**Ian Kenneth E Amor**
San Sebastian College, Recoletos de Cavite, Cavite City, Mnl. Blvd. Espiritu St. Sta. Cruz, 4100 Cavite City, Philippines

**Elizabeth C Sauquillo**
San Sebastian College, Recoletos de Cavite, Cavite City, Mnl. Blvd. Espiritu St. Sta. Cruz, 4100 Cavite City, Philippines

**James Andrei S Mondido**
San Sebastian College, Recoletos de Cavite, Cavite City, Mnl. Blvd. Espiritu St. Sta. Cruz, 4100 Cavite City, Philippines

**Robin Mathew M Duayan**
San Sebastian College, Recoletos de Cavite, Cavite City, Mnl. Blvd. Espiritu St. Sta. Cruz, 4100 Cavite City, Philippines

**David Zachary C. Viason**
San Sebastian College, Recoletos de Cavite, Cavite City, Mnl. Blvd. Espiritu St. Sta. Cruz, 4100 Cavite City, Philippines

# Significant relationship of self-esteem and class engagement of students from Cavite city, Philippines

**Ian Kenneth E Amor, Elizabeth C Sauquillo, James Andrei S Mondido, Robin Mathew M Duayan and David Zachary C Viason**

**DOI:** https://doi.org/10.22271/multi.2024.v6.i2a.381

**Abstract**
This study sought to investigate the correlation between self-esteem and class engagement among students in Cavite City and its potential influence on academic achievement. Pearson correlation coefficient and inferential statistics were employed to assess this association. However, the results unveiled no substantial link between the two variables, highlighting the need for additional research.
In examining the data concerning the relationship between self-esteem and engagement, the statistical approach of Pearson r was applied. The findings from this analysis demonstrated the absence of a noteworthy connection between the two variables. The calculated Sig. value of 0.124 signified a 12.4% probability that any observed relationship between self-esteem and engagement might have occurred purely by chance.
To provide further clarity, a significant relationship between the variables typically arises when the Sig. value equals or falls below 0.05. Nevertheless, in this instance, the Sig. value of 0.124 indicated that the observed relationship did not attain statistical significance. Although the outcomes implied that promoting self-esteem and class engagement may not significantly influence each other, this study furnished valuable insights for educators and policymakers in Cavite City, encouraging them to explore alternative interventions for enhancing academic outcomes. Further investigation is required to attain a more thorough grasp of the intricate factors influencing student motivation and engagement.

**Keywords:** Self-esteem, class engagement, Cavite city students, Pearson correlation coefficient, inferential statistics, significant relationship, Sig. value, chance alone

## 1. Introduction
The COVID-19 pandemic, initially a health crisis, gradually permeated various aspects of human life, including education. As governments imposed lockdowns, educational institutions also temporarily closed in response to curb the spread of COVID-19 (Schleicher, 2020) [13]. In reaction to this, the Department of Education introduced Distance Learning Delivery Modalities (DLDM), encompassing Online Distance Learning (ODL), Modular Distance Learning (MDL), and Blended Distance Learning (BDL) (DepEd Order No. 007, s. 2020). However, the abrupt transition to these new learning methods posed challenges for both students and teachers, including issues such as poor internet connectivity, diminished motivation, reduced interaction, and financial hardships (Rasheed *et al*., 2020) [18].
This situation underscores the significant role of self-esteem, which plays a causal role in various life outcomes (Michal *et al*., 2004) [11]. Self-esteem is defined by William James (1890) as the positive self-regard that emerges when people persistently achieve important goals in their lives. Rosenberg (1970) [17] interpreted self-esteem as an individual's positive or negative attitude toward themselves. As restrictions gradually ease and life returns to normal, the shift from distance learning to face-to-face classes can have a profound impact on students' self-esteem, potentially affecting their academic performance. Self-esteem has far-reaching effects on how individuals interact with others, perform at work, achieve their goals, experience happiness, and excel in academics (Branden, 1994) [2]. Having high self-esteem is associated with rationality, realism, intuition, inventiveness, independence, flexibility, adaptability, self-improvement, empathy, and cooperation. In contrast, low self-esteem is linked to irrationality, denial of reality, inflexibility, fear of change, conformity, defensiveness, and hostility (Branden, 1994) [2].

