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Exploring Students' Motivation in Mother Tongue Language through Experiential Learning: A Systematic Review

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Keywords

Experiential Learning, Self-Determination Theory, Motivation, Native Language, Mother Tongue Language; Primary Schools

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Abstract

There has been a decrease in the motivation levels of primary school students towards learning their native language. In Singapore, the native language is also known as the Mother Tongue Language (MTL). There is also a need for more research on Experiential Learning in primary schools worldwide and MTL classrooms in Singapore. Using the basic psychological needs of Self-Determination Theory (SDT), namely autonomy, competence, and relatedness, this research explores the potential of experiential learning as an effective pedagogical tool to foster motivation and learning. Using specific study selection and systematic review methods, 11 empirical papers were selected to study the potential of experiential learning strategies in fostering motivation and learning in primary and secondary school students, focusing mainly on primary school students. The experiential learning strategies in the research papers are categorized into game-based learning using ICT (Information and Communications Technology), imaginative activities, media, perspective-taking, and collaborative learning. While experiential learning strategies in schools fulfill lesser relatedness levels, the findings show that experiential learning can foster motivation in MTL classrooms, as experiential learning strategies could support autonomy and competence satisfaction in students.

Keywords: Experiential Learning, Self-Determination Theory, Motivation, Native Language, Mother Tongue Language; Primary Schools

Introduction

Singapore has a total population of 5.64 million, which constitutes three major ethnic groups – Chinese, Malays, and Indians. Among residents, the Chinese constitute 74.1% of the population, the Malays constitute 13.6% of the population, and the Indians constitute 9.0% of the population (Department of Statistics, 2022). Due to Singapore's heterogeneous ethnic composition, it is expected to have a complex linguistic environment. Concerning this, using neutral language was supposed to be a valuable tool to further economic development and international relations (Soh, 2020). As such, a standardized school system was brought about across the country to strengthen inter-ethnic communication. English serves as the medium of instruction for most subjects except for native language or Mother Tongue Language (MTL) classes.

In accordance with Singapore's ethnic make-up, there are four official state languages (Chinese, Malay, Tamil, and English). In 1966, the bilingual policy was made mandatory for students in government schools to learn English as the first language and their corresponding MTL as a second language (Tan & Ng, 2011). The two languages have been designated with distinct purposes. English is the official working language for international business, science, and technology and the medium of instruction in school systems and workplaces. This has led to higher usage of the English language within families in Singapore (Pakir, 1999). Moreover, it enabled students' richer exposure to the English language compared to MTL, mainly confined to classroom instruction with relatively restricted quantity and variation. As a result, students have higher exposure and motivation to use the English language than their corresponding MTL.

Students' Motivation Towards Mother Tongue Language in Singapore

With the language shift from MTL to English, there has also been a change in the interest and importance of language (Mukhlis, 2016). This is evident in the rise of residents aged five and above using English as the most frequently used language at home, from 32.3% in 2010 to 48.3% in 2020 (Department of Statistics, 2021). This may have contributed to a lack of motivation among primary school students to learn their MTL, either Malay, Chinese, or Tamil, in Singapore. Mukhlis (2020) added that students from English-speaking homes must be more inclined to learn their MTL. This is also supported by Schiffman (2003), explaining that children are less likely to learn the value of Tamil when their home language is English. Hence, this suggests that students' mindsets have been shaped to believe that the

English language is more valuable than MTL due to an increasing emphasis on using English at home.

Ng (2014) cited the Chinese Language Curriculum and Pedagogy Review Committee, which reports that "77% of Primary Six ethnic Chinese students from English-speaking background found the learning of CL (Chinese Language) difficult and disliked it." This was partly due to the pedagogical approaches used to teach MTL. This suggests that lessons that are too focused on examinations are less enjoyed by students, resulting in a lack of motivation to learn the language.

