

What makes a learning experience intrinsically motivating for American high school language learners?

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Article Info	Abstract
<p>Article History Submitted: 1 August 2018 Revised: 24 November 2018 Published: 3 December 2018</p> <hr/> <p>Keywords Self-determination theory Language teaching Basic need satisfaction Intrinsic motivation</p>	<p>The purpose of this study was to examine the self-determination theory (SDT) relationship between basic needs satisfaction and intrinsic motivation within the context of American high school (secondary) foreign language learners. Participants were 156 American high school students studying Spanish, French, or German as a foreign language. Participants completed a survey in which they described a personally satisfying or unsatisfying learning experience from their foreign language class and indicated their levels of intrinsic motivation and autonomy, competence, and relatedness fulfillment for that experience. Results demonstrated that the combination of the three basic psychological needs significantly predicted students' levels of intrinsic motivation for the in-class language learning experience they described, in which autonomy satisfaction was the strongest predictor of intrinsic motivation. Themes from the participants' qualitative responses and recommendations for need-supportive instruction are discussed.</p>

1. Introduction

In the past half-century, trends in learning theory have seen a shift toward the recognition of learners as diverse, multicultural individuals whose complex cultural identities impact the way they interact with the world and, ultimately, learn. With this has come a deep interest in the psychological states within each learner, specifically their beliefs, attitudes, and perceptions toward themselves, the people around them, and their experience of their learning, as well as the confluence of the internal and external motivations they experience at home and at school. Students are not simply passive beings or computers; their identities, feelings, and beliefs significantly influence their growth.

One of the most evident changes this trend away from behaviorist to more constructivist ways of teaching has brought was the acknowledgement of learner autonomy. An individual's autonomy, or their "experience of behavior as self-organized and volitional" (Ryan & Deci, 2013, p. 194), was disregarded by well-known theories of learning and development such as behaviorism ("If we do not know why a person acts as he does, we attribute his behaviour to him" [Skinner, 1971, p. 61]) and the construct of self-efficacy in socio-cognitive theory ("People are contributors to, not the sole determiners of, what happens to them" [Bandura, 1997, p. 3]), yet is integral to constructivism and social constructivism. In constructivism, students must play, be curious, inquire, and follow their interests in order for effective learning to take place (Woolfolk, 2016). To the constructivist-minded,

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educators must know who each individual student is in order for all students to succeed, and without self-direction and freedom, challenge and persistence, and mutual respect and understanding, learning will not take place.

While these dispositions are needed for educators of any subject area, language education is particularly apt to cultivate them due to the expressive and interdisciplinary nature of language. Despite this, the field of language education, too, has experienced the growing pains of the behaviorist-constructivist transformation. This is most apparent in the traditional methods for teaching foreign languages such as the grammar-translation and audio-lingual methods which are still stubbornly anchored into the routine teaching practices of many language educators around the world. To help combat these practices, the American Council on the Teaching of Foreign Languages (ACTFL) continues to advocate for a communicative, proficiency-based style of language teaching in the United States that focuses on what students can do with language in real-world, spontaneous situations. The World-Readiness Standards for Learning Languages (WRSLL), ACTFL's roadmap for proficiency-oriented language teaching and learning, integrates the three modes of communication—the interpretive (analyzing what is heard, read, or viewed), the presentational (informing, explaining, persuading, or narrating), and the interpersonal modes (negotiating meaning through speaking, signing, or writing)—with a deep investigation of the cultural products and perspectives of the target language population (ACTFL, *n. d.*). Language pedagogy in the 21st century, following the tenets of social constructivism, requires language learners to express themselves, communicate with others, experience and respect other cultures, and use language to interact with what they care about.

It is clear that the instructional, curricular, and collaborative environments language educators purposefully (or unintentionally) establish within their classrooms play a significant role in determining the outcomes their students will experience—outcomes such as their level of language proficiency, intercultural competence, intrinsic motivation for learning, engagement in classroom activities, persistence through difficult challenges, and their overall well-being as young adults. To this end, self-determination theory (SDT) has sought to consolidate this elaborate set of connections by establishing itself as an empirical model for measuring the relationships between classroom and instructional environments, students' perceived levels of support, the internalization of that support, and the various outcomes that can arise from them. And unlike other well-known learning theories and theories of motivation, learner autonomy is central to SDT.

1.1. Self-Determination Theory

Self-determination theory (SDT) is an empirical theory of human behavior and development centered on the social-contextual factors that support or thwart an individual's capacity to flourish (Ryan & Deci, 2017). Three basic psychological needs—autonomy, competence, and relatedness—are integral to this process, as their fulfillment is strongly associated with positive educational outcomes, specifically intrinsic motivation, achievement, engagement (Froiland & Worrell, 2016), persistence (Vallerand, Fortier, & Guay, 1997), creativity (Amabile, 1996), prosocial behaviors (Weinstein & Ryan, 2010), and overall well-being (Chirkov, Ryan, Kim, & Kaplan, 2003). SDT has been applied in general and specific contexts such as education, parenting, sports, workplace, and economic and political systems. Described as both a practical and critical theory, SDT is particularly concerned with how supportive and controlling environments nurture specific motivational orientations ranging from amotivation to extrinsic to intrinsic (Ryan & Deci, 2000).

Intrinsic motivation lies at the heart of the SDT model in education. Niemiec and Ryan (2009) provide an accurate description of SDT's outlook on education and schools: "People are innately curious, interested creatures who possess a natural love of learning and who desire to internalize the knowledge, customs, and values that surround them" (p. 133). For many people, the best teachers growing up challenged them, made them excited for learning, and let them have fun while doing it. Despite the tendency of an individual to assimilate and explore, external pressures and control are regularly subjected on schools, teachers, and their students in an attempt to spur learning,

oftentimes taking the form of carrot-and-stick education policies, standardized testing, and scripted lessons (Au, 2011). Research in education and general settings, however, has demonstrated the catastrophic effects of controlling environments on intrinsic motivation because they are unsupportive of students' basic needs for autonomy, competence, and relatedness (Deci & Ryan, 2002; Ryan & Weinstein, 2009).

