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RESEARCH ARTICLE

Assessing the Impact of Motivational Learning Techniques on Students' Ambiguity Tolerance in English as a Second Language at the higher level

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Abstract: This study investigates how motivational learning strategies influence second-language ambiguity tolerance among higher level English students in District Loralai, Balochistan. The three primary objectives are: (1) to identify the most frequently used motivational learning strategies in English classes; (2) to determine the level of ambiguity tolerance among students; and (3) to explore the relationship between preferred motivational strategies and students' tolerance for linguistic ambiguity. Using a quantitative approach, data were collected from 800 students via reliable questionnaires: The Motivated Strategies for Learning Questionnaire (MSLQ) and the Second Language Ambiguity Tolerance (SLAT) scale. Analyses conducted through SPSS version 24 revealed that motivational learning techniques positively correlated with higher levels of ambiguity tolerance. This finding suggests that enhancing students' motivation may foster their ability to cope with uncertainty in language learning.

Keywords: Second Language, Motivation, Learning, Ambiguity, Higher Education

Introduction

Learning a language always challenges the learner with the ambiguous words, structures, or contexts. The tolerance to such ambiguity by a learner also matters a lot in his or her language acquisition and confidence. Motivational learning strategies techniques that provoke and maintain the motivation of the learners are very instrumental in helping learners when faced with such uncertainty (Dörnyei, 2001).

These plans involve intrinsic aims, self-efficacy perceptions, feedback-seeking behaviors, and self-regulatory learning elements, that are reflected in the Motivated Strategies for Learning Questionnaire (MSLQ). On the other hand, the concept of ambiguity tolerance is a psychological peculiarity that determines the way people interpret uncertain information and adjust effectively to it. The research questions that the study seeks to answer are as follows: to determine whether there is a relationship between higher levels of motivation and greater ability to tolerate ambiguity among higher secondary students who are enrolled in English as a second language in Balochistan (Ezzati & Farahian, 2016).

Literature Review

Motivational Learning Strategies

The MSLQ, developed by Pintrich and De Groot (1990), assesses students' motivational orientation and metacognitive learning strategies. It has shown solid reliability in diverse contexts, including Pakistani student populations. Malaysian studies and Hong Kong adaptations further confirm its validity across educational levels.

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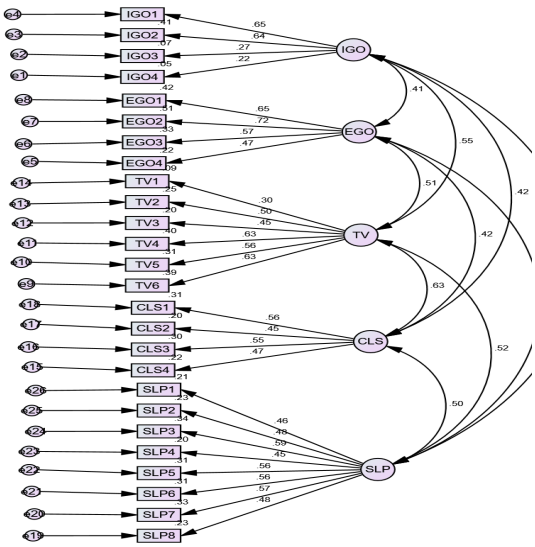
Ambiguity Tolerance in Language Learning

Such a psychological construct as ambiguity tolerance intolerance exists. Assimilation in language education It has been found that lower levels of intention to tolerate ambiguity can predict anxiety and lack of engagement and that higher levels can predict creativity and adaptability in language education.