**Corresponding Author:**
**Ian Kenneth E Amor**
San Sebastian College, Recoletos de Cavite, Cavite City, Mnl. Blvd. Espiritu St. Sta. Cruz, 4100 Cavite City, Philippines

Effective learning requires students to be actively engaged and interested in their classes. Student engagement encompasses their willingness, motivation, and success in the learning process. Engaged students commit themselves to the subject matter and participate enthusiastically because they see its value (Martin & Bolliger, 2018) [10]. The engaged student seeks to develop their knowledge, connect concepts to their experiences, and relate them to real-world scenarios (Biggs, 1999) [19]. The COVID-19 situation has significantly impacted students, leading to emotional turmoil and psychological strain. Sudden changes in academic routines have affected students' self-esteem, which, in turn, can influence their class engagement and scholastic achievement (Arshad *et al*., 2015) [1].

This research surveyed students from Cavite City using the Rosenberg Self-Esteem Scale (SES) and the Student Engagement Questionnaire, with permission from their school authorities. The findings indicated that the self-esteem of adolescents had a favorable impact on their academic involvement. Elevated levels of self-esteem in adolescents have the potential to bolster their academic participation, aligning with the theory of expectancy value. Those with heightened self-esteem tend to establish loftier objectives and regard themselves as proficient when they achieve those benchmarks fostering a constructive self-assessment and heightened academic involvement (Filippello *et al*., 2019) [20]. Additionally, individuals with high self-esteem can effectively manage the pressure of high expectations on their academic performance (Kort-Butler & Hagewen, 2011) [21].
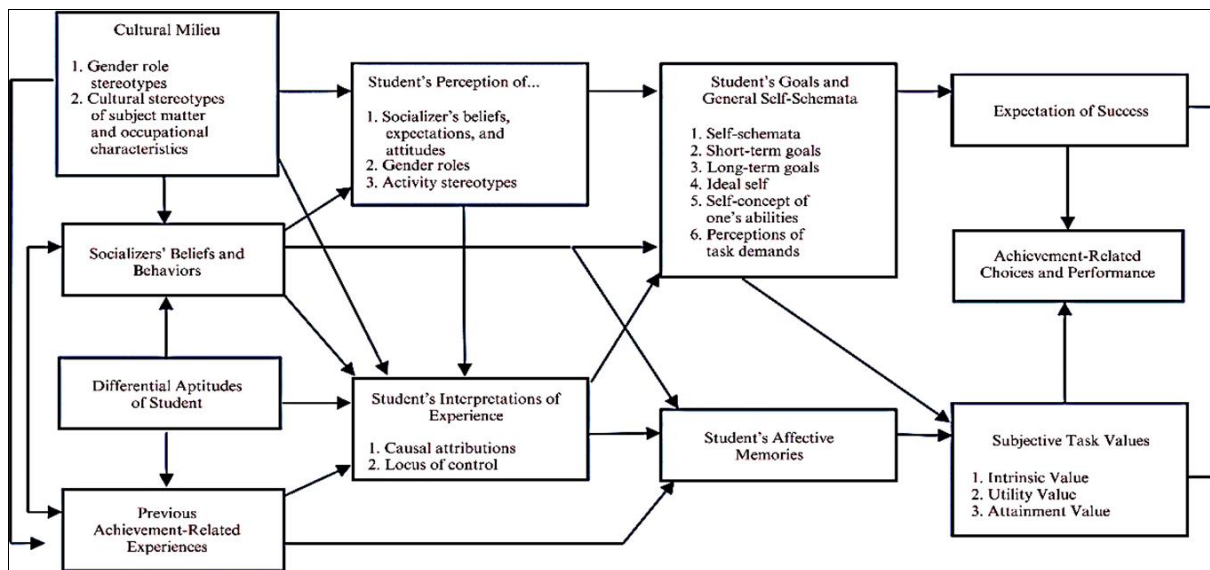
The primary objective of this research was to investigate the possibility link between students' self-esteem and their class engagement within the context of Cavite City. To achieve this goal, the study sought to address three key inquiries: firstly, to discern the prevailing level of self-esteem among students; secondly, to characterize the level of class engagement exhibited by these students; and thirdly, to determine whether a statistically significant relationship could be established between self-esteem and class engagement within the selected student population hailing from Cavite City. By addressing these questions, the study aimed to contribute valuable insights into the interplay between self-esteem and class engagement in this specific demographic.