1.2. Basic Psychological Needs

Three innate basic psychological needs of SDT are essential for an individual's motivation, growth, and well-being (Ryan & Deci, 2017). Autonomy refers to the perception that the reason for one's behaviors originates from within and that the behavior is voluntary (Ryan & Deci, 2000). In contrast to feelings of independence, "the hallmark of autonomy is instead that one's behaviors are self-endorsed, or congruent with one's authentic interests and values" (Ryan & Deci, 2017, p. 10). Educators can support students' need for autonomy by giving them opportunities to talk, encouraging their effort, acknowledging their perspectives, and making time for independent work (Reeve & Jang, 2006). Autonomy-supportive instruction, however, "is sensitive to and dependent on students' voice and needs" (Reeve, Ryan, Deci, & Jang, 2008, p. 236), so familiarity with students' cultural and learner identities is required before educators implement purposeful autonomy-supportive instruction.

Competence is the "basic need to feel effectance and mastery" (Ryan & Deci, 2017, p. 11) and "refers to the experience of behavior as effectively enacted" (Niemiec & Ryan, 2009, p. 135). Feelings of competence are enhanced when people feel effective in their actions and are diminished with feelings of inadequacy and failure. Educators can foster feelings of competence by giving clear instructions, giving students rationale for their instructional planning choices, and providing positive and constructive feedback (Haerens et al., 2013). The final need, relatedness, "concerns feeling socially connected" (Ryan & Deci, 2017, p. 11), cared for, and respected by other people (Baumeister & Leary, 1995). Fulfillment of relatedness is strengthened when individuals feel a sense of belonging, which includes feeling significant among peers or participating within a group. Relatedness is not a passive construct; fulfillment of relatedness is associated with active contribution to some other social organization or group of people beyond oneself. The need for relatedness is thwarted when one feels disconnected, excluded, or unsafe. Educators can foster feelings of relatedness by being enthusiastic, eager, and putting effort and energy into their teaching (Haerens et al., 2013).

1.3. Review of SDT Research

SDT has been applied comprehensively across a variety of cultures and their particular educational contexts. Tsai, Kunter, Lüdtke, Trautwein, and Ryan (2008) found a relationship between German students' perceived autonomy support from their teachers and their interest levels for their classes, while perceived controlling teacher behavior was associated with decreased interest. Intrinsic motivation has been shown to be a predictor of student achievement and engagement in diverse and homogenous student populations (Froiland & Worrell, 2016). Long-term diminished levels of academic intrinsic motivation can lead to a range of negative outcomes for students, including more anxiety and lower levels of competence, achievement, self-concept, and classroom functioning (Gottfried, Gottfried, Morris, & Cook, 2008). Additionally, intrinsic motivation has been associated with higher levels of conceptual learning (Benware & Deci, 1984). A substantial amount of research has demonstrated the relationship between basic psychological need support and beneficial student outcomes across a range of subject areas and grade levels (Black & Deci, 2000; Hardré & Reeve, 2003; Levesque, Zuehlke, Stanek, & Ryan, 2004; Patall, Dent, Oyer, and Wynn, 2012; see also Ryan & Deci, 2013).

Of the studies that have investigated the theoretical structure of SDT in the context of language learning and teaching, most have included language learners at the post-secondary level. Noels, Clément, and Pelletier (1999) found a relationship between diminished intrinsic motivation and

controlling teachers, and later with perceived autonomy, perceived competence, and persistence in Canadian university students learning a second language (Noels, Pelletier, Clément, & Vallerand, 2000; Noels, 2001). Similarly, Canadian university students learning Japanese as a foreign language who exhibited more self-determined motivational orientations also reported increased competence and relatedness support from their teacher (McEown, Noels, & Saumure, 2014).

These findings are apparent in other countries where English is learned as a foreign language. Somayeh and Takeshi (2017) found that basic need satisfaction predicted EFL (English as a foreign language) learners' intentions to continue with and achievements in out-of-class language learning. Hu and Zhang (2017) found that the implementation of one-year autonomy-supportive action program resulted in postgraduate students' increased basic need satisfaction, intrinsic motivation, and proficiency in English. Dincer and Yesilyurt (2017) found a moderate relationship between Turkish university students' intrinsic motivation for speaking English as a foreign language and their levels of autonomous self-regulation, perceived teacher autonomy support, and overall classroom engagement. Less research, however, has been conducted on the need satisfaction of younger language learners. Oga-Baldwin, Nakata, Parker, and Ryan (2017) found that need-supportive teaching predicted Japanese elementary school English learners' basic need satisfaction and engagement, which further predicted their autonomous motivation. Oga-Baldwin and Nakata (2015) showed students' perception of their teachers' autonomy supportive teaching predicted the satisfaction of their basic needs of autonomy, competence, and relatedness.

The purpose of the current study is to continue the examination of the relationship between basic psychological need support in language classrooms and language learners' intrinsic motivation at the high school (secondary) level in American public schools, where little to no research is available. The present study sought to add to the literature of SDT research by answering the following question: *Do high school language learners' perceptions of their basic psychological need fulfillment (autonomy, competence, relatedness) during classroom learning experiences predict their intrinsic motivation for those experiences?*

2. Method

2.1. Participants

The participants in this study were 156 American high school students (secondary level, grades 9-12) from three public schools in a mid-south state who were enrolled in a foreign language course at the time of the study. Students were enrolled in either a dual-semester Spanish, French, or German foreign language course at one of five levels: 1, 2, 3, 4, or AP (Advanced Placement). Table 1 provides a crosstabulation of participants by language class and level. While Spanish learners make up the largest portion of participants, participants' language levels are more appropriately represented.