With the increasing lack of interest in learning MTL, it might be challenging to maintain the language in the long run. Thomason (2015) argued that the attitude towards the value and usefulness of one's language may cause language endangerment. The students' lack of motivation in MTL may eventually lead to language loss or endangerment. These detrimental effects hurt cultural and social identity. Language carries human spirit, wisdom, and culture; hence, these collective experiences may be eroded once a language is endangered. More particularly, language endangerment could mean parents cannot communicate effectively with their children and cannot convey their values, wisdom, and beliefs on life experiences (Fillmore, 1991; Soh, 2020). Hence, it is crucial to prioritize preserving MTL as social and cultural factors are concerned. To address this problem, experiential learning is hypothesized as a potential tool to foster motivation in students' learning towards MTL. Experiential Learning posits that learning is best conceived as a continuous process grounded by experience (Kolb, 2014). As motivational issues toward learning MTL appear to be prevalent among Singapore students, it is essential to use established motivational theories, such as the Self-Determination Theory (SDT), to alleviate these concerns. Herein, the basic psychological needs for autonomy, competence, and relatedness are utilized to bring about self-determined or intrinsically motivated student behaviors (Deci & Ryan, 2000).

Purpose of the Study

To preserve the use of MTL in Singapore, it is essential to acknowledge and address the motivational issues experienced by the students, as described in the previous section. Indeed, a general trend of declining interest in and importance for MTL has been observed among students in Singapore. Hence, the authors of this paper propose an existing pedagogical tool, Experiential Learning, as a potential tool to foster students' motivation toward learning MTL. Herein, a systematic review of recent empirical studies on Experiential

Learning and language learning is conducted to answer the research question, "How does Experiential Learning serve as a pedagogical tool to foster motivation and learning in MTL classrooms?". In order to analyze the findings from the systematic review, the Self-Determination Theory (SDT) is used to frame the data analysis. In the next section, a comprehensive literature review discusses the concept and existing studies on Experiential Learning and the Self-Determination Theory. Research gaps are highlighted in the subsequent section to reinforce the study's purpose.

Literature Review

To be intrinsically motivated, three innate needs should be fulfilled: autonomy, competence, and relatedness (Deci & Ryan, 2020). In the case of Singapore, there is a decrease in the competence for MTL as there is an increasing number of students needing help to use the language proficiently (Mukhlis, 2020; Ng, 2014; Schiffman, 2003), especially those from English-speaking families. Regarding autonomy in learning MTL, external factors such as examinations and grades motivate students to learn MTL, which stems from pragmatism. As an increasing percentage of students come from English-speaking homes, an increasing percentage of students feel less associated with their MTL, affecting their relatedness.

Experiential Learning

Experiential learning is a learning design where students go through semi-structured instruction and learn from one another through experiences (Kolb & Kolb, 2009). It is a principle based on active and reflective learning whereby learners actively build on their prior experiences (Knutson, 2003). Here, experiences are viewed as the beginning of the learning process, which students can reflect upon to acquire actual learning. Reflection on experiences serves as the bridge that connects experience and actual learning. Within second-language acquisition literature, experiential learning may allow students to learn language skills through experiences of working with others on different activities (Knutson, 2003). Students reflect on these experiences and relate them to future applications using their previous knowledge. Hence, the experiential learning approach can be applied to language learning, such as MTL learning.

Language learning research has recently started to understand and highlight the importance of students' involvement and self-initiative in learning a language (Mollaei & Rahnama, 2012). This has indeed brought attention to language students as learners themselves. The experience of learning a language necessitates careful processing so that

learning can be effective. This would require experiences with different elements of the language and its associated culture. As learning takes place through the transformation of these experiences, it is essential to carefully consider these experiences and theoretical conceptualization (Mollaei & Rahnama, 2012). As the approach to experiential learning involves students' involvement, it may be beneficial for learning MTL regarding motivation and cultural understanding (Knutson, 2003).

Despite varying operationalization of experiential learning, Kolb's Experiential Learning Cycle is the most widely accepted definition (Kolb, 1984; Kolb et al., 2014). According to Kolb, the experiential learning cycle is based on four stages: Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation (Kolb et al., 2014). In the MTL context, concepts such as adjectives can be learned through the Experiential Learning Cycle. For instance, new experiences such as touching a sunflower (Concrete Experience) allow students to observe, understand and reflect on adjectives (Reflective Observation), think of adjectives related to the experience (Abstract Conceptualization), as well as apply these adjectives in the real world (Active Experimentation) (McLeod, 2017). As such, experiential learning could be a pedagogical tool that provides authentic experiences for students to learn and reflect on during MTL lessons.