**Theoretical Framework**
This research draws upon the Expectancy-Value Theory, a theoretical framework formulated by Jacquelynne Eccles and her research team (Eccles *et al*., 1983; Eccles & Wigfield, 2002; Wigfield & Eccles, 2001) [22, 2, 4, 23]. As per this particular theory, individuals' decisions concerning achievement are shaped by a fusion of their anticipations of achievement and their personal evaluation of the task's significance within particular domains. For instance, children are more likely to participate in an activity if they foresee succeeding and perceive value in that particular endeavor.

Moreover, the Expectancy-Value Theory further dissects task value into four distinct components, namely, attainment value (the perceived significance of excelling in a task), intrinsic value (the level of enjoyment derived from the task), utility value (the practical applicability of the task in one's life), and cost value (the perceived disadvantages or sacrifices associated with the task). Additionally, the theory underscores that expectations of success and task values are the product of a blend of individual factors (such as abilities, self-perceptions, prior experiences, beliefs, interpretations, and expectations) and external influences (including cultural context and the convictions and actions of socializing agents).
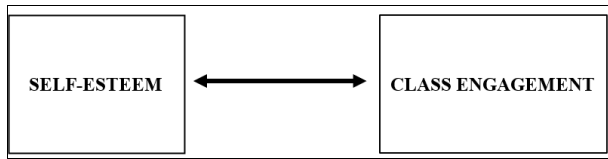


**Fig 1:** Eccles' (1983) model of choice and achievement performance. From Spence, J. T. (1983). Achievement Motives and Achievement, W. H. Freeman, San Francisco

**Conceptual Framework**
In Figure 2, a visual representation is presented, depicting the connection between two pivotal factors: Self-Esteem and Class Engagement. These factors are recognized as influential contributors to the academic performance of students in Cavite City.

It is hypothesized that students with higher self-esteem are more likely to excel academically. The second variable is Class Engagement, which pertains to students' active participation in their classroom activities and discussions. By examining the interplay between these two variables, the researchers suggest that they collectively serve as predictors

of students' academic achievements. Specifically, it is theorized that students with elevated self-esteem are more inclined to engage actively in their classes, and conversely, active class engagement is expected to positively influence self-esteem.



**Fig 2:** Paradigm of the study

## Significance of the study

This study underscores the significant impact of enhancing students' self-esteem, which extends beyond the realm of academic performance. It highlights that bolstering self-esteem has the potential to improve students' knowledge acquisition, research skills, and communication abilities, while simultaneously reducing uncertainty. Moreover, the cultivation of self-esteem can foster essential leadership attributes such as composure, rationality during emergencies, self-control, heightened self-awareness, and a methodical approach to situations. The study also emphasizes the diverse groups that can benefit from this research. For students in senior high school, it aims to boost self-esteem and confidence, particularly in their classroom activities and goal attainment. Teachers' conduct is recognized as a critical factor in influencing students' behavior, academic performance, and engagement in extracurricular activities, and their social skills proficiency plays a pivotal role in these interactions. Additionally, parents, as the first educators, can use this research to strengthen their relationships with their children, fostering positive behavior and self-esteem, which are fundamental to academic success and personal growth.

## Scope and Limitations of the Study

This study focused on students from Cavite City mainly from San Sebastian College - Recoletos de Cavite, St. Joseph College of Cavite, and Cavite National High School. This aimed to know if the students' self-esteem and class engagement from the mentioned school had a significant relationship with each other. The researchers only catered to respondents under the academic track; Science, Technology, Engineering, and Mathematics (STEM), Humanities and Social Sciences (HUMSS), General Academic Track (GAS), and Accountancy, Business, and Management (ABM).