Table 1

Crosstabulation of Participants by Foreign Language Class and Level

<i>Language</i>	<i>Level 1</i>	<i>Level 2</i>	<i>Level 3</i>	<i>Level 4</i>	<i>AP</i>	<i>Totals</i>
Spanish	15	0	27	49	17	108
French	0	21	9	0	0	30
German	5	1	6	4	2	18
<i>Totals</i>	20	22	42	53	19	156

2.2 Instruments

This study utilized a two-sided paper survey with three sections which collected both qualitative and quantitative data, including student information, a description of a satisfying or unsatisfying

learning experience, and responses to Likert-type questions about their perceived basic need satisfaction and intrinsic motivation for that learning experience.

Student information. Participants noted the language class in which they were enrolled (e.g., Spanish), the course's level (e.g., Spanish 3), and the school grade they were in at the time (e.g., 11th grade, or junior) as a substitute for age. Participants' gender identities were not collected.

Description of satisfying or unsatisfying learning experience. Students were asked to describe a learning experience from their foreign language class that was either satisfying or unsatisfying to them. Due to the relationship between satisfaction and more positive feelings such as intrinsic motivation, the purpose of the design was to elicit responses representing a wide range of levels of intrinsic motivation and basic need satisfaction. The following prompt was adapted from Jang, Reeve, Ryan, and Kim (2009):

“Consider a recent learning experience in your current foreign language class. What I want you to do is bring to mind a personally [un]satisfying learning experience you had during the first half of this school year in your foreign language class. I am being vague about the definition of a [un]satisfying learning experience on purpose because I want you to use your own definition. Think of [un]satisfying in whatever way makes sense to you. Take a couple of minutes to be sure that you come up with a learning experience that was [un]satisfying to you. In the area below, describe that learning experience in your foreign language class. What was it like? What were you learning? What were you and your classmates required to do? Why was it [un]satisfying to you?”

Basic psychological need fulfillment during experience. Two instruments were used to measure participants' perceptions of their basic psychological need fulfillment and levels of intrinsic motivation: the Intrinsic Motivation Inventory and the Affective-Feeling States scale. The Intrinsic Motivation Inventory (IMI) is a multidimensional measurement device intended to assess participants' subjective experience related to a target activity. The Affective-Feeling States scale (AFS) is “an efficient, nonintrusive, reliable, and valid measure of the three psychological needs that give rise to intrinsic motivation” (Reeve & Sickenius, 1994). In the present study, only two subscales—autonomy and relatedness—were selected from the AFS, while the other three subscales—intrinsic motivation, perceived choice (autonomy), and competence—were adapted from the IMI. Some items were adjusted to meet the context of the methodology. The stem “During my satisfying learning experience,” or “During my unsatisfying learning experience,” preceded each item, depending on which survey variation the participant randomly received. Examples of items included “I participated because I wanted to” (perceived choice), “I felt free to decide for myself what to do” (autonomy), “I was satisfied with my performance” (competence), “I felt emotionally distant to the people around me” (relatedness), and “It did not hold my attention at all” (intrinsic motivation, referred to as interest/enjoyment). Participants rated each item on a scale of 1 to 7 to indicate how true the item was for them, with 1 representing “not true at all” and 7 indicating that it was “very true.”

2.3 Procedure

High school foreign language teachers at the three high schools were contacted at the beginning of the fall 2017 semester (August) and asked if they would allow the researcher to conduct research with their classes. The research review boards for both districts and the principals at the three high schools gave permission for research to be conducted during the fall 2017 semester (August through December). Active parental consent was obtained for all students who completed the survey. Students completed the two-sided paper surveys during a portion of one regularly scheduled foreign language class. Participants completed the open-response section of the survey before answering the Likert items on the second page. Students placed their completed surveys into a

sealed folder to ensure confidentiality. At no time did teachers have access to the students' completed surveys. Forty-two surveys were removed from the analysis due to missing data (either missing open-response section, missing one or more Likert responses, or both), resulting in 156 complete surveys including qualitative and quantitative data.

3. Analysis

3.1 Principal Components Analysis

A principal component analysis (PCA) was conducted for the items comprising the four basic psychological need satisfaction subscales. The purpose of the analysis was to confirm that the subscales for autonomy, perceived choice, competence, and relatedness remained discrete components despite their modifications for use in the context of the present study. Utilizing an oblique rotation allowing for correlated components with a loading cutoff of 0.40, the PCA returned a three-component structure. This three-component structure in which items measuring perceived choice and autonomy load together is not surprising due to the importance of choice in the satisfaction of autonomy. Component eigenvalues ranged from 7.03 to 1.11 and explained 69.4% of the total variance. Table 2 provides the final component matrix for the independent variables. The Kaiser-Meyer-Olkin (KMO) statistics for the set of variables was 0.88, and Bartlett's test of sphericity was also significant, $\chi^2(91) = 1,358.74$, $p < .001$, indicating sampling adequacy and that a factor analysis was appropriate for the data (Yong & Pearce, 2013).

