AUTONOMY IN DRIVING ONLINE MOTIVATION FOR JAPANESE LANGUAGE LEARNING

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Abstract. Online usage in education, that are the result of rapid development of digital platform, play a vital role in Japanese language learners' motivation. In Japanese language learning, learners' participation and persistency are highly influenced by their autonomy. However, the relationship between online learning and autonomy has yet to be understood clearly. Thus, this study is done to investigate the influence of autonomy towards online motivation among Japanese language learners. This research employed a quantitative research approach through a survey from Fowler that utilized a 5 Likert-scale. Data were collected from 206 respondents from a public university in Malaysia. The findings show that online motivation has a significant positive relationship with autonomy. The higher autonomy a learner has, the greater motivation and participation they have in their classroom. This research offers current literature with empirical evidence on the relationship between autonomy and online motivation for Japanese language learning. This research also provides suggestions to instructors and curriculum designer when developing autonomy-related online Japanese language learning environments.
Keywords: *autonomy, motivation, online learning, Japanese language learning, student engagement*

Introduction

The current state of foreign language learning landscape has currently been transforming from fully physical classroom to online platforms due to the quick development of digital technologies. However, along with this rapid development, learners are expected to independently execute and monitor their own learning. Thus, it is vital for instructors as well as learners to comprehend the factors that preserve learners' motivation as they focus on studying online. Due to the minimal control from instructors in online learning, learners are required to have greater independence as well as self-participation. According to Deci and Ryan (2000), in their Self-Determination Theory, intrinsic motivation is foster by basic psychological needs which consist of autonomy, competence, and relatedness. Deci and Ryan (2000) explained that autonomy is the observed cause of a person's own behaviour and one experiences it when they do something with desire, willingness and psychological liberty. In term of online learning, autonomy becomes vital as learners typically need to decide their pace, engagement as well as strategies. Learners will find their interest, participation and determination rise when they experience purposeful choices and self-regulation. Despite the significance of this issue, current researches commonly studied online learning for their relationship with autonomy together with competence and relatedness like what was done by Chiu (2022) or for their association with digital technologies as studied by Sun and Rueda (2012). These studied did not demonstrate autonomy as the main factor for online learning motivation. To obtain a more diverse understanding of motivation and

autonomy in online platforms, this research aims to explore how autonomy plays a vital role in motivating Japanese language learners within the context of online environment.

Statement of problem

The role of autonomy as a key factor of motivation can be seen discussed in Self-Determination Theory (SDT) by Deci and Ryan (2000) (and again by Ryan and Deci (2020)). SDT suggests autonomy significantly improve intrinsic motivation and behavioural engagement (Ryan and Deci, 2020; Deci and Ryan, 2000). This vital factor that influenced motivation in the online learning context has become a scholarly trend as online platform like e-learning, online workspace and social media continue to expand swiftly. Researches like Hartnett (2016) and Jeno et al. (2017) discussed the important of autonomy in determining one's willingness to participate, persevere, as well as actively engage in online tasks. Even though there are researches that has examined autonomy in the aspect of online learning, there are several issues still can be seen in them. Ryan and Deci (2020) discussed that SDT components, such as competence and relatedness, has been examined by previous studies in relation to online motivation without separating its independent effects. Thus, there is yet to be sufficient information in regards to the specific advantages and predictive functions of autonomy as a main catalyst of online motivation.

According to Sun and Rueda (2012), the empirical findings on the impact of autonomy in different online settings, such as formal learning environments and informal digital communications, has produce some continuous inconsistencies. These inconsistencies reveal that there is generalizability of the current discoveries. On top of that, previous studies narrow their data on structured educational settings which boxed its applicability to wider online experiences. These concerns demonstrate that there are demands on further examination. Ryan and Deci (2020) explained that current studied has scrutinize the significance of investigating autonomy as a separate concept and requested more context-specific researches for in-depth understanding of its role in various digital settings. In addition, Jeno et al. (2017) recommended future studies to examine autonomy as a main predictor of online motivation, namely in situation where respondents experience diverse level of flexibility and independence. This concerns reveals that there is a research gap in identifying how far autonomy influence online motivation within less structured and contextually diverse settings, including language learning contexts. Therefore, this study aims to tackle these gaps by investigating autonomy in online motivation among Japanese language learners. This study also aims to offer a more detailed and narrow understanding of autonomy role by looking at it as the main catalyst in online learning.

