that are otherwise not easily expressed in literal language.

6.3 Pedagogical Implications

This study has shown that Lego Serious Play (LSP) can aid in understanding the beliefs of language learners by allowing them to produce highly detailed, multi-dimensional responses. As Kramsch (2006) explained, metaphor analysis can be beneficial for learners as it acts as a consciousness-raising device. This may also be the case for LSP participants, who discover and become more aware of their own beliefs as they build them, as per Seymour Papert's (1991) theory of constructionism. Moreover, this aligns with the current research on what is known as language learning awareness, which can be described as "conscious perception and sensitivity in language learning" (Constitution for the Association for Language Awareness, cited in Muñoz, 2014). For example, Muñoz (2014) investigated language learning awareness in young learners by asking school-age students in Catalonia questions about themselves as learners, their learning

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of English, the difficulty of English language learning, the classroom, and learning activities. Because the main task of LSP involves reflection on one's own beliefs, it is likely that this could also contribute to learners' own language learning awareness. As Muñoz reported, "self-beliefs have been recognised as central in successful language learning" (Muñoz, 2014; p 27). Learners could therefore benefit from the shared ideas they discuss and reflect on during the presentation phase of the LSP workshop. Teachers may also benefit from learning about the beliefs of learners, as they become more aware of learners' needs. For example, after learning more about students' beliefs about learning to write in English, Muñoz suggested that teachers may need to be trained to develop learners' grapho-morphological awareness (Muñoz, 2014; p. 34). In general, LSP can be considered a method that contributes to enhancing language learning awareness in students, and as such it helps teachers and students alike to understand more about individual differences in language learning, and possibly to expand their own knowledge and awareness of various ways of learning.

LSP can be particularly beneficial for raising language learning awareness when learners use generative metaphors, which allow other learners the opportunity to reframe their own beliefs. Many learners may not be aware of their own unique perspective until they have the chance to share their beliefs with others. What is assumed knowledge for one learner, may be a change in perspective for another learner. For example, Jeff and Nathan, who attended the same workshop, demonstrated opposing beliefs with their Lego models. While Jeff explained that he felt comfortable speaking German despite his mistakes, Nathan stated that his lack of confidence holds him back from speaking German. It is hoped that participants have increased their language learning awareness during the LSP workshops by reflecting on their own beliefs as well as listening to those of others.

Moreover, LSP could be a useful tool for advanced German classes when used in conjunction with task-based language teaching (TBLT). Although this was not thought appropriate for beginner learners of German, who may struggle with the new method in addition to the limitations of language, TBLT and LSP could be a productive combination for intermediate or advanced learners. In this case, the prompt/question would be less important than the process of carrying out the workshop in the target language (German), allowing the facilitator or teacher to explore many topics with LSP.

6.4 Suggestions for Future Research

This exploratory study was a pilot project for applying Lego Serious Play (LSP) to the field of Applied Linguistics. The results suggest that LSP is useful for increasing the understanding about individual learner beliefs about language learning. There are several directions for future research about LSP and learner beliefs that can be pursued.

First, the results indicate that it may be beneficial to explore many other aspects of beliefs using a similar workshop structure as was used in this study. This study attempted to get a very general overview of the beliefs learners hold about learning German in general; however, there are other prompts that could be used with LSP to explore learners' beliefs. For example, one could study the generally held beliefs about specific aspects of the language, such as the grammar, skills such as reading or speaking, or more detailed aspects of the learning process. Moreover, the roles of student and teacher could be investigated. In addition to this, one could study conceptualizations of grammar, as I began to do earlier in this project. This could include prompts to build models of parts of the language, such as the dative case or the past tense. This would allow the facilitator (or, in case LSP would be used in a classroom, the teacher) to

determine where learners have gaps in their understanding of particular structures. Moreover, as explained in the previous section, LSP could also be a useful tool for investigating the level of language awareness (LA) held by learners. In this regard, LSP could also be used with prompts related to cultural-awareness or stereotyping (e.g., German culture is like…).

Secondly, one could use the LSP method as it was originally intended, including all seven application techniques. Now that it has been determined that LSP can be used to understand the beliefs of language learners, the entire method could be used to determine whether the added application techniques extend what we can discover about beliefs. I believe that all seven application techniques could be applied to this context, and could be used to facilitate interesting discussion about topics in Applied Linguistics.

Additionally, the use of LSP does not need to be limited to learners as subjects. The beliefs of language teachers or teachers in training have also been investigated in the past (for example, Horwitz, 1985; Wan et al., 2011). LSP could be used to investigate the individual beliefs or the language awareness of teachers, just as it has been used with language learners. Naturally, a comparison of learner and teacher beliefs would also be possible using the LSP method.

Finally, this study did not consider the development of learners' beliefs after the workshop took place; however, this could be further researched. The results of the LSP workshops provided a snapshot of learners' beliefs about their learning, but it remains unknown whether learners' beliefs were influenced after taking part in the workshop. However, because this project has set something in motion regarding participants' language learning awareness, it is

likely to contribute to the future learning of learners. This should therefore be taken into consideration for future studies employing LSP in Applied Linguistics research.

The exploration of the Lego Serious Play method in this study has shown that it can provide insights into the beliefs of individual language learners. The method could easily be adapted to this context, and the original goals outlined by the method's founders were also achieved. After conducting my own LSP workshops, it was found that learners' beliefs about language learning are highly influenced by their own subjective experiences, especially those related to language learning. Learners were willing to share the details of their beliefs, emotions, and concerns about learning German, even without extra encouragement from the facilitator. There is a wide variety of opportunities for further research involving the LSP in the field of learner beliefs research or Applied Linguistics in general.