Moreover, experiential learning approaches could include various interactive activities wherein students engage in their own and others' experiences. These could include diaries, personal journals, portfolios, reflective personal essays and thought questions, role plays, games and simulations, personal stories, case studies, visualization and imaginative activities, empathy-taking activities, storytelling, as well as discussion and reflection in cooperative groups (Mollaei & Rahnama, 2012). The general trend of research regarding experiential learning in primary schools has been proven to have the potential to foster motivation in students. However, most of these research papers used various data collection methods and different motivation models instead of SDT to measure motivation. On that note, it is possible to interpret results and conclusions from SDT's basic psychological needs, namely autonomy, competence, and relatedness, which contribute to students' motivation toward learning.

Self-Determination Theory

Self-determination theory (SDT) is a human macro-theory for understanding factors that facilitate or undermine individual motivation (Deci & Ryan, 2020). According to SDT, individuals experience intrinsic motivation when their three basic psychological needs,

autonomy, competence, and relatedness, are satisfied (Deci & Ryan, 2020). Autonomy refers to one's taking initiative and the agency to act supported by interest and value; competence refers to one's feeling of mastery towards success and growth; and relatedness refers to one's sense of belonging and social connection (Deci & Ryan, 2020).

Linking SDT to experiential learning, Deci and Ryan (2020) proposed that an environment with play and curiosity-initiated activities satisfies learners' needs and exemplifies intrinsically motivated behaviors. As such, experiential learning is potentially a pedagogical tool to shift students' motivation from 'external regulation' to 'integrated regulation,' empowering students to construct their learning in schools.

Research Gaps

This systematic review aims to address two critical research gaps. First, research on experiential learning within the framework of SDT needs to be more extensive. Second, experiential learning programs in Singapore primarily focus on outdoor learning or hands-on subjects such as Science. Therefore, this paper addresses the research gaps in experiential learning in MTL classrooms in Singapore.

General findings from 11 research papers regarding the potential of experiential learning in promoting students' motivation in mainly primary schools are synthesized in this systematic review. This systematic approach categorizes the different experiential learning strategies into three categories to see if they fulfill the three basic psychological needs in SDT. This systematic review also evaluates the potential of experiential learning in MTL classrooms in shaping positive attitudes toward learning, explains practical implications, and provides recommendations for future research.

Based on SDT, this paper aims to investigate the underlying causes of the lack of motivation to learn MTL in primary schools. Additionally, it explores the potential of experiential learning as an effective pedagogical tool to foster motivation and learning. The research question in this systemic review sets the direction: "How does experiential learning serve as a pedagogical tool to foster motivation and learning in MTL classrooms?"

Method

This systematic review adopted several aspects of the methodology of Gómez-Leal et al. (2021).

Formulation of Research Questions

The first step of this research was to formulate the research questions based on the research problems and gaps.

Search Strategy

The second step was to determine a search strategy involving searching for relevant literature with specific search criteria. Keywords (Table 1) and database searches have been identified and stated to search for relevant literature from 2014 to 2023. The rationale for this is that they are the most recent and, hence, the most relevant literature. The main database used in the selection of articles is Google Scholar. The results of the relevant literature were managed in an Excel Sheet.

Table 1. Synonyms and alternative terms for the specific search criteria

Experiential Learning	Motivation	School	Subject
Experiential learning	Motivation	Primary school	Language
Concrete Experience	Intrinsic	Elementary school	Second language
Kolb		Middle school	Language learning
		Secondary school	Mother tongue

Study Selection

The third step is study selection. Following the search strategy, the literature identified was further assessed for its relevance and quality of research. As such, the inclusion and exclusion criteria are crucial to selecting the literature for this systematic review. The existing and relevant literature on experiential learning in primary schools for analysis and discussion was selected based on the type of research paper, educational level, subject domain, focus, timeline, and quality assessment.

This systematic review focuses on the existing research on experiential learning as a pedagogical approach and its potential to foster students' motivation levels. Though the database search of relevant empirical studies was within 2014-2023, the final selected studies in this paper were from 2017-2023, as papers initially identified from 2014-2016 did not focus on language learning and hence were excluded from the analysis. To ensure the credibility of this systematic review, the empirical papers selected were published in peer-reviewed journals or pedagogical handbooks. The scope of the educational level of relevant literature that was selected for this paper includes primary and secondary school levels. Although this paper mainly focuses on language classrooms in primary schools, the scope of educational level is expanded due to the limited studies in experiential learning in primary schools in language classrooms.