Objective of the study and research questions

This study is done to examine the influence of autonomy in online learning among Japanese language learners. Specifically, this study is done to answer the following questions: (a) Are there significant differences in online motivation among Japanese language learners across gender and clusters? (b) How do Japanese language learners perceive autonomy, competence, and relatedness in online learning? (c) What is the relationship between autonomy and the other basic psychological needs (competence and relatedness) among Japanese language learners?

H_{01}: There is no significant difference in online motivation across gender.
H_{02}: There is no significant difference in online motivation across clusters.
H_{03}: There is no significant relationship between autonomy and competence.
H_{04}: There is no significant relationship between autonomy and relatedness.

Literature review

Self-determination theory

Deci and Ryan (2015) explained that Self-Determination Theory (SDT) refers to a motivational theory on behavior, development, and social processes that examines the way individual differences as well as social contexts assist different forms of motivation, namely autonomous and controlled motivation, thereby predict learning, achievement, experience, and psychological well-being. SDT posits every individual has three fundamental psychological needs: relatedness, competence, and autonomy. When one feels appreciated and related to other, they experience relatedness, while competence refers to the feeling of completing challenging task optimally, acquiring new skills as well as able to receive constructive criticism that increase your confidence. On the other hand, autonomy refers to being able to freely do what one's desire. The best state of motivation can be fostered when all of these psychological needs are fulfilled and thus, supporting effective engagement with the external environments.

Online motivation

Online motivation is when a learner is willingly, with interest and persists in participating with learning activities via digital learning settings, adapting higher independence as well as self-regulation compared to traditional classroom learning. Hartnett et al. (2011) stated that there is a complex and multifaceted process involved in motivation in online learning, and on top of that, it is shaped by the engagement between individual learners and the learning environment. As discussed in SDT, Ryan and Deci (2000) argue that when a learner's fundamental basic psychological needs for autonomy, competence, and relatedness are fulfilled, motivation will be strengthened. And in the perspective of online learning, autonomy is mainly important as learners are expected to solve problem, handle their own learning growth, and trusted to complete task. Likewise, competence and relatedness are vital for supporting meaningful engagement in digital learning environment as they assist learners' confidence and sense of connection. This aligned with Chiu (2022) who discovered that by fulfilling autonomy, competence, and relatedness, learners' engagement in online learning can significantly increase, emphasizing the significance of these psychological factors in discovering online motivation.

Past studies

Autonomy, competence, and relatedness in online learning has been a recurring theme by previous researchers. These factors are examined in recent research to investigate their relationship with learners' motivation, classroom engagement as well as academic achievement. In addition, they have also investigated autonomy, competence, and relatedness in online learning in regards to a learning system to monitor learners as well as teaching approaches that improve learners' participation, persistence and meaningful learning experience. Firat (2016) examined the way

students' autonomous learning behaviours in online learning management systems affect motivation and academic performance. Firat (2016) collected quantitative and qualitative data from 71 participants using. explanatory mixed-method design. Participants' online behaviours in online learning management systems were scrutinized by using learning analytics for over 14 weeks and the association between the behaviours and their academic performance were analysed, then they were analysed on their perspective of online learning management systems influence on their academic achievement. He discovered that students believed online learning management systems enhanced academic performance when they included interaction, effectiveness, reinforcement, attractive design, social media support, as well as accessibility. Thus, he concluded that effective online learning management systems features can encourage learning engagement and performance.

Jeno et al. (2018) studied a model based on Self-Determination Theory (SDT) to analyse academic performance and dropout intentions among biology students at tertiary level in Norway. 754 participants joined in this cross-sectional study and Jeno et al. (2018) discovered that autonomous motivation and perceived competence positively predict academic performance but negatively predict dropout intentions. In addition, the finding also showed that need-supportive teachers and students' intrinsic aspirations also positively predict academic performance and negatively predict dropout intentions, but via autonomous motivation and perceived competence. Jeno et al. (2018) suggested that teachers support students' need for autonomy, competence and relatedness, through providing choice and volition to assist autonomous motivation, as well as providing students with reflectance-relevant feedback and significant challenges to improve perceived competence. Overall, these studies consistently present that autonomy, competence, and relatedness in learning environments play major roles in improving learners' motivation, engagement, as well as academic achievement. A successful online learning system and need-supportive teaching strategies can positively impact learners' engagement, motivation, and overall learning experiences.