A number of studies have highlighted the complexity of the interactions between motivational, cognitive, metacognitive strategies, and language learning outcomes, which create strong reasons to study the interactions between them in Balochistan. The research done by Ghasemi and Dowlatabadi (2018) with 190 EFL undergraduate learners in Iran. With structural equation modeling, they discovered that motivational factors (including task value) as well as learning strategies (including deep/surface-based and critical-thinking approaches) had a significant predictive power on self-regulation and language success. Interestingly, task value increased the level of strategic involvement and self-regulation of learners and critical thinking was associated with better language. In other studies, in the Iranian EFL context, it has also been established that cognitive and metacognitive strategies as those which assist in reading comprehension directly and positively affect the language abilities of listening, reading, speaking, and writing. Regression analyses established their predictive ability on receptive and productive capabilities of learners. Studies of metacognitive awareness, including strategy teaching and group discussions, demonstrated the reading performance and strategy use enhancement with references to the effectiveness of a specific pedagogical approach to language proficiency. Also, research on the behavior of Iranian EFL learners has regarded significant associations between motivation and the application of metacognitive reading instructions by learners. Specifically, even more proficient readers who employed more metacognitive strategies exhibited greater motivation which further highlights and underscores the symbiotic nature of strategy use and motivational orientation.

Although these studies are informative, they are placed beyond Balochistan. Their results inspire the local investigation of how motivational and metacognitive aspects influence the second language acquisition in the specific educational and cultural setting of Balochistan in which specific insights can be used to guide more efficient and context-specific pedagogical strategies.

Variables Based Item Analysis Mode



Studies in differing educational settings underline the essential importance of learning strategies in language learning, especially those in metacognitive and motivation of learners to acquire vocabulary and to learn English in general. Chan and Aziz (2021) examined the application of strategies by Chinese primary learners in Sarawak and found that students with high academic performance used metacognitive strategies

extensively to learn English vocabulary. In the same vein, Khamkhien (2010) compared Thai and Vietnamese university learners based on Oxford Strategy Inventory of Language Learning (SILL). He discovered that motivation turned out to be the most underlining factor that influenced the strategy use more than gender and previous experience and that Vietnamese learner female students, especially less experienced ones, and those less motivated used the strategies less often than their Thai counterparts. Corresponding with these discoveries, research on left-behind children (LBCs) in rural China highlights how emotional variables such as motivation and anxiety play a big role in determining the outcome in learning a language. Wu and Zhou (2020) claimed that motivation was lower and there were no clear disparities in anxiety in LBCs when compared to their counterparts, which are associated with insufficient parental engagement, decreased technological sophistication, and exam stress. Together, these studies demonstrate that successful language learning among age and educational systems depends on high-quality metacognitive strategies application and high motivation underpinnings. They also highlight the fact that family situations and lack of resources can be socio-contextual factors that prevent the emotional preparedness and academic activity of the students. Since the educational environment of Balochistan has some similarities with them considering resource limitations to different levels of motivation of learners, this knowledge can provide effective reasons to have locally-based studies. This type of research can be used to inform interventions aimed at enhancing strategies of learning, motivation, and language resilience among learners in this area (Wang & Liu, 2022).

Objectives of the Study

1. Identify the most commonly used motivational learning strategies in English classes at the higher level in University of Loralai.
2. Measure the level of ambiguity tolerance among students in these English classes at higher level.
3. Determine the relationship between preferred motivational learning strategies and ambiguity tolerance at higher level in university of Loralai.

Research Design

A quantitative correlational design was employed. The study sampled 800 higher level students from selected English classes across university of Loralai, using stratified random sampling to ensure representation across genders, academic streams, and localities.

Instruments

1. MSLQ (Motivated Strategies for Learning Questionnaire): A 44-item, 7-point Likert scale instrument measuring motivational beliefs (value, expectancy, affect) and learning strategies (cognitive, metacognitive, resource management).
2. SLAT (Second-Language Ambiguity Tolerance) Scale: A validated self-report measure assessing comfort with linguistic ambiguity.

Data Collection and Analysis

The sample of the study was 800 students with 70 percent men and 30 percent women of various departments, university of Loralai, Balochistan, Pakistan. The sample group was between 22 and 26 years. The survey tool had three parts containing 34 questions:

Part A: Demographic Information

This part collected data regarding both gender, academic background (urban vs. rural), education level (from BS) and previous performance in English. The questionnaires were given to students in both mainstream colleges and residential colleges, with the researcher sending it to through to the fourth year of university.