The exclusion criteria (see Table 2) include non-language classes in the English language. An example of non-language classes in the English language is Science taught in

the English language. This is because the English language is used as the medium of instruction in Singapore schools. These inclusion and exclusion criteria in terms of subject domain allow this research paper to investigate the possibility of using experiential learning strategies to foster motivation in the context of language and non-language classrooms similar to MTL classrooms in Singapore.

Table 2. Summary of study selection criteria

Inclusion criteria	Exclusion criteria
Empirical paper	Non-language classes in English Language
Primary or secondary school students	Pre-school or university level
Language classes or non-language classes in non-English L1	
Experiential learning as an approach	
Published between 2014 to 2023	
Written in English	

Data Extraction

The fourth step is Data Extraction. This streamlining process resulted in the reduction from 27 to 11 empirical papers. A thematic approach was used to analyze and identify patterns in the findings (Boyatzis, 1998). This systematic review categorizes the findings into three themes based on the basic psychological needs of SDT – autonomy, competence, and relatedness. This thematic analysis approach was inspired by research by Kinnafick et al. (2014) and Orsini et al. (2015). In the systematic review by Orsini et al. (2015), the findings from selected research articles were classified into the three basic psychological needs. For instance, autonomy in medical students is measured by the ability to "making decisions by your own will." At the same time, competence is observed by feeling "capable of performing a determined task" and accepting challenges. On the other hand, relatedness was measured by the feeling of "belongingness and connectedness with significant others" (Orsini et al., 2015).

As selected research papers did not use the three psychological needs as a benchmark to measure the levels of motivation, this systematic review analyses and synthesizes the potential of experiential learning in fostering motivation using a thematic analysis approach. Students exhibiting signs of engagement, interest, initiative, and value towards the learning process indicate autonomy fulfillment. Increased levels of competence can be observed by

heightened knowledge, progress, and capability to complete a task. Moreover, comfortably and respectfully working with peers reinforces increment in relatedness levels (Deci & Ryan, 2020). Table 3 presents the thematic analysis based on the 11 empirical papers.

Table 3. Thematic analysis of 11 empirical papers for this systematic review

Authors	Sample	Research Design	Experiential Learning Strategies	Key Findings	Code	SDT Themes
Alexopoulou et al. (2018)	26 Primary School students	Qualitative	Puppet storytelling	Students were deeply interested in the topic and displayed better performance in empathy and knowledge.	Interest Capability Relating and empathy towards others	Autonomy Competence Relatedness
Ammar & Hassan (2018)	79 Grade 5 and 6 students	Quasi-experimental Quantitative	Collaborative dialogue	Students in the experimental group significantly outperformed the control group in language learning.	Capability	Competence
Atan (2017)	Three hundred Primary Four students	Qualitative	Annotating tool	Students were highly motivated and comfortable using annotation tools for individual work and collaboration.	Interest Working with others	Autonomy Relatedness
				Students' compositions increased in the number of correct uses of cohesive	Capability	Competence

				devices and longer descriptions.		
Busse et al. (2019)	42 third Graders	Qualitative Quantitative -	Dream journey, imagination	Plurilingual ideal self-aspirations (interest in learning new languages) were higher post-intervention for both groups, and gains were more significant in the intervention group.	Interest	Autonomy
				Increased levels of vocabulary (experimental group)	Capability Progress	Competence
Cahyani et al. (2017)	130 fifth graders	Quasi-experimental Quantitative	Audio Visual Media	Increased levels of passion Increased initiative Increased engagement	Interest	Autonomy
				Increased levels of confidence Writing in Poetry is significantly higher in the experimental group.	Capability	Competence