Table 2

Principal Component Analysis for Independent Variables

	C1	C2	C3
Autonomy ($\lambda = 7.03$)			
I believe I had some choice about doing it. ₁	.96		
I took part because I had no choice. ₁ (R)	.85		
I participated because I wanted to. ₁	.79		
I felt like I was doing what I wanted to be doing. ₂	.67		
I felt free to decide for myself what to do. ₂	.57		
I felt like it was not my own choice. ₁ (R)	.51		
I felt free. ₂	.50		
Competence ($\lambda = 1.57$)			
I thought it was something that I couldn't do very well. ₁ (R)		.86	
I thought I was pretty good at it. ₁		.84	
I was satisfied with my performance. ₁		.80	
I felt pretty capable at it after working on it for a while. ₁		.71	
Relatedness ($\lambda = 1.11$)			
I felt like I belonged and the people there cared about me. ₂			.80
I felt emotionally distant to the people around me. ₂ (R)			.75
I felt like I was involved with really close friends. ₂			.74

Note. λ = eigenvalue. C = component. (R) = reverse coded item; ₁ = adapted from the perceived choice subscale from the Intrinsic Motivation Inventory (IMI); ₂ = adapted from the autonomy subscale from the Affective-Feeling States Scale (AFS).

Scales for each component from the PCA were formed by computing the mean of each set of items, resulting in four scales—intrinsic motivation, autonomy, competence, and relatedness—ranging from 1.0 to 7.0 (see Table 3). Scale means ranged from 4.08 to 4.61. Values for skewness and

kurtosis indicated that all variables were normally distributed. Coefficient alphas for the four scales ranged from .71 to .92, in which all measures of internal consistency above .80 are considered good inter-item cohesion. The reliability was lower than desired for the relatedness scale, which will impact the scale's predictive ability.

Table 3

Descriptive Statistics and Scale Reliability for Dependent and Independent Variables

	<i>N</i> _{items}	Min	Max	Mean	SD	Skew	Kurt	<i>a</i>
Intrinsic Motivation	4	1.00	7.00	4.40	1.75	-.26	-1.00	.88
Autonomy	7	1.00	7.00	4.08	1.67	-.08	-1.17	.92
Competence	4	1.00	7.00	4.60	1.52	-.25	-.71	.86
Relatedness	3	1.00	7.00	4.61	1.51	-.26	-.68	.71

Note. *N* = 156. *SD* = standard deviation; *Skew* = skewness; *Kurt* = kurtosis; *a* = coefficient alpha.

4. Results

The magnitude of the correlations between the predictors and the dependent variable ranged from .59 to .82, with correlations between predictors not exceeding .60 (see Table 4). Autonomy, as expected, shared a strong correlation with intrinsic motivation. Moderate to high correlations were expected between the three basic psychological needs due to the strong relationship between them (Korthagen & Evelein, 2016).

Table 4

Correlations Among Intrinsic Motivation and Basic Psychological Needs

	1.	2.	3.	4.
1. Intrinsic Motivation	1.00			
2. Autonomy	.82	1.00		
3. Competence	.60	.60	1.00	
4. Relatedness	.59	.59	.48	1.00

Note. *N* = 156. All correlations significant at $p < .001$

A regression analysis was conducted using the three basic psychological needs as predictors and intrinsic motivation as the criterion variable. The results shown in Table 5 illustrate that the linear combination of the three basic psychological needs significantly predicted students' levels of intrinsic motivation for the in-class experience they described, $R^2 = .694$, $F(3, 152) = 118.351$, $p < .001$. Students' perceived levels of basic need fulfillment or frustration accounted for 69% of the variation in their levels of intrinsic motivation. Variance inflation factors for the independent variables ranged from 1.60 to 1.92 which suggested minimal multicollinearity. No significant interactions effects were present beyond the original model; autonomy \times competence, $\Delta R^2 = .002$, $\Delta F(1, 151) = .775$, $p = .380$; autonomy \times relatedness, $\Delta R^2 = .005$, $\Delta F(1, 151) = 2.380$, $p = .125$; competence \times relatedness, $\Delta R^2 = .003$, $\Delta F(1, 151) = 1.695$, $p = .195$.

Table 5

Results of the Multiple Regression Analysis of Basic Psychological Need Fulfillment on Intrinsic Motivation

	B	β	t	p	F	df	Adj. R ²	SE
(Constant)	.156				118.351	3, 152	.694	.965
Autonomy	.680	.652	10.60	< .001				
Competence	.169	.148	2.60	.01				
Relatedness	.153	.132	2.36	.02				

Note. N = 156. B = unstandardized beta coefficients; β = standardized beta coefficients; Adj. R² = adjusted R-squared; SE = standard error of the estimate.

The standardized coefficients in Table 5 indicate that students' feelings of autonomy were the strongest predictor of their intrinsic motivation, $\beta = .652$, $t(152) = 10.60$, $p < .001$, followed by competence, $\beta = .148$, $t(152) = 2.60$, $p = .01$, and then relatedness, $\beta = .132$, $t(152) = 2.36$, $p = .02$. For every one unit increase in autonomy, a student's intrinsic motivation would increase by just over two-thirds of a point, holding all other variables constant. This increase is lower for one unit increases in competence and relatedness, which would see an increase in intrinsic motivation of .17 and .15 points, respectively. Returning to the question "Do high school language learners' perceptions of their basic psychological need fulfillment (autonomy, competence, relatedness) during classroom learning experiences predict their intrinsic motivation for those experiences?", the results indicate that American high school foreign language students' basic need fulfillment does predict their intrinsic motivation for activities in their foreign language class.

4.1 Themes from Qualitative Data

Based on these results, students' responses to the prompt about their satisfying or unsatisfying learning experiences were examined in order to further explore their perceptions of the reasons for their basic need satisfaction or frustration and their subsequent levels of intrinsic motivation. Quotations were selected from the collection of responses which illustrated the voices of students who were exhibiting the satisfaction or frustration of each of the three basic psychological needs based on general SDT research in education. These quotations were analyzed in order to uncover themes in the data representing students' experiences of autonomy-, competence-, and relatedness-supportive (or thwarting) classroom environments, which are discussed in the following paragraphs. It is important to note that the inclusion of the qualitative data is being used primarily for exploratory and instructional purposes; students' responses varied dramatically in length, depth, content, cohesion, and in how related they were to the original prompt.

