

Intrinsic Motivation and Student Engagement in Classroom Learning Environment in A Selected School in China: Towards Classroom-Enhanced Learning Program



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ABSTRACT: This descriptive quantitative research assessed the intrinsic motivation factors in classroom learning environment in a selected school in China in terms of autonomy, competence and relatedness; and learning engagement in terms of behavioral, cognitive and emotional. The respondents are the students at the School of Tourism of Changchun University Quota sampling was applied in the selection of the respondents. Data interpretation indicated that the students' overall motivational experience is positive and they generally feel motivated to engage in the learning process, driven by the opportunities for autonomy, the sense of competence, and the relationships they have in the classroom. The overall engagement score is positive, indicating that most students perceive themselves as engaged in their learning, combining efforts across the emotional, cognitive, and behavioral dimensions. The correlation analysis revealed that intrinsic motivation and engagement are closely interconnected, with competence playing a crucial role in fostering active participation and enthusiasm. The findings emphasize the need for targeted interventions to strengthen intrinsic motivation and engagement, particularly through strategies that address specific course-related challenges and capitalize on the strengths of various motivational dimensions.

KEYWORDS: intrinsic motivation, student engagement, classroom learning environment

INTRODUCTION

The relationship between intrinsic motivation and student engagement is a critical component in educational research and practice, as these factors significantly influence the quality of classroom learning experiences. In the context of Chinese schools, which often focus on rigorous academic standards, understanding how intrinsic motivation impacts student engagement is particularly important. This study explores the role of intrinsic motivation in fostering student engagement in a selected school in China, with an emphasis on the impact of a Classroom-Enhanced Learning Program (CELP).

Promoting student participation in the classroom remains a persistent difficulty in today's educational system (Fernandez & Marcelo, 2024). Recent research suggests that students' motivation is declining, which may impair their learning outcomes by causing them to participate less in class activities. The concept of motivation is multidisciplinary and encompasses students' thoughts, feelings, and behaviors that impact their involvement in class, attitude toward tasks, and emotional control (Fernandez & Marcelo, 2024). Declining school interest and participation highlight the need to investigate how motivation affects classroom engagement. Motivation is crucial in determining how students behave and perform in class because it influences their feelings, ideas, and physical engagement. Teachers must comprehend how motivation and engagement are related to create interventions that foster a positive learning environment (Fredricks et al., 2015).

Researchers and practitioners are particularly concerned about learner engagement in classroom learning environments, which is defined as learners' active participation in learning activities. Examining strategies for teachers to encourage student involvement in a classroom learning environment is crucial, as student engagement is critical to academic performance. Teachers are the primary source of motivation for learning in their students; hence teaching motives are a crucial component. Promoting active learning through teaching motives may be a successful teaching method in light of the identified difficulties in learning (Li et al., 2022). As cited in the study of Li et al. (2022), engagement and motivation are inextricably linked. Students' energy and desire to learn are known as motivation, while their hard work and efficiency are known as engagement. This definition emphasizes the efforts and psychological involvement made by pupils. According to several academics, engagement and motivation are related. Private psychological variables make up the former, whereas publicly observable behaviors are the focus of the latter. Engagement is defined as active participation in the learning process or assigned activities as opposed to indifference, apathy, or surface-level involvement.

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College students' motivation and engagement have a predictive effect on their school success and adaptive development, such as academic performance and subjective well-being (Skinner et al., 2020). Nonetheless, evidence shows that college students' motivation and class engagement tend to decline after they enter university (Zhoc et al., 2021). According to Cherry (2023), the benefits of incentives are acknowledged by intrinsically driven individuals, yet they are insufficient to sustain their motivation. Stated differently, individuals will persist in performing tasks as long as they are interested in them or believe in them, regardless of the payoff.

A student's academic progress, cognitive growth, and the quality of their education are all influenced by their level of engagement (Zhoc et al., 2021). One of the most important metrics for gauging learners' levels of engagement is the extent of participation in academically focused activities. However, using only digital technology does not significantly improve academic performance. The key factor is the effective pedagogical and technological integration, which makes instructors crucial in encouraging students to be more involved (Bond & Bedenlier, 2019).

The energy and effort students put forth within their learning community are discernible by a variety of behavioral, cognitive, or affective signs. Numerous structural and internal factors, such as the interactions between relationships, learning activities, and the learning environment, shape this engagement. Students are more inclined to channel their energy back into their learning when they feel empowered and involved in their learning community, resulting in both short- and long-term positive effects (Bond & Bedenlier, 2019).