6.5 Limitations

Although Lego Serious Play has been shown to be helpful tool for use in learner beliefs research or in language education, it is important to point out the limitations of this method. For example, the fact that LSP is performed in a group may result in the uncertainty about to what extent the beliefs expressed by learners are influenced by their peers. This could be further investigated by observing learners' behaviour and interaction during the building phase. Also, the fact that LSP is carried out in a one-time workshop does not reveal how learners' beliefs develop over time. Further, LSP is time consuming and not easily carried out in large groups. My largest workshop, which was one hour in length, was attended by just six learners. One way to overcome this would be to divide workshops with many participants into smaller groups, in which the learners can share their ideas amongst themselves before reporting a summary to the

larger group. Even though LSP is time consuming and must be completed on-site, the novelty of the method's use of the popular Lego blocks resulted in a high level of interest during recruitment. However, the use of a popular building material such as Lego can also be a drawback. Because learners come to a LSP workshop with preconceived ideas about Legos, this may limit the potential models and metaphors used by learners. It is likely that learners will use metaphors relating to what people habitually build with Lego (i.e., houses/buildings, walls) to express their beliefs. This was not a major concern in case of Jeff, whose physical model depicted a house, but whose spoken explanation described a puzzle. In this case, Jeff could still express his ideas to the rest of the group without trouble. However, it may be difficult for learners to express other metaphors in a physical model, for example action-oriented metaphors (e.g., learning German is like going on a journey).

LSP would be appropriate for classroom use, however, it would be challenging to complete the workshop on time in a class of 30 students, even with integrated group work. Therefore, it is likely more suitable for use in smaller classes or in classes that run longer than one hour in length. Moreover, use of the LSP method requires the facilitator to supply the Lego blocks. Even a relatively small group of participants requires a large collection of Legos to ensure that all participants have access to the sufficient resources to build the models they envision. In a large group of learners, it could be challenging for a teacher or researcher to find access to so many Lego blocks. It is possible to purchase a Lego Serious Play kit from the Lego online store; however, the kits can be expensive to purchase new (for example, the 'Identity and Landscape Kit,' sold for $789.99 CAD). This challenge could be overcome if a department or a group of teachers or researchers is willing to make a one-time investment in a shared resource so that LSP can be used frequently. Moreover, by substituting the official Lego Serious Play kits

with a self-made collection, as in this study, learners are not using the kit as originally intended by the method's founders. However, Lego has never produced any special bricks for LSP; the LSP kits are simply made up of standard bricks from various collections, including classic Lego bricks, Duplo, and licensed collections such as Star Wars (Kristiansen and Rasmussen, 2014; p. 34).

This study has tried to show that LSP can bee a useful tool for investigating the beliefs of learners; however, there are some limitations to address. First, the small number of participants was restrictive. Although this may have ensured that participants had enough time to express their beliefs, a larger group would have enabled an analysis of themes in learners' responses. A larger number of participants would also offer the opportunity to analyze the data with a focus on factors such as gender or length of time learning German. A further limitation is the possibility that the learners' models or descriptions thereof may have been influenced by the other participants' presence and their respective contributions. This is perhaps less likely with regards to the models, which were often unrecognizable without a description; however, it is more likely that participants' explanations had an effect on what the others chose to share. This could be expected in cases where learners consider sharing sensitive information or emotions with the other participants, who they do not know. It was felt that despite this potential influence of others, it was overall more beneficial to have students present their models to their peers, as that triggered a lively discussion and it allowed them to talk about their beliefs more "naturally" than if they had to explain them only to the researcher.

Although there are some limitations to the use of the Lego Serious Play method in research or in language teaching, there is no doubt that the method is a fun and creative process

for learners, teachers, and researchers. This study has shown that LSP can be a useful tool for understanding more about the conceptualizations that language learners have about their own learning. Sharing their beliefs about language learning with their peers can be a productive process for language learners, who may learn to reframe their own understandings of language learning and increase their language awareness.

7. References

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Appendix A: Workshop Lesson Plan

Date: March 29, 2017
Task: "Learning German is (like)…"
Time: 4:00 – 5:00 PM (1 hour)
Location: ML 245

Time	Activity Description	Materials
3:45-4:00	Set up video and audio equipment, set up Legos, prepare work space	Camcorders, audio recorder, tripods, extension cords, power bar, Legos, consent forms
4:00-4:08	Introduction, brief description of LSP/task/rules, collect signed consent forms	Consent forms (info/consent, audio/video, photographs), pens
4:08-4:15	Warm-up: build a bridge -Participants start with identical Lego bricks and each build a bridge, ideally big enough for a hand to fit under (4 min. building time) -Point out that although everyone started with the same bricks, each bridge is different	Legos
4:15-4:40	Building phase Main task: "Learning German is (like)…" -Participants prompted to build a model to complete this statement. -Encourage learners to be creative, use metaphors; there are no wrong answers	Legos
4:40-5:00	Sharing phase/discussion -Each participant tells the story behind his or her Own model -Others invited to ask questions/discuss --*What did you think of the workshop? Did you enjoy it? What parts did you like? What do you think is useful about workshops like this?* Etc.	