Past studies on motivation and online learning

Previous studies have looked into factors impacting learners' motivation and engagement in online learning, especially through Self-Determination Theory. Researchers underlined the significance of autonomy, competence, relatedness, self-regulation, and contextual support in improving engagement and persistence. These studies offer vital insights into structuring encouraging and engaging online learning environments. Chiu's study from 2022 examined how students' participation in online learning during the COVID-19 epidemic was predicted by autonomy, competence, and relatedness. 1,201 Hong Kong students in grades 8 and 9 participated in this study, which used pre- and post-questionnaires during a six-week online learning period. The findings showed that students' satisfaction of the three psychological requirements was enhanced by digital support measures, and that all three needs significantly predicted online engagement, with relatedness having a particularly strong influence. The study highlights the importance of flexibility, structured support, and meaningful interaction in promoting motivation and engagement in virtual classrooms.In addition, Sun and Rueda (2012) investigated how student engagement in distance learning was impacted by situational interest, computer self-efficacy, and self-regulation. The study indicated that students' confidence in using technology and their capacity to control their own learning had a substantial impact on their level of engagement, using survey instruments

given to university students participating in online courses. This suggests that online learning environments require learners to exercise a higher degree of independence and self-control, which are closely related to the concept of autonomy.

The study by Chen and Jang (2010) is done to examine online learner motivation using Self-Determination Theory, with a focus on the relationships between contextual support, psychological need satisfaction, self-determined motivation, and learning outcomes. The study involved 262 learners from two online certificate programmes, and data were collected through a seven-point Likert-scale online survey, along with students' final grades and course access records. The findings showed that contextual support significantly supported learners' psychological needs, which then strengthened their self-determined motivation in online learning. However, self-determined motivation did not show a direct significant effect on learning outcomes. The study suggests that online courses should be designed to support learners' autonomy, competence, and relatedness in order to promote stronger motivation and continued participation. The studies discussed adopted Self-Determination Theory and discovered autonomy, competence, and relatedness prominently influence students' motivation and engagement in online learning. Contextual and digital support improved psychological need satisfaction, encouraging engagement and persistence. Despite that, autonomy's independent role, namely in online Japanese language learning contexts, remains underexplored and requires further investigation. Thus, this study explores learners' perceptions of autonomy, competence, and relatedness in online learning, and the important relationships between online motivation, gender, clusters, autonomy, competence, as well as relatedness.

Conceptual framework of the study

When it comes to online learning, one fear of learners is the issue of engagement. Without engagement, learners may feel demotivated as they feel "alone" during the online lessons (Rahmat, 2025). According to Fowler (2018), motivation to learn online is influenced by expectancy, value, and social support. Expectancy in learning refers to a person's beliefs that he/she is able to succeed through effort. Next, value drives the learners to be goal-focused. Social support is needed, especially in online learning, as learners need to be connected and engaged in the learning. Having motivation is not enough to determine success; learners need to have self-determination. According to Ryan and Deci (2000), self-direction and personal growth depend on three needs: autonomy, competence, and relatedness. Autonomy refers to the feeling that a person has a choice. In the context of this study, this is found in intrinsic and extrinsic goal orientation as well as task value. Competence is the need to produce desired outcomes and to experience mastery. In this study, this is achieved when learners have self-efficacy and control of learning beliefs. Relatedness is the need to feel connected to others. In the context of this study, this refers to social engagement and instructor support. One motivating factor in online learning is the learner's feeling that they have autonomy over their own learning. Having autonomy gives the learners confidence in what they have learnt so far. This study also explores the influence of autonomy in online motivation (*Figure 1*).

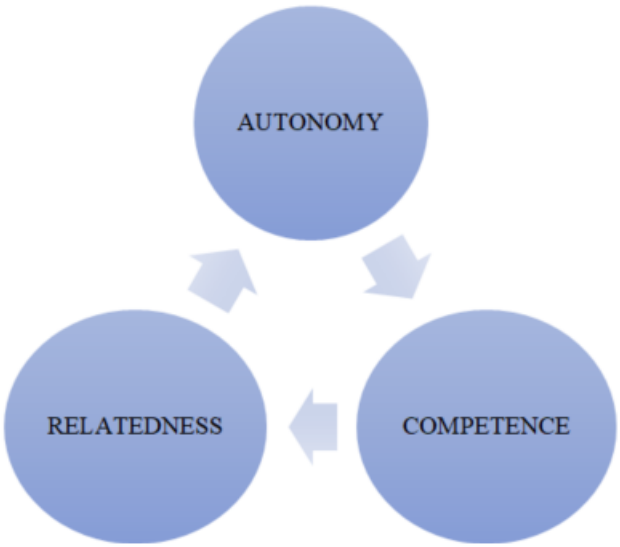

Figure 1. *Conceptual framework of the study the influence of autonomy in online motivation.*