David & Weinstein (2023)	123 students aged 9-16 years	Experimental Quantitative	Gamified Experiential Technology (GET)	Students in the experimental condition had greater psychological needs, perceived academic well-being, and intrinsic motivation than students in the control group.	All Needs Satisfaction	Autonomy Competence Relatedness
Marcinkevičienė & Burbienė (2018)	15 pupils aged 8-9 years old	Qualitative	Videos, Text-based short projects	Children found this way of learning grammar to be most interesting.	Interest, Initiative	Autonomy
				The learning process was child-centred.	Initiative	Autonomy
				Pupils develop their higher-order thinking skills, ICT competence, creativity, ability to work alone or with a group.	Capability Working with others	Competence Relatedness
Nguyen et al. (2023)	455 students in Grades 3, 4, 5	Quantitative	Conversation, Visual aids, Role Playing, Game-based, Group discussion, Role modeling.	Conversation groups, discussions, and games demonstrated the highest effectiveness in preserving the	Working with others	Relatedness

				mother tongue in students.		
Nuriyanti et al. (2019)	47 fourth-grade students	Quasi-experimental Quantitative	Narrative text: Storytelling	Students in the experimental group had increased skills in organizing content, producing diverse words, and expressing student experience in writing.	Capability	Competence
Sung et al. (2017)	49 fifth Graders	Quantitative-Experimental	Learning analects through games on a tablet	Increased learning motivation	Interest, Initiative	Autonomy
				Increased learning strategy	Capability	Competence
				Increased learning achievement but not significant	Capability	Competence
				Technology acceptance is higher in the experimental group.	Capability	Competence
Zaidi et al. (2020)	118 Class 8 students	Quantitative	Role-play	A high correlation between experiential learning and autonomy	Autonomy	Autonomy

Data were tabulated according to "study characteristics, quality, and effects…use of statistical methods for exploring differences between studies and combining their effects" (Khan et al.,

2003). Each paper's key findings are summarized and coded using preconceived themes from the SDT literature.

Data Analysis

Lastly, the fifth step is interpreting the findings, in which the experiential learning approaches were discussed and critiqued on their potential to foster motivation in MTL classrooms. The strengths and weaknesses of the literature are included for further research.

Key Findings

Fulfillment of Basic Psychological Needs through Experiential Learning Strategies

As all selected literature did not use SDT as a motivation theory to measure motivation levels, this systematic review used a thematic analysis approach to categorize the findings according to the three basic psychological needs—autonomy, competence, and relatedness. Table 3 encapsulates each article's autonomy, competence, and relatedness fulfillment.

In the selected literature, experiential learning has been manifested in various interactive methods, namely game-based learning using Information and Communications Technology (ICT), imaginative activities, media, perspective-taking, and collaborative learning.

Game-based Learning using ICT

Three articles utilized game-based learning using ICT (see Table 3). All three showed increased levels of autonomy and competence, while only two reported increased levels of relatedness (Atan, 2017; David & Weinstein, 2023; Sung et al.,2017).

Atan (2017) investigated the potential of a learning design with an online annotation tool to hone students' ability to write in the Malay language cohesively. Primary four students went through a learning design, 10'CMT (Chinese, Malay, Tamil) approach, wherein students were given time for online reading, self-construction of readings, opportunity for self-improvement prior evaluation, and online collaboration via peer-editing and peer-to-peer feedback through the online annotation tool. The self-paced reading materials consumed by the students serve as the concrete experience upon which they reflect and construct their understanding (reflective observation). Through this reflective observation, students can write more descriptive compositions, which their peers can edit through the online annotation tool. This represents the abstract conceptualization and active experimentation stage wherein students apply their learning in the real world with others after reflection. The findings from this study show that students were more motivated in their learning and were well-prepared

and equipped to use the online annotation tool to provide feedback for their work and collaboration with peers.

David and Weinstein (2023) conducted a study using the Gamified Experiential Technologies (GET) intervention, such as the SRS (Student Response Form), in a need-satisfying environment. Here, students under the intervention group were allowed to participate or not participate in the tasks and were allowed to work in teams. However, each student was given a clicker and was allowed to choose to answer differently from their teammates. Students were then given feedback on their performance and response time, which facilitated a sense of friendly competition within the group. The findings from the study showed that students from the intervention group had greater psychological need satisfaction and intrinsic motivation than students in the control group.