Part B: Motivated Strategies for Learning Questionnaire (MSLQ)

In this part motivational learning strategies were evaluated through the following subscales: Intrinsic Goal Orientation (4 items), Extrinsic Goal Orientation (4 items), Task Value (6 items), Control of Learning Beliefs (4 items), Self-efficacy for Learning and Performance (8 items)

Part C: Tolerance of Second Language Ambiguity (SLAT)

The last section contained 8 questions that assessed tolerance to ambiguity by the students in a specific setting of language of learning a second language a scale that is both highly accepted in gauging language-based ambiguity tolerance.

Table 1

CFA of the Questionnaire-Motivational Learning Strategies, Confirmatory Factor Analysis (Indices of Model Fit) for Motivational Learning strategies (N = 0000)

Indices	χ^2(df)	χ^2/df	CFI	RMSEA
M 1	875.686 (289)	3.030	.839	.05

χ^2 (df) = chi-square; χ^2/df = normed chi-square; CFI = Comparative Fit Index; RMSEA = Root Mean Squared Approximate error; SRMR = Standardized Root Mean Square. M1 = Default Model.

Table 2

Reliability Level for Each MSLQ Scale

Scales		No. of Items	Cronbach Alpha
1	Intrinsic goal orientation	04	.64
2	Extrinsic goal orientation	04	.76
3	Task value	06	.67
4	Learning Control of Strategies	04	.61
5	Self-efficacies for Learning and Performance	08	.81

The alpha of the motivation scales1 to14 were between 0.64 and 0.67; alpha of the learning strategies scales (Scales 15 to 16) were between 0.61 and 0.81. All scales are linked to sufficient alpha reliability levels in the intention of the research.

Table 3

Reliability Level for SLAT Scale

Scales		No. of Items	Cronbach Alpha
1	Ambiguity Tolerance	08	.66

Table 4

Data Analysis

Gender	Motivational Strategies		Ambiguity Tolerance
Male	N	553	553
	Mean	3.8004	3.7710
	Std. Deviation	.46245	.70925
Female	N	247	247
	Mean	4.1213	3.9514
	Std. Deviation	.38714	.73212
Total	N	800	800
	Mean	3.8995	3.8267
	Std. Deviation	.46465	.72077

This section presents gender-specific descriptive statistics, examining the mean scores and standard deviations across motivational learning strategies and ambiguity tolerance.

Motivational Strategies (MSLQ Scores)

Male subjects were 553 participants (69.1% of the sample), whose average score was 3.8004 which is above the midpoint value of 2.5 and implies high involvement in motivational strategies. The standard deviation of 0.4625 indicates a moderate variability on responses. This was 4.1213 by females who represented 247 persons (30.9%) also exceeding the 2.5 mark. This is because the standard deviation is lower 0.3871 which reflects more patterned responses. These finding confirm that male and female students think that motivational strategies have some influence on their learning and that female students are more aligned and more homogeneous in their perceptions. As a composite total between the sexes, the average of 3.8995 and a standard deviation of 0.4647 highlights the general awareness of the power of motivational techniques in academic involvement.

Ambiguity Tolerance (SLAT Scores)

The mean ambiguity tolerance of male students (n = 553, 69.1%), was again above the neutral midpoint: 3.7710, which indicates a generally positive tendency to deal with second-language ambiguity. The corresponding standard deviation of 0.7093 indicates a broader variation in the tolerance levels. The standard deviation in female students (n = 247, 30.9) was slightly bigger (3.9514) and the outcome showed a higher value with a standard deviation value of 0.7321, which showed that the students were more tolerant and that the value range was more varied.