Materials and Methods

This quantitative study is done to explore the influence of autonomy in online motivation. A convenient sample of 206 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from Fowler (2018) to reveal the variables in table below. *Table 1* shows the categories used for the Likert scale; 1 is for Strongly Disagree, 2 is for Disagree, 3 is for Undecided, 4 is for Agree and 5 is for Strongly Agree. *Table 2* shows the distribution of items in the survey. Section B has 11 items on Competence. Section C has 14 items on Autonomy. Section D has 12 items on Relatedness. In order to determine the internal reliability of the instrument, reliability analysis is conducted. *Table 3* above shows the distribution and interpretation of Cronbach Alpha range. According to Ahmad et al. (2024), Cronbach Alpha scores between 0.7 to 0.9 is considered acceptable to excellent. *Table 2* also shows the reliability of the survey. The analysis shows a Cronbach alpha of .899 for competence, .921 for Autonomy, and .863 for Relatedness. The overall Cronbach alpha for all 37 items is .952, thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Table 1*. Likert scale use.*

Category	Descriptipn
1	Never
2	Seldom
3	Sometimes
4	Often
5	Almost Always

Table 2*. Distribution of items in the survey.*

Section	Variable motivation	Construct	No of items	Cronbach's alpha
B	Competence	Self-Efficacy	7	.899
		Control of Learning Beliefs	4	
C	Autonomy	Intrinsic Goal Orientation	4	.921
		Extrinsic Goal Orientation	4	

		Task Value	6	
D	Relatedness	Social Engagement	5	.863
		Instructor Support	7	
Total number of item			37	.952

Table 3. *Reliability levels, Cronbach's Alpha ranges, and their interpretations*.

Reliability level	Cronbach's Alpha range	Interpretation
Excellent	0.9 and above	Indicates very high internal consistency
Good	0.80-0.89	Reflects strong internal consistency
Acceptable	0.70-0.79	Indicates acceptable internal consistency
Questionable	0.60-0.69	Reflects questionable internal consistency
Poor	Below 0.6	Indicates poor internal consistency

Results and Discussion

Demographic analysis

According to Ziegenfuss et al. (2021), researchers report demographic data in percentages to establish sample representatives and allow for generalizability to a larger population. The reporting also provides an overview of participants' characteristics. Percentages offer a clear and understandable picture of the sample makeup. *Table 4* presents the percentage for the demographic profile among Japanese Language Learners. It shows that 35% of the respondents are male, and 65% are female. 46% of respondents are from the Science & Technology cluster, and 54% are from Social Science and Humanities.

Table 4. *Percentage for demographic profile among Japanese language learners.*

Category	Frequency	Percentage
Gdener		
Male	35%	Male
Female	65%	Female
Cluster		
Science & Technology	46%	Science & Technology
Social Sciences & Humanities	54%	Social Sciences & Humanities

The statistical analysis

Inferential Statistics: According to Shah (2024), there are three main functions of a T-test. Firstly, T-tests are done to compare means. This test is also done to determine if the average scores (mean) or values of two groups, or one group against a known value, are different enough to be considered statistically meaningful and are not just due to random chance. Secondly, a T-test is done to test hypotheses. Researchers use t-tests to test hypotheses about means, such as whether a new treatment significantly impacts a variable or if there's a difference in performance between two distinct groups. Lastly, T-test is used to identify significant differences. The output of a t-test provides a p-value (significance value). If this p-value is below a predetermined threshold (often 0.05), it indicates a statistically significant difference, allowing researchers to conclude the populations from which their samples were drawn. Findings for gender: This section presents data to answer research question "Is there a significant relationship between online motivation across gender among Japanese Language Learners?"

H_{o1}: There is no significant relationship between online motivation across gender among Japanese Language Learners.