## Methodology
### Research Design and Sample Selection

This study sought to investigate the significance of self-esteem and class engagement among Senior High School students in Cavite City, employing a quantitative research approach to examine their correlation. The emergence of positive psychology and its emphasis on human strengths and positive psychological standards, including academic commitment, served as the backdrop for this investigation.

The study was conducted across multiple schools in Cavite City, including Cavite National High School, San Sebastian College - Recoletos de Cavite, and St. Joseph College of Cavite. These schools were strategically selected as the research sites for surveying self-esteem and class engagement among students in the city. Respondents participated in the study by completing Google Forms questionnaires.

## Data Collection and Research Instruments

To gather data on the two primary variables, two distinct research instruments were utilized. The Rosenberg Self-Esteem Scale (RES) questionnaire assessed self-esteem, consisting of ten items designed to evaluate both positive and negative self-perceptions. To express their viewpoint, participants employed a four-point Likert scale, ranging from "strongly agree" to "strongly disagree." Additionally, the Class Engagement Questionnaire, a self-constructed survey with ten questions, measured class engagement. This questionnaire employed a five-point Likert scale, wherein 1 denotes "Highly Disengaged," 2 represents "Disengaged," 3 indicates "Neutral," 4 signifies "Engaged," and 5 denotes "Highly Engaged."

Prior to data collection, the research team secured permission from the Principals of Cavite National High School (CNHS), St. Joseph College of Cavite (SJCC), and San Sebastian College- Recoletos de Cavite (SSCRdC) to conduct an online survey among Senior High School students in specific academic strands. Informed consent was obtained from all participants, and it was emphasized that no personal information would be collected. Data were stored separately for each school/institution to maintain confidentiality.

## Data Analysis

The primary objective of this research was to establish the relationship between self-esteem and class engagement. To achieve this, Pearson Correlation Coefficient was employed as the statistical tool. The analysis determined the direction of the correlation (positive, negative, or zero) and assessed its magnitude (strong, weak, or zero). This statistical approach facilitated the measurement and connection of the two sets of data. In the event of a positive correlation, it suggested the importance of addressing self-esteem to enhance class engagement and subsequently improve academic performance within educational institutions. Self-esteem levels were interpreted using a four-point Likert scale questionnaire interpretation.

**Table 1:** Interpretation of Self-Esteem

| Ratings | Scale | Verbal Interpretation |
|---|---|---|
| 1. | 1.00-1.75 | Poor |
| 2. | 1.76-1.50 | Fair |
| 3. | 1.51-2.25 | Good |
| 4. | 2.26-3.00 | Excellent |

The level of students' class engagement was determined with a five-point Likert scale questionnaire interpretation that was interpreted by the table below.

**Table 2:** Interpretation of Class Engagement

| Ratings | Scale | Verbal Interpretation |
|---|---|---|
| 1. | 1.00-1.80 | Highly Disengage |
| 2. | 1.81-2.60 | Disengage |
| 3. | 2.61-3.40 | Neutral |
| 4. | 3.41-4.20 | Engage |
| 5. | 4.21-5.00 | Highly Engage |

**Results and Discussion**
The respondents of the survey were the Senior High School students from San Sebastian College - Recoletos de Cavite, Saint Joseph College, and Cavite National High School. Students who belonged to STEM, ABM, HUMSS, GAS strand. Ninety-seven (97) Grade 11 students participated, and 205 students came from Grade 12. 112 students were from STEM strand. 104 students came from ABM strand. 58 students from HUMSS strand. 28 students came from strand. The total number of respondents was 302.