According to Bond and Bedenlier (2019) and Zhoc et al. (2021), behavioral engagement involves students' time, perseverance in learning activities, and participation efforts. Indicators include active behavior (e.g., time spent on tasks and class discussions), involvement in academic tasks (e.g., timely cooperation and attention), and participation in extracurricular activities (Garrison et al., 2000). Cognitive engagement, on the other hand, is correlated with self-regulation, learning objectives, and intrinsic motivation (Alioon & Delialioğlu, 2019). Self-regulation and the proficient application of deep learning techniques often characterize this dimension. Positive self-perceptions, self-efficacy, and deep learning focus are markers of cognitive engagement (Bedenlier, 2019).

Emotional engagement is linked to positive responses to the learning environment, classmates, and teachers, as well as a sense of interest and belonging. Motivation fosters enjoyment, interest, and positive interactions with peers and teachers, which are essential for emotional engagement (Bond & Bedenlier, 2019). However, classroom learning can pose challenges for instructors, who must adapt their teaching designs to maintain standards (Bülow, 2022). Despite these challenges, classroom learning can foster closer relationships among students and teachers, which supports active participation (Bülow, 2022).

Intrinsic motivation, or the inner desire to engage in activities for their own sake, is a critical factor in successful learning. Based on the Self-Determination Theory (SDT) proposed by Deci and Ryan (1985), intrinsic motivation thrives when basic psychological needs for relatedness, competence, and autonomy are met. This hypothesis has significant implications for education, particularly in classroom learning environments where learner engagement poses challenges. This study was undertaken to assess the intrinsic motivation and engagement of students in classroom learning environments, with the end view of presenting a Classroom-Enhanced Learning Program.

I. METHODOLOGY

The researcher employed descriptive quantitative research to describe and assess the assessment on the intrinsic motivation and engagement of student in classroom learning environment in a university is located in Changchun City, Jilin Province, known as the "Spring City of the North". Quota sampling method was applied in the selection of the 200 student-respondents.

The main tool used in the data collection was a researcher-made questionnaire culled from related literature and studies which was validated by the experts. The research instrument consists of three (3) parts. First part pertains to the profile of the respondents such as age, sex, course, and year level; while the second part is the assessment on the intrinsic motivation in classroom learning environment relative to autonomy, competence and relatedness. Part 3 pertains to the assessment of the student-respondents on their learning engagement in terms of behavioral, cognitive, and emotional engagement. Each of the variables of intrinsic motivation and learning engagement will have five (5) indicator statements.

The data gathered in this study was statistically treated using the following: Frequency, Average Weighted Mean (AWM). The computed weighted means were interpreted using the following scales:

Scale	Range	Verbal Interpretation
4	3.26 – 4.00	Strongly Agree (SA)/Highly Evident (HE)/Highly Motivated
3	2.51 – 3.25	Agree (A)/Evident(E)/Motivated(M)
2	1.76 – 2.50	Disagree (DA)/Slightly Evident (SE)/Slightly Motivated
1	1.00 – 1.75	Strongly Disagree (SD)/Not Evident (NE)/Not Motivated (NM)

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To test hypothesis of non-significance in the assessment of the student- respondents on the variables of the intrinsic motivation on classroom learning environment and student engagement, ANOVA and T-test was used.

The hypothesis of no significant difference was accepted or rejected using 0.05 as level of significance.

To determine the coefficient of correlation between the intrinsic motivation factors and learning engagement, Pearson r was used.

In the conduct of the study the researcher considered the following ethical considerations: Respondents were briefed fully on the purpose of the conduct of the research; It was made very clear to the respondents that participation is voluntary. Data collection and analysis were described clearly to them so that they will know what they are doing. Respondents were given informed consent letter. Confidentiality of the information was maintained by protecting the anonymity of the respondents.

It was made clear to the respondents that taking part in the survey will not put them in danger or cause difficulty, nor will it influence their class standing. Furthermore, respondent may quit at any moment with no repercussions. If the study is completed, the researcher will be pleased to share the results with the respondents.