Table 5

Descriptive Result

Gender	N	Motivational Strategies (Mean ± SD)	Ambiguity Tolerance (Mean ± SD)
Male	553	3.8004 ± 0.4625	3.7710 ± 0.7093
Female	247	4.1213 ± 0.3871	3.9514 ± 0.7321
Total	800	3.8995 ± 0.4647	3.8267 ± 0.7208

Discussion

The goal of this research was to determine how a motivational learning approach affects the tolerance to ambiguity in higher level ESL students in Loralai, Balochistan. The descriptive outcomes demonstrated that both sexes showed scores that were significantly below the mid mark of a neutral (2.5) about the constructs. It is worth noting that female students had better motivational engagement (M = 4.1213, SD = 0.3871), whereas male students had a lower score (M = 3.8004, SD = 0.4625). On the same note, female respondents had higher scores (M = 3.9514, SD = 0.7321) than males (M = 3.7710, SD = 0.7093) on ambiguity tolerance. These results indicate good general approaches to motivational strategies and quite a high level of tolerance to uncertainty in English language learning.

The existence of gender disparity in motivational attitudes towards language learning is well-known. Studies such as that by Dörnyei, and others, record that the female learners have reported to have higher levels of motivation as compared to their male counterparts, which is usually associated with dissimilarity in self-perception and emotional control in learning. This is in line with our observation that female students always recorded greater interest in motivational strategies.

The nature of ambiguity tolerance is a psychological characteristic that has immense effects on learning. Highly tolerant learners can better deal with uncertainty and interpretive risks and adopt non-standard language input characteristics that facilitate adaptive language learning behaviors. There was also

a higher level of tolerance that was slightly higher among the female learners in our study which could be due to more comfort with ambiguity and flexibility in language use.

In others, but most prominently, in the topic of reading comprehension male readers have been found to be performing better in ambiguity tolerance and reading abilities. These findings highlight the situational characteristic of ambiguity tolerance, which depends on the type of task, the cultural context, and the instructional environment. In our context, this may be because of educational and socio-cultural forces that favour their language learning strategy by making them both driven and ambiguity tolerant.

Ambiguity tolerance is also another element that supports sustainable language learning encouraging persistence and in-depth thinking in ambiguous or tricky situations. This study supports that correlation because a more tolerant student population is probably more engaged and more likely to last longer in a challenging situation of uncertain language input.

Although our research did not make any inferential analyses of the motivational strategies through regression or t-tests, there were trends using which motivational strategies and ambiguity tolerance are aligned positively. Some evidence also exists in the literature that ambiguity tolerance in a language situation is strongly correlated with that of emotional and motivational factors. In addition, motivational constructs such as intrinsic goal orientation and self-regulation which form critical elements of MSLQ play a key role in persistence and cognitive uncertainty.

Implications

These conclusions provide practical lessons to teachers. Increasing the resilience of students to ambiguous situations by improving the capacity of teachers to promote both intrinsic motivation and self-regulated learning by autonomy-supportive instructional instruction and metacognitive training. Also, ambiguity-tolerant activities (e.g. inferencing, incomplete text interpretation) might be incorporated to allow the learners to develop confidence in dealing with ambiguity.

Since the baseline scores are very large, additional analytic procedures such as regression can be used to clarify the role of strong motivational strategies as predictors of ambiguity tolerance. Some gender-specific needs can also be addressed by understanding them and designing specific interventions, e.g., confidence-building activities may be provided to male learners, whereas females who require larger exposure to ambiguity may be made to work on challenge tasks.

Conclusion

This research paper examined how motivation learning strategies and ambiguity tolerance relate between the English students in Loralai, Balochistan at higher level. The findings revealed that male and female students displayed high interest in motivational strategies and an admirable skill to sustain linguistic ambiguity. It is important to note that female students performed better in both areas compared to male students, although the differences indicate the existence of significant individual differences between genders.

The results of this study are congruent with overall work demonstrating that more motivated learners tend to be in a better position to process uncertain or new linguistic inputs. It has been established that ambiguity tolerance is a trait that builds resilience and adaptability in second language learning, and students are able to take up and approach strange forms and meanings without fear. Despite the differences in genders in descriptive statistics, the past research has shown that gender is not a strong predictor of ambiguity tolerance, which underlines the importance of situational and task-specific factors.