**Table 3:** Level of self-esteem of students from Cavite City categorized by their grade level, strand, and school

| Grade level | Self-esteem | Interpretation |
|---|---|---|
| Grade 11 | 1.59 | Good |
| Grade 12 | 1.60 | Good |
| Strand | | |
| ABM | 1.60 | Good |
| HUMSS | 1.62 | Good |
| GAS | 1.55 | Good |
| STEM | 1.60 | |

**Table 3:** Continuation…

| School | | |
|---|---|---|
| SSC-R DE Cavite | 1.61 | Good |
| SJCC | 1.62 | Good |
| CNHS | 1.57 | Good |
| Not clear answers | 1.73 | Good |
| Total | 1.60 | Good |

The information presented in Table 1 reveals some interesting findings about the self-esteem of senior high school students across different grade levels and academic strands. Upon analyzing the data, it was discovered that the mean rating for self-esteem among 11th grade students is 1.59, while 12th grade students have a slightly higher mean rating of 1.60. When combined, the total mean rating for the grade level is also 1.60, which is interpreted as good. This data shows that senior high school students from Cavite City exhibit a good self-esteem, especially the 12th grade students that have a slightly higher mean rating than the 11th grade students.

Further analysis of the data shows that the mean rating for self-esteem among students in the HUMSS strand have a slightly higher mean rating of 1.62. It is observed that the HUMSS strand has the highest mean rating among 4 tested strands. With this, it can be concluded that students who are taking HUMSS strand have a slightly higher self-esteem compared to students taking other academic tracks.

Another interesting aspect of the data is the variation in self-esteem ratings among students from different schools. Specifically, students from San Sebastian College Recoletos de Cavite have a mean rating of 1.61. In contrast, students from Cavite National High School have a mean rating of 1.57, and there were some students whose answers were unclear because they didn't specify where school they come from, but they had a mean rating of 1.73. Looking at these data, it is evident that students from Cavite National High School have a slightly low self-esteem compared to students from two schools.

Overall, the data presented in Table 1 provides valuable insights into the self-esteem of high school students in different grade levels, academic strands, and schools. While there are some differences in self-esteem ratings across these various categories, the total mean rating for self-esteem remains consistently good. Considering all of these factors, it answers the study's first question regarding the level of self-esteem of students from Cavite City

**Table 4:** Level of class engagement of students from Cavite City categorized by their grade level, strand, and school

| Grade Level | Class Engagement | Interpretation |
|---|---|---|
| Grade 11 | 3.75 | Highly Engage |
| Grade 12 | 3.70 | Highly Engage |
| Strand | | Highly Engage |
| ABM | 3.66 | Highly Engage |
| HUMSS | 3.78 | Highly Engage |
| GAS | 3.73 | Highly Engage |
| STEM | 3.74 | Highly Engage |
| School | | Highly Engage |
| SSC-R DE CAVITE | 3.61 | Highly Engage |
| SJCC | 3.82 | Highly Engage |
| CNHS | 3.73 | Highly Engage |
| Not clear answers | 3.68 | Highly Engage |
| Total | 3.72 | Highly Engage |

Data presented on table 4 presents the class engagement of high school students across different grade levels, academic strands, and schools. The mean rating for class engagement among grade levels reveals that grade 11 students are highly engaged in their classes with a mean rating of 3.75.

When analyzing the data by academic strand, it was discovered that the mean rating for class engagement of HUMSS students have the highest mean rating of 3.78 among all the strands. This result mirrors the result from table 1 which HUMSS students also got the highest mean rating.

Additionally, the data shows that there are some variations in class engagement ratings among students from different schools. Students from SJCC have a significantly higher mean rating of 3.82 among all the schools. This data shows that students from SJCC are more engaged in their class compared to other two schools.

In conclusion, Table 4 provides useful information on the class engagement of senior high school students, revealing that most of the students are engaged in class most of the time. Moreover, the data suggests that there are some variations in class engagement ratings among different grade levels, academic strands, and schools. However, the total mean rating for class engagement remains consistent across these various categories, indicating that most senior high school students are actively engaged in class.