A two-sample t-test was performed to compare online motivation across gender among Japanese Language Learners (*Table 5* and *Table 6*). There was no significant difference in online motivation (p=.842) across gender among Japanese Language Learners. Null hypothesis is accepted for H_{o1}. Findings for clusters: This section presents data to answer research question "Is there a significant relationship between online motivation across clusters among Japanese Language Learners?"

Table 5. *The group statistic of gender and cluster.*

Category	N	Mean	Std. Deviation	Std. Error Mean
Gender				
Male	71	3.8081	.49390	.05861
Female	135	3.8220	.46244	.03980
Cluster				
S&T	95	3.8674	.43808	.04495
SS,H & B	111	3.7743	.49779	.04725

Table 6. *Independent samples test of gender and cluster.*

Statistic	Equal variances assumed	Equal variances not assumed
Gender		
Levene's F	1.923	-
Levene's Sig.	.167	-
t	-.200	-.196
df	204	134.495
One-Sided p	.421	.423
Two-Sided p	.842	.845
Mean Difference	-.01388	-.01388
Std. Error Difference	.06941	.07085
95% CI Lower	-.15073	-.15400
95% CI Upper	.12298	.12625
Cluster		
Levene's F	.507	-
Levene's Sig.	.477	-
t	1.414	1.428
df	204	203.833
One-Sided p	.079	.077
Two-Sided p	.159	.155
Mean Difference	.09314	.09314
Std. Error Difference	.06586	.06521
95% CI Lower	-.03672	-.03544
95% CI Upper	.22299	.22171

H_{o2}: There is no significant relationship between online motivation across clusters among Japanese Language Learners.

A two-sample t-test was performed to compare online motivation across clusters among Japanese Language Learners (*Table 5* and *Table 6*). There was no significant difference in online motivation (p=.159) across clusters among Japanese Language

Learners. Null hypothesis is accepted for H_{o2}. Descriptive statistics: According to Vetter (2017), Mean (M) represents the average, or centre of a data set. Standard deviation (SD) indicates the typical distance of individual observations from the mean which shows the data's variability or spread. A low SD means the data points are clustered close to the mean whole a high. SD indicates they are more spread out. It is good to have a high SD. Findings for autonomy: This section presents data to answer research question (3): How do Japanese language learners perceive their autonomy in online learning? In the context of this study, this is measured by (i) intrinsic goal orientation, (ii) extrinsic goal orientation and (iii) task value. The *Table 7* presents four items measuring intrinsic motivation toward online learning, showing moderate to relatively high mean scores ranging from 3.33 to 3.67. The highest mean (VIQ3, M = 3.67, SD = 0.75) indicates that respondents value deeply understanding online content. Similarly, VIQ2 (M = 3.51, SD = 0.84) and VIQ4 (M = 3.50, SD = 0.88) suggest a willingness to engage with challenging and meaningful tasks, even without guaranteed high grades. VIQ1 (M = 3.33, SD = 0.83) is slightly lower but still reflects a positive preference for challenging materials. Overall, the results indicate a generally strong intrinsic motivation among respondents. The *Table 7* presents four items measuring extrinsic motivation toward online learning, showing moderate to relatively high mean scores ranging from 4.08 to 4.56. The highest mean recorded for VEQ1 (M = 4.56, SD = 0.67) indicates that respondents value to get a good grade in the classes. In addition, VEQ2 (M = 4.19, SD = 0.83) and VEQ4 (M = 4.31, SD = 0.84) indicate that respondents have a willingness to show their own abilities to others and to gain awards and recognition. Although VEQ3 (M = 4.08, SD=0.84) showed the lowest mean among the four statements, it still reflects a positive preference for getting high grades in their classes. Overall, the findings suggest that respondents generally have strong extrinsic motivation toward online learning. The *Table 7* presents the results for task value in online learning, showing moderate to relatively high mean scores ranging from 3.89 to 4.12. The highest mean was recorded for VTQ2 (M = 4.12, SD = 0.68), indicating that respondents consider learning the course materials to be important. Similarly, VTQ3(M = 4.09, SD = 0.72), VTQ4 (M = 4.06, SD = 0.71), VTQ5 (M = 4.03, SD = 0.73), VTQ6(M=4.09, SD=0.73) also suggest that respondents are interested in the subject matter and course materials. Overall, the findings suggest that respondents value learning course materials and subject matter in online learning.