Autonomy. Students often described the autonomy satisfaction they experienced when they felt a sense of freedom, when they were given the opportunity to be creative, when they were able to engage with something of personal relevance, and when they felt free of pressure or control. Guidance from the teacher was appreciated when they were still free to choose their own way of completing a task. Students felt pressured when they thought they were being surveilled or expected to comprehend words and phrases in the foreign language too quickly.

"I found this assignment satisfying because it sparked my creativity and let me be as colorful and fun filled as I wanted it to be."

"This year has had less structure and more time to ask questions about small details that will make our day to day conversational speech better. ... It felt so good to casually converse without the pressure of being graded or criticized for improper grammar. I didn't have to beat myself up about what I'd say next because it all felt so natural. My teacher and the environment she has provided makes me want to learn and do the best I can in class."

"It [an oral presentation] was a very brief one during which you had to talk about something that was important to you (a book, song, work of art, etc.). I really enjoyed the opportunity because I was able to talk about something I was familiar with. It was satisfying because it was the best presentation I had ever given."

Competence. Competence satisfaction was exemplified in students' responses when no out-of-control factors affected their performance, when they felt efficient in their learning, when they were able to apply their language in real-world settings, and when they were able to successfully comprehend others in the target language. Competence frustration arose when they felt that the expectations for their performance were unclear, when they believed what they were learning in class would not match what they would experience in the real world, and when they felt as if their time was being wasted. The perception that students were wasting their time in class appeared frequently in their open responses, particularly when describing situations in which they felt their teacher was unprepared for the lesson or when they were assigned "busy work," such as worksheets, book work, or other rote tasks.

"I feel a lot of satisfaction when I pick up a reading in Spanish and I am able to understand from the context all of the words I am unsure about."

"The reason why is because I have some type of experience at home that I can relate in class. I learned more about my culture just by spending some time with my family and converse about the topics in Spanish."

"We were required to make a presentation about what our family ate during Thanksgiving break. It was unsatisfying because we never were able to present those so I basically wasted time that I could have spent with my family making that presentation."

Relatedness. Students described satisfaction of their need for relatedness in situations where they were able to interact with their peers, meet new people, and learn about new perspectives and cultures. Students' needs for relatedness were frustrated when they felt embarrassed and judged by their teacher and/or peers or when they perceived that their teacher was not happy or energetic when teaching. Students' quotations suggested a connection between culture and their classroom community in which peer interaction facilitated the exploration of new cultures. Additionally, even when students were engaged in what they considered to be worthwhile and engaging group tasks, poor relationships between students within a group contributed to their classification of the learning experience as an unsatisfying one.

"At the very beginning of the year I had to talk about myself in Spanish. I felt like the people were judging me and I didn't like that."

"One of the learning experiences that I have found satisfying was the for and against activity. Half of the room to the right is if you are against the given statement. Half of the room to the left is if you agree. When you have chosen your side you have to defend your opinion. Say why you believe you are correct and also provide examples (if possible). With that activity I learned how to listen to other points of view, defend what I believed in, and maybe have an open mind and let myself be persuaded. It was satisfying in the sense that I felt like I was learning a little bit more about my classmates, my teacher, and myself. We can laugh and make jokes but also learn about one another and for sure the subject that we were (are) currently studying."

"They [groupmates] were being grumpy and too cool for school, and slacked off and would not answer any questions or participate, so my unsatisfying experience is the lack of participation from my classmates, who ruined a fun lesson plan."

"I didn't enjoy this activity because it felt like I was being put on the spot, and since I didn't know many of my classmates yet, it was awkward whenever someone got one wrong."

5. Discussion

This study investigated the self-determination theory (SDT) model of basic need satisfaction and intrinsic motivation within the context of American high school foreign language learners. The results demonstrated that when recalling a satisfying or unsatisfying learning experience from their high school foreign language class, students' fulfillment or thwarting of their basic psychological needs for autonomy, competence, and relatedness was strongly related to their intrinsic motivation for that experience. In agreement with previous research supporting the theoretical model of SDT and its causal structure, the findings of this study suggest that when teachers of high school foreign language learners are more autonomy-, competence-, and relatedness-supportive in their instruction and their interactions with students, their students will experience higher levels of intrinsic motivation. In this study, students who described satisfying learning experiences tended to report higher levels of autonomy, competence, and relatedness fulfillment, as well as higher levels of intrinsic motivation, while descriptions of unsatisfying experiences were mostly associated with lower levels of intrinsic motivation for the activity and more frequent basic needs frustration.

Need-supportive teaching can be developed through professional development and training. In a study by Reeve, Jang, Carrell, Barch, and Jeon (2004), teachers trained in autonomy-support demonstrated significantly more autonomy-supportive teaching behaviors than control group teachers. This finding was confirmed in a follow-up meta-analysis of 19 studies by Su and Reeve (2011) who found a large effect size between teachers in training and control groups. Additionally, need supportive teaching thrives when teachers feel autonomously motivated to teach (Roth, Assor, Kanat-Maymon, & Kaplan, 2006) and unpressured by the measures of accountability (Pelletier, Séguin-Lévesque, & Legault, 2002) that are so common in early 21st century American public schools (Tienken, 2017).

5.1 Recommendations for Language Educators

Despite the abundance of research and strategies for need support in education in general, few specific recommendations have been provided to foreign language educators for how to more effectively support the basic need satisfaction of their language learners. Some who have written about SDT in terms of language pedagogy (Davis & Bowles, 2018; Jones, Llacer-Arrastia, & Newbill, 2009; McEown, Noels, & Saumure, 2014) have extrapolated the general findings from SDT research and have contributed descriptions of autonomy-, competence-, and relatedness-supportive strategies that can be used with secondary foreign language learners. As seen in the following strategies, the three basic psychological needs of SDT are strongly connected to each other.