To increase motivation in students, Sung et al. (2017) conducted a study to see if gaming would be feasible to encourage students to learn about the analects of Confucius. The concrete experience was based on the "historical events" from the Confucius period; students were immersed in the game as they were given challenges and information about the analects. After this, students could progress to higher and more challenging levels. Despite no significant increase in learning achievement, it was reported that students continued to progress to higher and more challenging game levels on the tablet computer.

Imaginative Activities

Imaginative activities were one of the many strategies used for experiential learning. Table 3 reports that one empirical paper (Busse et al., 2019) explained the use of imaginative activities. The study by Busse et al. (2019) used a treasure chest and imagination of a dream journey as a Concrete Experience. This was followed by reflecting on their language's significance and translating it into English (Abstract Conceptualization). Students were then exposed to Active Experimentation, where they got to expand their vocabulary. In this literature, students were reported to have self-aspirations and increased vocabulary levels, suggesting increased autonomy and competence, respectively. Since this lesson focused on individual work, levels of relatedness were not reported.

Media

Two articles used a media-based experiential learning strategy (Table 3). For instance, Cahyani et al. (2017) utilized audio-visual media to teach poetic writing. Using this multimedia as a Concrete Experience allows students to engage in Reflective Observation by using the pictures to build schemata and express ideas. Students engaged in Active

Experimentation when they wrote the poems. Findings revealed that students with increased passion, initiative, and engagement exhibited heightened autonomy. Students also displayed more confidence in poetry writing, indicating competence. For the second article, Marcinkevičienė and Burbienė (2018) experimented in Lithuania, wherein students worked in pairs to find plural nouns in a story using videos and text-based short projects. This was followed by group work, where students were tasked to complete a "word map," filling in plural nouns in "word families."

Perspective-taking

Perspective-taking includes using experiences from students or experts, role-playing, and scenarios. This has been used in articles by Alexopoulou et al. (2018), Nuriyanti et al. (2019), and Zaidi et al. (2020).

In one experimental study (Alexopoulou et al., 2018), students were exposed to a Concrete Experience where a red-cross volunteer shared her experiences of helping refugees, and puppets were used in storytelling instead of the traditional method of choral reading. This was followed by Reflective Observation, where students discussed the issue, and Abstract Conceptualization, where they were asked to find parallels between situations in the past and present. Active Experimentation occurred when students were tasked to draw their feelings, and they suggested ways to offer help to the refugees. In this experiment, students were reported to show signs of deep interest and display higher levels of knowledge, which suggest autonomy and competence, respectively.

In another paper by Nuriyanti et al. (2019), each primary school student participant was given narrative texts from teachers by identifying intrinsic elements via story-telling activities. Here, identifying intrinsic elements through story-telling activities provided the concrete experience (narrative text) of which reflection, abstract conceptualization, and experimentation (writing a narration) followed. The findings in this study show that students in the experimental group had enhanced skills in organizing content, producing diverse words, and expressing experience in writing.

Zaidi et al. (2020) have utilized role-playing and dialogue construction as part of Concrete Experience in experiential learning to promote student motivation. In this experiment, students showed higher levels of autonomy and competence.

Collaborative Learning

Selected literature that used collaborative learning are Ammar and Hassan (2018), David and Weinstein (2023), as well as Marcinkevičienė and Burbienė (2018). Collaborative

learning is used for group work in experiential learning. For instance, Ammar and Hassan (2018) showed that students in the collaborative dialogue, wherein teachers dictate one pre-determined text per week and invite students to reflect on their language-related questions with teachers and peers, significantly outperform students in the control group. Moreover, Marcinkevičienė and Burbienė (2018) in Lithuania had students work in pairs to find plural nouns in a story. This was followed by group work, where students were tasked to complete a "word map," filling in plural nouns in "word families." David and Weinstein (2018) and Nguyen et al. (2023) also satisfied the relatedness needs of students through student teamwork and group discussions.

Discussion

Interpretation of Findings

Regarding SDT, the 11 articles must still fulfill the three basic psychological needs (see Table 3). This also explains why only some strategies may satisfy autonomy, competence, and relatedness needs. Of all three needs, competence is given the most attention when it comes to experiential learning, followed by autonomy and relatedness. This shows that experiential learning in schools focuses on increasing the students' competence and autonomy levels instead of relatedness.