***Table 7**. The mean (M) and standard deviation (SD) among Japanese language learners.*

Code	Description	M	SD
Intrinsic Goal Orientation (VI)			
VIQ1	I prefer online material that really challenges me, so I can learn new things.	3.33	0.83
VIQ2	I prefer online material that arouses my curiosity, even if it's difficult to learn.	3.51	0.84
VIQ3	The most satisfying thing for me is trying to understand the online content as thoroughly as possible.	3.67	0.75
VIQ4	I choose assignments that I can learn from even if they don't guarantee a good grade.	3.50	0.88
Extrinsic Goal Orientation (VE)			
VEQ1	Getting a good grade is the most satisfying thing for me.	4.56	0.67
VEQ2	I want to do well in my classes so that I can get awards and recognition.	4.19	0.83
VEQ3	I want to get better grades than most of the other students in my classes.	4.08	0.84
VEQ4	I want to do well in my classes because it's important to show my ability to my family, friends, employer, or others.	4.31	0.78
Task Value (VT)			
VTQ1	I think I will be able to use what I learn in this course in other courses.	3.89	0.71
VTQ2	It is important for me to learn the course material in this class.	4.12	0.68
VTQ3	I am very interested in the content area of this course.	4.09	0.72
VTQ4	I think the course material in this class is useful for me to learn.	4.06	0.71
VTQ5	I like the subject matter of this course.	4.03	0.73
VTQ6	Understanding the subject matter of this course is very important to me.	4.09	0.77

Self-Efficacy (ESE)			
ESEQ1	I believe I'll receive excellent grades in my classes.	3.67	0.70
ESEQ2	I'm certain I can understand the most difficult material presented in the readings.	3.40	0.78
ESEQ3	I'm confident I can learn the basic concepts that are being taught.	3.83	0.70
ESEQ4	I'm confident I can understand the most complex material presented by the instructor online.	3.34	0.86
ESEQ5	I'm confident I can do an excellent job on assessments online	3.69	0.80
ESEQ6	I'm certain I can master the skills being taught online.	3.38	0.81
ESEQ7	Although online classes can be challenging, I think I can do well.	3.39	0.81
Control of Learning Beliefs (ECB)			
ECBQ1	If I study in appropriate ways, then I'll be able to learn the material.	3.90	0.73
ECBQ2	It's my own fault if I don't learn the material taught.	3.96	0.79
ECBQ3	If I try hard enough, then I'll understand the material presented.	4.06	0.71
ECBQ4	If I don't understand the material presented, it's because I didn't try hard enough.	3.78	0.87
Social Engagement (SSE)			
SSEQ1	I feel "disconnected" from my teacher and fellow students in classes.	2.63	1.11
SSEQ2	I pay attention in classes.	3.90	0.71
SSEQ3	I enjoy class discussions.	3.73	0.80
SSEQ4	I feel like I can freely communicate with other students in classes.	3.53	0.82
SSEQ5	I have strong relationships with fellow students in this course.	3.52	0.90
Instructor Support (SIS)			
SISQ1	I feel like I can freely communicate with the instructor in this class.	3.67	0.74
SISQ2	The instructor responds to questions, clearly, completely, and in a timely manner.	4.08	0.72
SISQ3	The instructor's expectations for me in this class are clear.	3.90	0.75
SISQ4	The instructor provides the guidance I need to be successful in this class.	4.08	0.72
SISQ5	The instructor presents the material in a way that makes it relevant to me.	4.16	0.68
SISQ6	In this course, I have the freedom to guide my own learning	3.91	0.73
SISQ7	The instructor provides regular feedback that helps me gauge my performance in this class.	4.00	0.71

Findings for competence: This section presents data to answer research question "How do learners perceive their competence in online learning?" In the context of this study, this is measured by (i) self-efficacy and (ii) control of learning beliefs. The *Table 7* presents the results for self-efficacy in online learning, showing moderate to relatively high mean scores ranging from 3.34 to 3.83. There are no large differences among the items. The highest mean was recorded for ESEQ3 (M = 3.83, SD = 0.70), indicating that respondents are confident in learning the basic concepts of online learning. In contrast, ESEQ4 showed the lowest mean score (M = 3.34, SD = 0.86), suggesting that respondents had relatively lower confidence in understanding more complex material presented online. Overall, the findings indicate that respondents tend to have a high confidence in performing well and obtaining good grades, however they showed a low confidence to master skills and understand complex materials in online learning. The *Table 7* presents the results for control of learning beliefs in online learning, showing moderate to relatively high mean scores ranging from 3.78 to 4.06. Some items show comparatively lower values. The highest mean was recorded for ESEQ3 (M = 3.83, SD = 0.70), indicating that respondents believed they could understand the learning materials if they tried hard enough. Similarly, ECBQ1 (M =3.90, SD = 0.73) and ECBQ2 (M = 3.96, SD = 0.73) suggest that respondents believed that if they made their own effort and studied hard, they could understand the materials in their learning. In contrast, ECBQ4 (M = 3.78, SD = 0.87) suggests that respondents were likely to associate difficulty in understanding the materials with a lack of their own effort.