II. RESULTS AND DISCUSSION

Table 1. Profile of Respondents

Variable	Category	Frequency	Percentage
Sex	Male	137	68.5%
	Female	63	31.5%
Course	Hospitality	39	19.5%
	Travel and Tourism	52	26.0%
	Event Planning	54	27.0%
	Cultural and Heritage Tourism	55	27.5%
Year Level	1	49	24.5%
	2	48	24.0%
	3	62	31.0%
	4	41	20.5%

The demographic profile of the respondents, as presented in Table 1, reveals insights into their distribution across various categories of sex, course enrollment, and year level. The respondents were predominantly male, comprising 68.5% (137 individuals) of the sample, while females constituted 31.5% (63 individuals). This indicates a significant gender disparity among the respondents, suggesting potential implications for gender representation within the study's context.

Regarding the academic courses pursued by the respondents, the data demonstrate a relatively balanced distribution. Cultural and Heritage Tourism students represented the largest proportion, accounting for 27.5% (55 individuals), closely followed by Event Planning at 27.0% (54 individuals). Students enrolled in Travel and Tourism made up 26.0% (52 individuals), while those in Hospitality comprised the smallest segment at 19.5% (39 individuals). This even representation across course categories suggests a diverse range of academic specializations, potentially enriching the study with varied perspectives.

The year-level distribution highlights a concentration of respondents in their third year, comprising 31.0% (62 individuals), while first-year and second-year students were nearly equal at 24.5% (49 individuals) and 24.0% (48 individuals), respectively. Fourth-year students were the least represented, constituting 20.5% (41 individuals). This distribution indicates that the majority of respondents were in the intermediate stages of their academic journey, possibly reflecting a cohort with sufficient academic experience to provide informed responses.

Overall, the demographic data provide a comprehensive overview of the respondents, showcasing a predominance of male students, an equitable representation across courses, and a majority clustered in the middle year levels of their academic programs. These characteristics are essential for contextualizing the subsequent analyses and interpretations of the study's findings.

Table 2. Summary of Mean Values on Assessment of the Student-Respondents on their Intrinsic Motivation in Classroom Learning Environment

Variable	Weighted Mean	Standard Deviation	Qualitative Description	VI	Rank
Autonomy	2.93	.4285	Agree	Motivated	3
Competence	2.947	.4601	Agree	Motivated	2
Relatedness	3.007	.4283	Agree	Motivated	1
Overall Mean	2.961	.4389	Agree	Motivated	

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The overall mean score of 2.961 falls within the "Agree" range, suggesting that on average, students are motivated in the classroom due to the factors of autonomy, competence, and relatedness. The relatively small standard deviation indicates that the overall perception of intrinsic motivation is relatively consistent among the students in the sample.

Qualitative Description: The students' overall motivational experience is positive and they generally feel motivated to engage in the learning process, driven by the opportunities for autonomy, the sense of competence, and the relationships they have in the classroom.

Relatedness emerges as the most significant factor in students' intrinsic motivation in the classroom, suggesting that students highly value the emotional and social connections with their peers and teachers.

Competence is also important, with students feeling motivated by their ability to succeed and demonstrate mastery, though it is slightly less influential than relatedness.

Autonomy plays a role in motivating students, but it is ranked third in importance, indicating that while students appreciate the freedom to make choices in their learning, it may not be as central to their motivation as competence and relatedness.

The overall findings suggest a strong sense of motivation across the sample, with students agreeing that they are motivated by these three dimensions—autonomy, competence, and relatedness—in the classroom learning environment.

Table 3. Significant Difference in the assessment of intrinsic motivation factors when demographic profile is considered

Profile		Autonomy	Competence	Relatedness
Sex	T-value	.201	2.696	.021
	Sig	.655	.102	.885
	Decision	Accepted	Accepted	Accepted
	Interpretation	Not significant	Not significant	Not Significant
Course	F-Value	.811	5.904	2.484
	Sig.	.489	.001	.062
	Decision	Accepted	Rejected	Accepted
	Interpretation	Not significant	Significant	Not significant
Year Level	F-Value	1.598	.830	.027
	Sig.	.191	.479	.994
	Decision	Accepted	Accepted	Accepted
	Interpretation	Not significant	Not significant	Not significant

Sex. The findings reveal that sex does not significantly impact students' intrinsic motivation across autonomy, competence, or relatedness dimensions. Both male and female respondents demonstrate similar perceptions of their motivational experiences, highlighting an equitable influence of the classroom learning environment on intrinsic motivation irrespective of gender.

Research rooted in Self-Determination Theory (SDT) suggests that intrinsic motivation is primarily influenced by a student's perception of autonomy (control over their actions), competence (feeling skilled and capable), and relatedness (connections with others). Several studies in recent years (2020–2024) found that these three basic psychological needs influence motivation in similar ways for both male and female students.