Competence was ranked the highest, possibly due to the nature of education. Even within the Ministry of Education in Singapore, each subject has a complete teaching and learning syllabus (Ministry of Education, 2021). This syllabus contains educational objectives in which students should attain sets of skills and levels of competence according to their education level. As such, it is common for educational lessons to be driven by lesson objectives, which measure students' competence levels at the end of the lesson. At the same time, autonomy was ranked second highest. This may be due to the importance of engagement in lessons. In this paper, the benchmark for autonomy is signs of engagement, interest, initiative, and value towards the learning process. Developing autonomy in students is crucial so that they have increased attention and focus, allowing them to develop critical thinking skills and benefit from "meaningful learning experiences" (University of Washington, n.d.). As experiential learning requires students to be actively involved and create experiences from their learning, autonomy is given priority, especially in experiential learning strategies.

Relatedness as a basic psychological need often seems to be given less focus, especially in experiential learning classes. This indicates that some current experiential

learning strategies need more opportunities for students to bond and connect with their peers. Fulfilling three basic psychological needs, autonomy, competence, and relatedness, leads to intrinsic motivation (Ryan & Deci, 2020). When students experience need satisfaction, they will likely shift from controlled motivation (motivation, external regulation, and introjection) to autonomous motivation (identified regulation, integrated regulation, and intrinsic motivation). Hence, with the findings of this research, experiential learning strategies focused on individual work may be improvised to promote more collaborative learning among peers so that relatedness levels can increase. Autonomy and competence levels have increased significantly with experiential learning, which may increase students' motivation. However, more motivation can be fostered if students can interact more with their peers in the process.

Media and perspective-taking were among the well-utilized strategies, suggesting that they are crucial in experiential learning and could be easily adapted into language classrooms. As opposed to the traditional pen-and-paper classrooms, media can be an effective pedagogical tool to provide Concrete Experience to students as part of experiential learning (Kolb, 1984). This can be seen from critical findings in 'Media.' The articles that utilized media used this strategy as part of their Concrete Experience. For example, videos (Cahyani et al., 2017; Marcinkevičienė & Burbienė, 2018) were used to kickstart the experiential learning process. Media can be easily infused into language classrooms as pictures and videos can facilitate language learning, such as nouns or even descriptive writing. As such, media can be easily adapted into language classrooms as an experiential learning strategy.

In addition, the perspective-taking strategy was ranked the highest as it can be part of the Reflective Observation and Abstract Conceptualization. For example, in the experimental study by Alexopoulou et al. (2018), having an expert on the refugee issue to share her experiences and the use of storytelling using puppets allowed students to have concrete experience, which was then followed by discussions and activities that allowed students to consider the perspectives of the refugees. This has allowed students to participate in Reflective Observation and Abstract Conceptualization as they can think about how others feel and learn to be empathetic. This is similar to the other five articles, where others' experiences are considered, which helps students reflect and conceptualize, constructing their language learning through these ideas. Hence, it is essential to bring perspective-taking as part of Reflective Observation and Abstract Conceptualization. While it may seem that bringing in an expert to share might be additional work for teachers, other articles, such as

Zaidi et al. (2020), reported using scenarios and role-playing, which the teacher can create. As such, it can be integrated into the MTL classrooms easily.

Next, collaborative learning was a well-utilized experiential learning strategy in this research. Collaborative learning is often used as an educational approach that involves students working together (Laal & Ghodsi, 2012). While experiential learning can be achieved without having students collaborate with their peers, such as in Sung et al. (2017), collaborative learning can contribute significantly to the increased levels of relatedness. Out of the articles that utilized collaborative learning, one paper reported increased levels of relatedness. This is due to the increased ability of students to work collaboratively with their peers. Given the opportunity to solve problems with their peers, students also develop social-emotional skills, allowing them to manage their relationships with their peers better. This could be due to the frequent usage of collaborative learning as an experiential learning strategy compared to students' problem-solving strategies to solve problems individually. While collaborative learning occurs frequently, the general relatedness results in the findings are low. This shows that if more experiential learning lessons incorporate the collaborative learning strategy, the relatedness levels of students can increase, along with the autonomy and competence levels.