**Table 5:** Testing correlations between self-esteem and class engagement using Pearson r

| | | Engagement | Self-Esteem |
|---|---|---|---|
| Engagement | Pearson Correlation | 1 | -.089 |
| | Sig. (2-tailed) | | .124 |
| | N | 299 | 299 |
| Self-Esteem | Pearson Correlation | -.089 | 1 |
| | Sig. (2-tailed) | .124 | |
| | N | 299 | 302 |

When analyzing the data on the relationship between self-esteem and engagement, the statistical method of Pearson r was utilized. The results of the analysis revealed that there was no significant relationship between the two variables.

The obtained Sig. value of 0.124 indicated that there was a 12.4% probability that any relationship between self-esteem and engagement was due to chance alone.

To elaborate further, a significant relationship between the variables was established when the Sig. value was equal to or lower than 0.05. However, in this case, the Sig. value of 0.124 suggested that the observed relationship was not statistically significant, meaning that there was no strong or meaningful relationship between self-esteem and engagement.

It is important to note that the non-significant result obtained did not necessarily imply the absence of any relationship between the two variables. Rather, it suggested that any relationship between self-esteem and engagement, if it existed, was not strong enough to be considered significant. Overall, the Pearson r analysis indicated that there was no strong relationship between self-esteem and engagement, and any association that did exist was most likely due to chance. Further research may be necessary to explore the relationship between these variables more comprehensively, and to determine whether other factors influence their relationship.

Since the result showed that there was no significant relationship between self-esteem and class engagement, the null hypothesis was accepted. This revealed that the variable self-esteem does not necessarily affect the class engagement of students from Cavite City and vice versa. This result contradicted to Zhao, et al. (2021) [16] self-esteem could potentially have an indirect positive effect on the academic engagement of adolescents by means of their academic self-efficacy. The result the researchers also contradicted to what some studies in literature indicating that that there is a positive relationship between self-esteem and student achievement (Körük 2017) [9]. Muhammad, S., and Zaidi, I. (2015) [1] also found in their study that there is a strong positive correlation between self-esteem and academic performance in college students. High self-esteem could also lead to better academic performance. There is no available literature studies that states that self-esteem and class engagement have no significant relationship between each other. This discrepancy between the findings of various studies could be partially considered because of variations in the samples' ages, cultures, and religions.

## Summary

In this study, the self-esteem levels of high school students exhibited variations based on grade levels, academic strands, and schools. However, the overall mean rating remained consistently high at 1.60. The majority of high school students displayed active engagement in their classes, with a total mean rating of 3.72 across all academic strands. Utilizing the Pearson R statistical method, the findings revealed that there existed no significant relationship between self-esteem and class engagement among the selected students from Cavite City, as indicated by a p-value of 0.124. Conversely, a study in Language Testing in Asia offers pedagogical insights for educators, emphasizing the role of self-assessment and critical thinking in enhancing students' academic engagement and self-esteem (Riswanto *et al.*, 2022) [12]. Furthermore, various research studies employ diverse research focuses and methodologies.

## Conclusion

To sum up, this research illuminated the self-esteem and class engagement of high school students in Cavite City. While variations in self-esteem were observed across different grade levels, academic strands, and schools, the overall assessment indicated consistently positive self-esteem. Additionally, a significant number of high school students actively participated in their classes. Nevertheless, the study's results pointed to the absence of a significant relationship between self-esteem and class engagement among the sampled students. This research contributes valuable insights to the existing body of knowledge on student self-esteem and engagement. Future studies may explore alternative research focuses and methodologies. Furthermore, educators can draw from the pedagogical implications of integrating self-assessment and critical thinking to foster academic engagement and self-esteem among learners. Ultimately, this study confirmed the acceptance of the null hypothesis, indicating no significant relationship between self-esteem and class engagement among students from Cavite City.

## Recommendation

This research shows that students in Cavite City have a high self-esteem. This is applicable for both grade 11 and grade 12 students as they presented a very close mean of 1.59 and 1.60. HUMSS students have the highest result and students in GAS strand have the lowest. The students from HUMSS should do this but most especially the students of STEM, ABM and GAS should be more kind to themselves study show that always start with yourself before exploring other things. They also need to set realistic goals and check on themselves from time to time to understand their progress and to strengthen their weaknesses. Celebrate their success no matter how big or small it is. They should also surround themselves with people who motivates and influence them towards success and give them lesson on how they will improve themselves. Do what makes them happy, students tend to be more productive if they enjoy what they are doing.