Vallerand et al. (2021) noted that gender does not significantly alter the basic psychological needs satisfaction in students, suggesting that classroom strategies promoting autonomy, competence, and relatedness benefit all students similarly.

Course. The analysis of differences in the assessment of intrinsic motivation in the classroom learning environment based on the respondents' course reveals mixed results, with significant differences observed in certain dimensions while others show no statistically significant variation. Specifically, competence and overall intrinsic motivation demonstrate significant differences, while autonomy and relatedness do not.

Deci & Ryan (1985) argue that competence satisfaction is one of the strongest predictors of intrinsic motivation, especially when tasks are appropriately challenging and provide opportunities for skill development. In contexts where students feel competent, their motivation is more likely to be intrinsic, which can explain the higher motivation levels found in Event Planning students if their coursework is structured to enhance feelings of mastery.

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Vallerand et al. (2021) found that students in courses with a clear structure and opportunities for skill application (such as Event Planning) report higher perceived competence and intrinsic motivation. This supports the idea that the course structure and delivery significantly influence students' feelings of competence.

Year Level. The analysis of differences in the assessment of intrinsic motivation in the classroom learning environment based on year level reveals no statistically significant variations across all dimensions—autonomy, competence, relatedness, and overall intrinsic motivation. The decision to accept the null hypothesis (Ho) for each dimension indicates that students' perceptions of their intrinsic motivation are consistent regardless of their academic year level

Vansteenkiste et al. (2022) found that students in different academic years (undergraduate, graduate, etc.) report similarly high levels of intrinsic motivation when their basic needs are met. The study concluded that the type of educational context (autonomy-supportive, competence-enhancing, etc.) can help maintain stable motivation levels regardless of year level, reinforcing the idea that intrinsic motivation can be consistent across different stages of academic progression. In addition, Reich and Flanagan (2010) highlight that although students' academic goals and challenges evolve as they progress in their education, intrinsic motivation is primarily driven by how well their learning environment supports their autonomy, competence, and relatedness. Their findings suggest that intrinsic motivation remains consistent across different academic year levels, especially when courses maintain a focus on fostering these basic psychological needs.

Table 4. Summary of Mean Values on the Assessment of the Student-Respondents on their Learning Engagement in Classroom Learning Environment

Variable	Weighted Mean	Standard Deviation	Qualitative Description	Verbal Interpretation	Rank
1. Behavioral	2.889	.6047	Agree	Engaged	3
2. Emotional	2.987	.3919	Agree	Engaged	1
3. Cognitive	2.919	.4488	Agree	Engaged	2
Overall Mean	2.931	.4818	Agree	Engaged	

The overall mean score of 2.931 indicates that students generally report being engaged across all dimensions of learning—behaviorally, emotionally, and cognitively. The standard deviation of 0.4818 indicates moderate variability in the overall engagement, suggesting that while most students feel engaged, there are some differences in the level of engagement they experience.

The overall level of engagement is described as "Agree" and "Engaged", which reflects that the majority of students are actively participating in their learning, emotionally involved, and making an effort to understand the material.

Emotional Engagement is the strongest dimension of engagement, with students feeling most enthusiastic, interested, and emotionally connected to their learning. This suggests that students' positive feelings about the content and classroom environment play a significant role in their overall engagement.

Cognitive Engagement is also reported as moderately high, with students putting effort into understanding and mastering the content. However, it ranks second, indicating that while cognitive engagement is important, it may be somewhat less perceived than emotional engagement.

Behavioral Engagement is the least strongly perceived dimension of engagement. While students are involved in class activities and exert effort, the level of participation and effort may vary more widely across individuals, as reflected in the larger standard deviation. This suggests that some students might find it harder to engage behaviorally in certain classroom settings or tasks.

The overall engagement score is positive, indicating that most students perceive themselves as engaged in their learning, combining efforts across the emotional, cognitive, and behavioral dimensions.

Table 5. Significant Difference in the Assessment of Intrinsic Motivation Factors when Demographic Profile is Considered

Profile		Behavioral	Emotional	Cognitive
Sex	T-value	.152	.001	.760
	Sig	..697	.971	.384
	Decision	Accepted	Accepted	Accepted
	Interpretation	Not significant	Not significant	Not Significant
Course	F-Value	3.875	3.031	.915
	Sig.	.010	.031	.435

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	Decision	Rejected	Rejected	Accepted
	Interpretation	Significant	Significant	Not significant
Year Level	F-Value	.130	.881	.465
	Sig.	.942	.452	.707
	Decision	Accepted	Accepted	Accepted
	Interpretation	Not significant	Not significant	Not significant

All three dimensions (Behavioral, Emotional, Cognitive) show no significant differences based on year level, as indicated by high p-values (all greater than 0.05).