Autonomy support. To support language learners' needs for autonomy in class, Davis and Bowles (2018) suggest providing students with choice and freedom of language expression. Language teachers should immerse their students in the target language, as immersion lends itself to students discussing topics that are interesting to them. This is supported by findings from Jones et al. (2009), where students were given prompts for activities that encouraged students to discuss topics and create products that were personally relevant to them. One student in a study by McEown et al. (2014) described, "Instead of just telling us the answers or talking to the class constantly, he gets us to think about what we have to say and then talk to our fellow classmates. Sensei (teacher) gets us to think instead of just listen" (p. 10). Additionally, freedom of expression and choice of language are essential to the three modes of communication in the World Readiness Standards for Language Learning, the standards advocated for by ACTFL.

Competence support. Language educators can focus on meaning over form, provide students with authentic language experiences, and give students consistent constructive feedback to enhance language learners' feelings of competence (Davis & Bowles, 2018). Positive and constructive feedback not only helps make students feel as if they were effective in their communication, but

makes them truly effective in their communication because the teacher's authentic response will have complimented the student's original language output. Students' feelings of autonomy are also connected to their need for competence, as discussions about familiar topics encourage a focus on meaning over form, leading to effective and more efficient communication. As one student explains, "Speaking in Spanish can be difficult but when you're talking about yourself and the things you like it's easier" (Jones et al., 2009, p. 12).

Relatedness support. To support language learners' feelings of relatedness, foreign language teachers should provide students with a safe environment and implement the best practices of culturally responsive pedagogy in their classrooms (Davis & Bowles, 2018). Culturally responsive pedagogy affirms students' cultural identities by putting them at the center of instruction. In an activity in which students used Play-Doh to elicit language production (Jones et al., 2009), students descried, "It really allowed classmates to get to know each other in a casual and friendly way. If partners had only interviewed each other without the Play-Doh, they wouldn't have learned such original, deep things about each other" (p. 9), "I also like learning about others and discovering things I have in common" (p. 12), and "I enjoyed learning about my classmates—lots of interesting things I never would have known or guessed" (p. 12).

5.2 Further Research

Further research in the areas of SDT and language pedagogy should investigate the effectiveness of specific instructional and curricular interventions that enhance and thwart language learners' feelings of autonomy, competence, relatedness, and the outcomes they bring about. While the effectiveness of generalized strategies and strategies specific to other content areas has been previously examined, there remains a void of information about empirically-validated autonomy-, competence-, and relatedness-supportive practices for language educators. These would undoubtedly be beneficial to pre-service and practicing language teachers because they would help bridge the often unnavigable gap between theory and practice.

Because persistence is a documented outcome of basic need satisfaction and intrinsic motivation, SDT research may be a powerful tool for advocating for the study of foreign languages. In a recent report by the Modern Languages Association (Looney & Lusin, 2018), post-secondary enrollments in foreign language courses dropped to 7.5% at the end of 2016, and K-12 foreign language enrollments were at only 19.7% at the end of the 2014-15 school year (American Councils for International Education, 2017). Research should investigate which motivational orientations and classroom environments predict high school and university students' reasons for choosing to enroll in language courses and continue their study of language. Such findings may assist in recruiting and retaining more foreign language learners and teachers.

Additionally, research methods for examining these relationships should not be confined to quantitative data and statistical analyses. Interviews with students, particularly repeated and longitudinal ones, about their experiences learning a foreign or second language would bring about much richer data demonstrating the effects of teachers' instructional, curricular, and emotionally-supportive classroom environments on students' language proficiency, attitudes toward language, beliefs about other cultures, persistence, career plans, and overall growth (see Perry, Brenner, Collie & Hofer, 2015). As described by Wisniewski et al. (2018), "the survey self-report methods widely used in SDT research limit participants' responses to researcher-defined constructs. And by potentially denying participants the ability to choose responses they fully endorse, such research methods deny participants autonomy and voice for the sake of expedience" (p. 5).

Finally, future research should explore the meaning and applications of a need-supportive language curriculum. Considering SDT is described not just as a practical, but critical theory which seeks to "evaluate all environments with regard to how they support or thwart basic psychological need satisfactions" (Ryan & Deci, 2017, p. 564), educators must reflect on how their language curriculum is aligned to move beyond the classroom and help satisfy the basic psychological needs

of those in their community, as well as include topics which examine oppressive systems that are uncondusive to the autonomous behaviors of the people living within them.