Another interesting finding is that most selected literature used a multimodal approach to achieve experiential learning. Multimodal approaches in this systematic review refer to combining two or more experiential learning strategies. For instance, David and Weinstein (2023) used a multimodal approach that combined game-based learning using ICT and collaborative learning. This multimodal approach is beneficial in ensuring that all four stages of the experiential learning cycle, namely Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation (Kolb, 1984), are included in the lesson. These strategies should not be used in isolation but instead combined with other strategies for a fruitful experiential learning lesson experience. Concerning Table 3, combining two or more strategies could ensure that all three innate needs are satisfied, potentially increasing students' motivation levels.

The abovementioned strategies may overcome the lack of motivation in students stemming from pedagogical approaches centered around examinations by making lessons enjoyable and seeing the value in their MTL. Furthermore, experiential learning allows students to use their MTL in additional language domains, such as games, media, and group work. This might allow students to see the value of their MTL as they can use it in more

contexts. As students in the selected literature experienced the joy of learning, experiential learning could be used as an alternative pedagogical tool that differs from the traditional pen-and-paper approach and invokes the joy of learning (Ministry of Education, 2017) in students learning MTL in Singapore.

In summary, the different forms of experiential learning activities support the psychological needs for competence, autonomy, and relatedness, though to varying extents. The systematic review exemplifies that experiential activities utilize competence and autonomy more than relatedness needs. Nevertheless, the findings of this paper generally show that experiential learning activities could support basic psychological needs and, hence, may support students' motivation toward MTL.

Practical Implications and Limitations

As experiential learning is dependent on experiences, contextualization is crucial, especially in linguistic classes where the rules of grammar are emphasized, such as in recent studies (Alexopoulou et al., 2018; Marcinkevičienė & Burbienė, 2018; Sung et al., 2017). Using stories, historical events, and experiences could help students increase their linguistic capabilities in an experiential learning lesson such as writing and possibly provide contexts to their learning, allowing them to use the language in more domains.

Though rarely researched, Applied Learning Programmes (ALP) are experiential learning-based programs in Singapore. However, these programs focus more on hands-on subjects, such as science, than MTL. As for the Malay language, there are efforts to engage students in games and storytelling. Sung et al. (2017) used a game strategy similar to the 'Legenda Singapura' and 'Cerita Binatang' applications created by the Malay Language Centre of Singapore (MLCS). Even though it may not be intended as an experiential learning strategy, it could be developed further to include all four experiences and collaborative learning. This could foster positive attitudes and motivation in MTL classrooms.

Moving on to limitations, this systematic review is limited by various factors, such as the direct link between experiential learning and motivation theory. With the direct link between experiential learning and motivation theory, measuring how experiential learning can serve as a pedagogical tool to foster motivation may be easier. According to SDT, the fulfillment of all three needs is required in order to achieve intrinsic motivation. However, since all selected literature did not use SDT as a motivation theory, these three needs were not a reference point for the overall motivation increase. This limitation could be overcome by translating the findings of the selected literature and classifying them, according to

thematic analysis, into the three innate needs – autonomy, competence, and relatedness – which were tabulated and analyzed in Table 3. As such, future research must consider infusing the SDT perspective into experiential learning. This is to ascertain how experiential learning can benefit students and foster motivation in MTL classrooms.

Future Directions

Future empirical research on experiential learning in primary schools could be conducted in a way relevant to SDT. Future research should explicitly link Kolb's Experiential Learning Cycle regarding the four processes. This is especially true for literature that needs to be more specific in its experiential learning strategies. The experiential learning process can be more visible by explicitly explaining the four stages. Moreover, stating specific experiential learning strategies used in classrooms is helpful for teachers who plan to adapt experiential learning strategies in their classrooms.

Conclusion

Experiential learning has the potential to foster motivation in MTL classrooms in primary schools. The lack of motivation in students towards their MTL in Singapore stems from the need for language domain use and pedagogical approaches that focus on examinations. As such, experiential learning could create a fun, positive learning environment, even in language classrooms. This aligns with the 'joy of learning' (Ministry of Education, 2017). While one experiential learning strategy may not be sufficient to foster motivation, all three innate needs will likely be satisfied when paired with other strategies. Finally, experiential learning should be a pedagogical tool in schools to enhance motivation in MTL classes.

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