Findings for relatedness: This section presents data to answer research question "How do learners perceive their relatedness in online learning?" In the context of this study, this is measured by (i) social engagement and (ii) instructor support. *Table 7* presents the mean scores and standard deviations for social engagement in online learning. The findings show that respondents generally demonstrated a positive level of social engagement, with the highest mean recorded for paying attention in classes (M = 3.90, SD = 0.71). This was followed by enjoyment of class discussions (M = 3.73, SD = 0.80), freedom to communicate with other students (M = 3.53, SD = 0.82), and the

development of strong relationships with classmates in the course (M = 3.52, SD = 0.90). Meanwhile, the item on feeling "disconnected" from teachers and fellow students obtained the lowest mean score (M = 2.63, SD = 1.11), indicating that respondents were less likely to experience a sense of social disconnection during online classes. *Table 7* shows that all mean scores ranged from 3.67 to 4.16, which indicates that respondents perceived instructor support positively. The highest mean was recorded for SISQ5 (M = 4.16, SD = 0.68), showing that respondents strongly agreed that the instructors' presentation of the materials was in a relevant and meaningful way. Likewise, SISQ2 and SISQ4 both acquired high mean scores (M = 4.08, SD = 0.72), demonstrating favourable perceptions of the instructor's responses and guidance. SISQ7 also showed a favourable evaluation (M = 4.00, SD = 0.71), indicating that regular feedback helped students monitor their performance. Meanwhile, SISQ1 had the lowest mean score (M = 3.67, SD = 0.74), implying that students were comparatively less confident about freely communicating with the instructor, although the response remained positive overall. The relatively low standard deviation values, ranging from 0.68 to 0.75, indicate that respondents' opinions were fairly consistent across all items.

Exploratory statistics: According to He (2024), correlation is a statistical technique that shows how strongly two variables are related to each other or the degree of association between the two. It's a common tool for describing simple relationships without making a statement about cause and effect. This section presents data to answer research questions on correlation. According to He (2024), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. To determine if there is a significant association in the mean scores between all components in online motivation, data is analysed using SPSS for correlations. Results are presented separately in *Table 8*. This section presents data to answer research question "Is there a significant relationship between autonomy and competence?" *Table 8* shows there is an association between autonomy and competence. Correlation analysis shows that there is a high significant association between autonomy and competence (r=.687**) and (p=.000). This means null hypothesis is rejected for Ho3.

H_{o3}: There is no significant relationship between autonomy and competence

***Table 8**. Correlation between all components in online motivation.*

Category	Autonomy	Competence	Relatedness
Autnonomy			
Pearson Correlation	1	.687**	.731**
Sig. (2-tailed)		<.001	<.001
N	206	206	206
Competence			
Pearson Correlation	.687**	1	.632**
Sig. (2-tailed)	<.001		<.001
N	206	206	206
Relatedness			
Pearson Correlation	.731**	.632**	1
Sig. (2-tailed)	<.001	<.001	
N	206	206	206

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

This section presents data to answer research question 7: Is there a significant relationship between autonomy and relatedness? H_{o4} There is no significant relationship

between autonomy and relatedness. *Table 8* also reveals there is an association between autonomy and competence. Correlation analysis shows that there is a high significant association between autonomy and competence (r=.731**) and (p=.000). This means null hypothesis is rejected for H_{o4}.