References

- Amabile, T. M. (1996). *Creativity in context*. Boulder, CO: Westview Press, Inc.
- American Councils for International Education. (2017). *The National K-16 foreign language enrollment survey report*. Retrieved from <https://www.americancouncils.org/sites/default/files/FLE-report.pdf>
- American Council on the Teaching of Foreign Languages (ACTFL). (n. d.) *World-readiness standards for language learning*. Retrieved from <https://www.actfl.org/sites/default/files/publications/standards/World-ReadinessStandardsforLearningLanguages.pdf>
- Au, W. (2011). Teaching under new Taylorism: High-stakes testing and the standardization of the 21st century curriculum. *Journal of Curriculum Studies*, 43(1), 25-45. <https://doi.org/10.1080/00220272.2010.521261>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman and Company.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529. <http://psycnet.apa.org/doi/10.1037/0033-2909.117.3.497>
- Benware, C. A., & Deci, E. L. (1984). Quality of learning with an active versus passive motivational set. *American Educational Research Journal*, 21(4), 755-765. <https://doi.org/10.3102%2F00028312021004755>
- Black, A. E., & Deci, E. L. (2000). The effects of student self-regulation and instructor autonomy support on learning in a college-level natural science course: A self-determination theory perspective. *Science Education*, 84(6), 740-756. [https://doi.org/10.1002/1098-237X\(200011\)84:6%3C740::AID-SCE4%3E3.0.CO;2-3](https://doi.org/10.1002/1098-237X(200011)84:6%3C740::AID-SCE4%3E3.0.CO;2-3)
- Chirkov, V., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology*, 84(1), 97-110. <http://psycnet.apa.org/doi/10.1037/0022-3514.84.1.97>
- Davis, W. S., & Bowles, F. (2018). Empowerment and intrinsic motivation: A self-determination theory approach to language teaching. *CSCTFL Report*, 15, 1-19. Retrieved from <https://csctfl.wildapricot.org/resources/Documents/2018Report/CSCTFL%20Report%202018.pdf>
- Deci, E. L., & Ryan, R. M. (2002). The paradox of achievement: The harder you push, the worse it gets. In J. Aronson (Ed.), *Improving academic achievement: Impact of psychological factors on education*. (pp. 61-87). San Diego, CA: Academic Press. <https://doi.org/10.1016/B978-012064455-1/50007-5>
- Dincer, A., & Yesilyurt, S. (2017). Motivation to speak English: A self-determination theory perspective. *PASAA*, 53, 1-25. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1153672.pdf>
- Froiland, J. M., & Worrell, F. C. (2016). Intrinsic motivation, learning goals, engagement, and achievement in a diverse high school. *Psychology in the Schools*, 53(3), 321-336. <https://doi.org/10.1002/pits.21901>
- Gottfried, A. E., Gottfried, A. W., Morris, P. E., & Cook, C. R. (2008). Low academic intrinsic motivation as a risk factor for adverse educational outcomes: A longitudinal study from early childhood through early adulthood. In C. Hudley & A. E. Gottfried (Eds.), *Academic motivation and the culture of school in childhood and adolescence*. (pp. 36-39). Oxford, UK: Oxford. <https://doi.org/10.1093/acprof:oso/9780195326819.003.0003>
- Haerens, L., Aelterman, N., Van den Berghe, L., De Meyer, J., Soenens, B., & Vansteenkiste, M. (2013). Observing physical education teachers' need-supportive interactions in classroom settings. *Journal of Sport and Exercise Psychology*, 35(1), 3-17. <https://doi.org/10.1123/jsep.35.1.3>
- Hardré, P. L., & Reeve, J. (2003). A motivational model of rural students' intentions to persist in, versus drop out of, high school. *Journal of Educational Psychology*, 95(2), 347-356. <http://dx.doi.org/10.1037/0022-0663.95.2.347>
- Hu, P., & Zhang, J. (2017). A pathway to learn autonomy: A self-determination theory perspective. *Asia Pacific Education Review*, 18(1), 147-157. <https://doi.org/10.1007/s12564-016-9468-z>
- Jang, H., Reeve, J., Ryan, R. M., & Kim, A. (2009). Can self-determination theory explain what underlies the productive, satisfying learning experiences of collectivistically oriented Korean students? *Journal of Educational Psychology*, 101(3), 644-661. <http://psycnet.apa.org/doi/10.1037/a0014241>