Mutual reinforcement between motivation and ambiguity tolerance implies key instructional implications. Educators can reinforce adaptive language behaviors by adding to the learning strategies that

promote high intrinsic motivation like autonomy, relevance, and self-regulated learning and by challenging students with manageable amounts of ambiguity in classroom activities. This method both fosters perseverance and adaptability the two qualities of successful language acquisition. Further studies applying inferential statistics such as regression or structural equation modeling may elucidate the relationship between motivational strategies and ambiguity tolerance in the various learner profiles. The exploration of the effects of certain motivational dimensions including intrinsic goal orientation and self-efficacy on ambiguity tolerance can inform more focused pedagogical interventions.

Overall, this paper has highlighted that development of motivation is not only an excellent practice, but it also plays a central role in enabling learners to competently cope with uncertainty in the process of language acquisition, a critical observation in the education business in settings such as Balochistan.

Although there was a small gender disparity female student scoring higher than males in motivation (M=4.12 vs. 3.80) and ambiguity tolerance (M=3.95 vs. 3.77), all the students are highly motivated and moderate-high in tolerating linguistic uncertainty, indicating high readiness to study in English. These results support the general findings that indicate self-regulated learning and ambiguity tolerance are dynamically changing processes that contribute to resilience in language learning. It would therefore be expected of educators to combine both motivational scaffolding and metacognitive techniques in order to even more enhance the skills of students in dealing with the complexities and uncertainties typically associated with second-language learning.

Recommendations Strategies

Focus Area	Recommended Actions
Self- Regulation Skill	Integrate SRL instruction via planning, reflection, and strategy monitoring.
Authentic Assessment	Use real world tasks like portfolios and presentations to assess language skills.
Blended Instruction	Adopt flipped models that embed SRL strategies in and outside class time.
Effective Feedback	Facilitate ongoing, process based feedback with a focus on self-correction.
Metacognitive Tools	Employ think-aloud, questioning, and regulation checklists.
Adaptive Learning	Encourage reflection, goal setting, and adjustment through feedback loops.
Inclusive Support	Customize motivational and ambiguity tolerance supports to fit student profiles.

Recommendations

On the basis of the results of this research thus indicating that there is a positive correlation between motivational learning strategies (intrinsic motivation in particular and self-regulation) and ambiguity tolerance in higher level English students in Loralai below are some of the evidence-based, context-specific recommendations that can be made to educators, school administrators, and policy makers in Balochistan:

1. Both motivation and ambiguity tolerance can be improved by empowering students and giving them self-regulated learning strategies in the form of goal-setting, planning, self-monitoring, and reflection. Borrowing on SRL, advise instructors to create activities that facilitate the development of metacognitive awareness and learner autonomy.
2. Instead of traditional assessments that are memory based, use real world based, authentic tasks such as projects, portfolios, presentations or reflective journals, which demand higher-order thinking and self-reflection. Such strategies facilitate meaningful interest, resilience, and capacity to deal with ambiguity.
3. Applying SRL techniques in blended or flipped learning techniques provides students with flexibility and increased control over their learning. As an example, inverting lectures and replacing classroom time with active activities, like peer-to-peer work and the implementation of methods to SRL, may increase proficiency in all language domains.

4. Incorporate feedback, which allows learners to self-correct, reflect and modify their approach. Promote peer and self-assessment with the rubrics. Feedback must be continuous and process oriented rather than results oriented to encourage self-awareness and adaptability.
5. Educate students using the metacognitive strategies of self-questioning, think aloud, graphic organizers and regulation checklists. The tools will help the learners to structure thoughts, track understanding and hone tactical maneuvers that are important in surviving amidst ambiguity.
6. Challenge the educators to develop the learning environment that causes students to look into performance, get feedback, and make the practices of the approaches that match the Master Adaptive Learner framework. This developed flexibility allows learners to deal with uncertainty and to cope with new challenges in a flexible manner.
7. Though motivational strategies are beneficial to all the students, in this study, female learners developed a bit higher motivation and ambiguity tolerance. booster interventions and support systems to meet the emotional and motivation needs of all students, by exploiting peer support, mentoring, and agency-promoting tasks.

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