Conclusion

In conclusion, the findings of this study reveal that Japanese language learners in general have positive motivation, engagement, and perceptions toward online learning. The descriptive analysis indicated that respondents showed moderately high levels of intrinsic and extrinsic motivation, as they appreciate successful learning experiences at the same time, external rewards for instance, grades, recognition, and achievement, also motivates them. Learners also reported positive perceptions of task value, indicating that they view online course materials vital, interesting, and beneficial for their learning. According to Chiu (2022), digital support measures enhance learners' psychological requirements and these requirements can predict learners' engagement significantly. The findings further demonstrate that respondents present somewhat strong self-efficacy and control of learning beliefs. The majority of the learners believed that effort and persistence could aid them to comprehend online learning materials and accomplish well academically. Despite that, learners showed lower confidence when mastering complex online content, presenting that some learners could still need additional instructional assistance and guidance in difficult learning situations. When it comes to social engagement and instructor support, the results revealed general positive responses. Learners actively concentrated during online classes, enjoyed class discussions, and experienced successful interaction with peers as well as instructors which aligned with Firat (2016). The learners also perceived instructor support positively, namely when it comes to successful presentation of materials, guidance and feedback. These findings underline the significance of encouraging online learning environments in enhancing learners' engagement and satisfaction. Firat (2016) stated that learning engagement and performance can be improved through effective online learning management systems features, Meanwhile, the inferential analysis showed no significant differences in online motivation across gender and clusters, revealing that among Japanese language learners has comparatively consistent online motivation across different groups. On the other hand, autonomy and competence have significant positive relationships, as well as between autonomy and relatedness. These findings discover that learners who experience greater autonomy in online learning have a higher opportunity to feel competent and socially connected in their learning spaces which agrees with Jeno et al. (2018). Jeno et al. (2018) stated that academic performance can be predicted through learners' autonomous motivation and perceived competence In short, this study confirms that autonomy has a vital role in improving learners' motivation, competence, and relatedness in online Japanese language learning. The findings offer useful implications for instructors and curriculum designers in designing autonomy-supportive online learning environments that support active engagement, confidence, and successful learning experiences.

The findings of this study give vital theoretical and conceptual implications in the context of Self-Determination Theory (SDT) and online learning motivation. The study promotes SDT by proving that autonomy prominently impacts learners' motivation, competence, and relatedness in online learning environments. The important

relationships between autonomy and competence, as well as autonomy and relatedness, reveal that psychological needs are interconnected in encouraging learners' engagement and participation. Conceptually, this study offers understanding of online motivation by underlining autonomy as a major motivational factor among Japanese language learners. Sun and Rueda (2012) stated that learners need to exercise a higher degree of independence and self-control in online learning, which are closely related to the concept of autonomy. In addition, this study highlights the independent role of autonomy in improving online learning motivation. On top of that, the findings expand the current literature on online language learning within the Malaysian tertiary level context. The study also strengthens the significance of learner-centred online environments that promote flexibility, interaction, and self-learner elements to increase successful learning experiences and maintain motivation. The findings of this study suggest that online teaching should be planned in ways that support learners' autonomy while also strengthening their competence and relatedness. Since autonomy showed significant relationships with both competence and relatedness, instructors should provide learners with appropriate choices, flexible learning opportunities, and activities that encourage them to take responsibility for their own learning. This supports the view of Ryan and Deci (2000), who state that autonomy, competence, and relatedness are important needs in sustaining learner motivation. In addition, students' lower confidence in understanding complex online materials suggests that teachers should provide clearer explanations, guided learning support, and regular feedback to improve learners' confidence and ability. As emphasised by Chiu (2022), online learning should also include meaningful interaction through class discussions, collaborative activities, and active instructor communication to maintain student engagement. Therefore, effective online teaching should balance learner independence with structured support and social connection to promote stronger motivation in online learning.

To improve the generalizability of the results, future research should build on the current study by investigating the role of autonomy in online motivation across other disciplines, institutions, and cultural contexts. Future research may use mixed-method or qualitative techniques, like interviews or observations, to obtain a deeper understanding of how learners experience and interpret autonomy in online learning, since this study used a quantitative survey and convenience sampling among UiTM Japanese language students. Furthermore, rather than focusing on a single point of measurement, longitudinal study is advised to examine how autonomy affects motivation over time. Future researchers may investigate causal relationships using experimental or quasi-experimental designs to ascertain whether autonomy-supportive interventions directly improve online motivation, since autonomy demonstrated strong relationships with competence and relatedness. Lastly,further studies could examine additional variables such as digital literacy, self-regulation, and learning styles to better understand other factors that may interact with autonomy in shaping students' online motivational experiences.

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Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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