- Jones, B. D., Llacer-Arrastia, S., & Newbill, P. B. (2009). Motivating foreign language students using self-determination theory. *Innovation in Language Learning and Teaching*, 3(2), 171-189. <https://doi.org/10.1080/17501220802358210>
- Korthagen, A. J., & Evelein, F. G. (2016). Relations between student teachers' basic needs fulfillment and their teaching behavior. *Teaching and Teacher Education*, 60, 234-244. <https://doi.org/10.1016/j.tate.2016.08.021>
- Levesque, C., Zuehlke, A. N., Stanek, L. R., & Ryan, R. M. (2004). Autonomy and competence in German and American university students: A comparative study based on self-determination theory. *Journal of Educational Psychology*, 96(1), 68-84. <http://psycnet.apa.org/doi/10.1037/0022-0663.96.1.68>
- Looney, D., & Lusin, N. (2018). *Enrollments in languages other than English in United States institutions of higher education, summer 2016 and fall 2016: Preliminary report*. New York, NY: Modern Language Journal. Retrieved from <https://www.mla.org/content/download/83540/2197676/2016-Enrollments-Short-Report.pdf>
- McEown, M. S., Noels, K. A., & Saumure, K. D. (2014). Students' self-determined and integrative orientations and teachers' motivational support in a Japanese as a foreign language context. *System*, 45, 227-241. <https://doi.org/10.1016/j.system.2014.06.001>
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education*, 7(2), 133-144. <https://doi.org/10.1177%2F1477878509104318>
- Noels, K. A. (2001). Learning Spanish as a second language: Learners' orientations and perceptions of their teachers' communication style. *Language Learning*, 51(1), 107-144. <https://doi.org/10.1111/0023-8333.00149>
- Noels, K. A., Clément, R., & Pelletier, L. G. (1999). Perceptions of teachers' communicative style and students' intrinsic and extrinsic motivation. *The Modern Language Journal*, 83(1), 23-34. <https://doi.org/10.1111/0026-7902.00003>
- Noels, K. A., Pelletier, L. G., Clément, R., & Vallerand, R. J. (2000). Why are you learning a second language? Motivational orientations and self-determination theory. *Language Learning*, 50(1), 57-85. <https://doi.org/10.1111/1467-9922.53223>
- Oga-Baldwin, Q. W. L., & Nakata, Y. (2015). Structure also supports autonomy: Measuring and defining autonomy-supportive teaching in Japanese elementary foreign language classes. *Japanese Psychological Research*, 57(3), 167-179. <https://doi.org/10.1111/jpr.12077>
- Oga-Baldwin, Q. W. L., Nakata, Y., Parker, P., & Ryan, R. M. (2017). Motivating young language learners: A longitudinal model of self-determined motivation in elementary school foreign language classes. *Contemporary Educational Psychology*, 49, 140-150. <https://doi.org/10.1016/j.cedpsych.2017.01.010>
- Patall, E. A., Dent, A. L., Oyer, M., & Wynn, S. R. (2012). Student autonomy and course value: The unique and cumulative roles of various teacher practices. *Motivation and Emotion*, 37(1), 14-32. <http://psycnet.apa.org/doi/10.1007/s11031-012-9305-6>
- Pelletier, L. G., Séguin-Lévesque, C., & Legault, L. (2002). Pressure from above and pressure from below as determinants of teachers' motivation and teaching behaviors. *Journal of Educational Psychology*, 94(1), 186-196. <http://psycnet.apa.org/doi/10.1037/0022-0663.94.1.186>
- Perry, N. E., Brenner, C., Collie, R. J., & Hofer, G. (2015). Thriving on challenge: Examining one teacher's view on sources of support for motivation and well-being. *Exceptionality Education International*, 25(1), 6-34. Retrieved from ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1146&context=eei
- Reeve, J., & Jang, H. (2006). What teachers say and do to support students' autonomy during a learning activity. *Journal of Educational Psychology*, 98(1), 209-218. <http://psycnet.apa.org/doi/10.1037/0022-0663.98.1.209>
- Reeve, J., & Sickenius, B. (1994). Development and validation of a brief measure of the three psychological needs underlying intrinsic motivation: The AFS scales. *Educational and Psychological Measurement*, 54, 506-515. <https://doi.org/10.1177%2F0013164494054002025>
- Reeve, J., Jang, H., Carrell, D., Barch, J., & Jeon, S. (2004). Enhancing high school students' engagement by increasing their teachers' autonomy support. *Motivation and Emotion*, 28(2), 147-169. <https://doi.org/10.1023/B:MOEM.0000032312.95499.6f>
- Reeve, J., Ryan, R. M., Deci, E. L., & Jang, H. (2008). Understanding and promoting autonomous self-regulation: A self-determination theory perspective. In D. H. Schunk & B. J. Zimmerman (Eds.), *Motivation and self-regulated learning: Theory, research, and applications*. (pp. 223-244). New York, NY: Taylor & Francis Group, LLC.
- Roth, G., Assor, A., Kanat-Maymon, Y., & Kaplan, H. (2006). Assessing the experience of autonomy in new cultures and contexts. *Motivation and Emotion*, 30(4), 365-376. <https://doi.org/10.1007/s11031-006-9052-7>

- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78. Retrieved from https://selfdeterminationtheory.org/SDT/documents/2000_RyanDeci_SDT.pdf
- Ryan, R. M., & Deci, E. L. (2013). Toward a social psychology of assimilation: Self-determination theory in cognitive development and education. In B. Sokol, F. Grouzet, & U. Müller (Eds.), *Self-regulation and autonomy: Social and developmental dimensions of human conduct*. (pp. 191-207). New York, NY: Cambridge University Press. <https://doi.org/10.1017/CBO9781139152198.014>
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York, NY: The Guilford Press.
- Ryan, R. M., & Weinstein, N. (2009). Undermining quality teaching and learning: A self-determination theory perspective on high-stakes testing. *Theory and Research in Education*, 7(2), 224-233. <https://doi.org/10.1177%2F1477878509104327>
- Skinner, B. F. (1971). *Beyond freedom & dignity*. Harmondsworth, England: Penguin Books.
- Somayeh, F., & Takeshi, O. (2017). A self-determination theory approach to technology-enhanced out-of-class language learning intention: A case of Japanese EFL learners. *International Journal of Research Studies in Language Learning*, 6(4), 53-64. <http://doi.org/10.5861/ijrsl.2016.1607>
- Su, Y.-L., & Reeve, J. (2011). A meta-analysis of the effectiveness of intervention programs designed to support autonomy. *Educational Psychology Review*, 23(1), 159-188. <https://doi.org/10.1007/s10648-010-9142-7>
- Tienken, C. H. (2017). *Defying standardization: Creating curriculum for an uncertain future*. Lanham, MA: Rowman & Littlefield.
- Tsai, Y.-M., Kunter, M., Lüdtke, O., Trautwein, U., & Ryan, R. M. (2008). What makes lessons interesting? The role of situational and individual factors in three school subjects. *Journal of Educational Psychology*, 100(2), 460-472. <http://psycnet.apa.org/doi/10.1037/0022-0663.100.2.460>
- Vallerand, R. J., Fortier, M. S., & Guay, F. (1997). Self-determination and persistence in a real-life setting: Toward a motivational model of high school dropout. *Journal of Personality and Social Psychology*, 72(5), 1161-1176. Retrieved from https://selfdeterminationtheory.org/SDT/documents/1997_VallerandFortierGuay_JPSP.pdf
- Weinstein, N., & Ryan, R. M. (2010). When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *Journal of Personality and Social Psychology*, 98(2), 222-244. <https://doi.org/10.1037/a0016984>
- Wisniewski, T., Sohel, S., Perry, N. E., White, C., Green, C., Shapka, J. D., & Elder, A. F. (2018). Supporting students through role redefinition: A self-determination theory perspective. *Education as Change*, 22(1), 1-23. <https://doi.org/10.25159/1947-9417/3700>
- Woolfolk, A. (2016). *Educational psychology (13th. Ed)*. Boston, MA: Pearson.
- Yong, A. G., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in Quantitative Methods for Psychology*, 9(2), 79-94. <http://dx.doi.org/10.20982/tqmp.09.2.p079>