The analysis shows that sex and year level do not significantly affect behavioral, emotional, or cognitive dimensions. Thus, course has a notable impact on both behavioral and emotional dimensions but not on cognitive outcomes.

Kahu (2023) found that student engagement is more significantly shaped by factors such as course structure, student-teacher interaction, and the availability of resources rather than the student’s year level. Her research emphasized that the learning environment, including pedagogical practices (e.g., active learning, collaborative tasks) and course design, tends to have a more profound influence on engagement than students’ academic progression.

Garrison, Anderson, and Archer (2000), in their work on the Community of Inquiry (CoI) framework, argue that cognitive, emotional, and behavioral engagement in learning is strongly shaped by social presence, teaching presence, and cognitive presence, all of which can be designed to support engagement consistently across different year levels. In their analysis, they found that while students' experience levels (year levels) might affect their confidence or self-regulation, the learning design and teacher involvement play a far more significant role in fostering engagement.

Table 4. Correlation between Intrinsic Motivation and Engagement of Students Classroom Learning Environment

Intrinsic Motivation	Engagement Of Students	Computed r	Sig.	Decision	Interpretation
Autonomy	Behavioral Engagement	-.185**	.009	Rejected	Significant
	Emotional Engagement	-.124	.080	Accepted	Not Significant
	Cognitive Engagement	.022	.762	Accepted	Not Significant
Competence	Behavioral Engagement	.833**	.000	Rejected	Significant
	Emotional Engagement	.818**	.000	Rejected	Significant
	Cognitive Engagement	.002	.972	Accepted	Not Significant
Relatedness	Behavioral Engagement	-.027	.702	Accepted	Not Significant
	Emotional Engagement	.165*	.020	Rejected	Significant
	Cognitive Engagement	-.024	.734	Accepted	Not Significant
Overall Intrinsic Motivation	Overall Engagement of Students	.433**	.000	Rejected	Significant

The correlation analysis demonstrated a significant positive relationship between overall intrinsic motivation and overall engagement ($r=0.433, p<0.001$), highlighting the interconnectedness of these constructs.

Specifically, **competence** showed a strong positive correlation with both behavioral engagement ($r=0.833, p<0.001$) and emotional engagement ($r=0.818, p<0.001$), indicating its critical role in fostering active participation and enthusiasm among students. However, it showed no significant correlation with cognitive engagement ($r=0.002, p=0.972$).

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Autonomy displayed a weak negative correlation with behavioral engagement ($r=-0.185, p=0.009$), but no significant relationship was observed with emotional engagement ($r=-0.124, p=0.080$) or cognitive engagement ($r=0.022, p=0.762$).

Relatedness was positively correlated with emotional engagement ($r=0.165, p=0.020$), emphasizing the importance of social connections in fostering students' emotional involvement. However, no significant relationship was found between relatedness and behavioral engagement ($r=-0.027, p=0.702$) or cognitive engagement ($r=-0.024, p=0.734$).

Fredricks, Blumenfeld, and Paris (2021) reviewed the literature on student engagement and intrinsic motivation and concluded that there are indeed complex relationships between the two. Their review highlighted that cognitive engagement (e.g., effort in understanding, problem-solving) is typically more strongly correlated with intrinsic motivation than behavioral engagement (e.g., participation in activities).

Skinner and Pitzer (2020) also argued that the correlation between intrinsic motivation and engagement varies depending on the dimension of engagement being considered. They noted that emotional engagement (e.g., feelings of interest, enjoyment, or enthusiasm) is often more directly linked to intrinsic motivation because it is closely tied to students' interest in the subject matter.

III. CONCLUSION

Intrinsic motivation plays a crucial role in student engagement. When students are motivated by their curiosity and enjoyment of the subject matter, they are more likely to participate actively in class discussions and collaborative activities. There is a need for educational systems to prioritize intrinsic motivation as a cornerstone of effective teaching practices. By creating engaging, supportive, and personalized learning environments, educators can significantly enhance student engagement and foster academic success.

In conclusion, the study provides valuable insights into the interplay between intrinsic motivation and student engagement within educational settings. The findings underscore the importance of fostering an environment that nurtures students' intrinsic motivation, which is essential for enhancing their engagement and overall learning experience.

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