STEM students and teachers should do these recommendations most especially with HUMSS. ABM, and Gas students and teachers for them to enhance their class engagement. The teachers should use more real life examples when discussing lessons. Students will understand the situation deeper if they already experienced or seen the samples being presented. This will leave an imagination for the students and will become more engaged in class. Study shows also that using of group and collaboration work will give them benefits of one another as they express them thoughts and ideas. Using of different media in learning gives students a clear understanding of the lesson rather than using a single way of teaching. Weaving humorous jokes inside the classroom helps them to be more comfortable with the atmosphere and space. Students needs also to be reasonable as they starting to learn each other they will also be learning about themselves.

The Institutions should give seminars to students that can enhance their Self-esteem. Positive Psychology Seminars and Goal setting seminars should be some of the main topics. Using of brochures and infographics to promote awareness about Self-esteem. Collaborative learning should also be emphasized and strengthened to give students ability to benefit from one another.

Showing that there is no significant between the two variables. This Students should still keep their Self-esteem and Class Engagement high and consistent. This will still give them a benefit as a students and for future purposes.

## References

1. Arshad M, Zaidi SM, Mahmood D. Self-Esteem & Academic Performance among University Students. Journal of Education and Practice, 2015, 6.
2. Branden N. The six pillars of self-esteem by Nathaniel Branden (9780553374391), E-book. Books.
3. Du H, King RB, Chi P. Self-esteem and subjective well-being revisited: The roles of personal, relational, and collective self-esteem. PLoS ONE. 2017;12(8):e0183958. https://doi.org/10.1371/journal.pone.0183958
4. Eccles JS, Wigfield A. Motivational beliefs, values, and goals. Annual Review of Psychology. 2002;53:109-132. https://doi.org/10.1146/annurev.psych.53.100901.135153
5. Fang L. Educational aspirations of Chinese migrant children: The role of self-esteem contextual and individual influences. Learning and Individual Differences. 2016;50:195–202. https://doi.org/10.1016/j.lindif.2016.08.009
6. Gunuc S. The Relationships between Student Engagement and Their Academic Achievement. International Journal on New Trends in Education and Their Implications. 2014;5:216-231. http://www.ijonte.org
7. Gunuc S, Kuzu A. Student Engagement Scale: Development, Reliability and Validity. Assessment & Evaluation in Higher Education. 2015;40:587-610. https://doi.org/10.1080/02602938.2014.938019
8. James W. The principles of psychology. Cambridge, MA: Harvard University Press; c1890.
9. Körük S. The Effect of Self-Esteem on Student Achievement. 10.1007/978-3319560830_15. https://www.researchgate.net/publication/317177320_The_Effect_of_Self-Esteem_on_Student_Achievement
10. Martin F, Bolliger DU. Engagement Matters: Student Perceptions on the Importance of Engagement Strategies in the Online Learning Environment. Online Learning. 2018;22:205-222. https://doi.org/10.24059/olj.v22i1.1092
11. Mann M, Hosman CM, Schaalma HP, de Vries NK. Self-esteem in a broad-spectrum approach for mental health promotion. Health Education Research. 2004;19(4):357–372. https://doi.org/10.1093/her/cyg041
12. Riswanto, Heydarnejad T, Saberi Dehkordi E, *et al*. Learning-oriented assessment in the classroom: the contribution of self-assessment and critical thinking to EFL learners' academic engagement and self-esteem. Language Testing in Asia. 2022;12:60. https://doi.org/10.1186/s40468-022-00210-4
13. Schleicher A. The Impact of Covid-19 on Education: Insights from Education at a Glance 2020. https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf
14. Stets JE, Burke PJ. Self-Esteem and Identities. Sociological Perspectives. 2014;57(4):409-433. https://doi.org/10.1177/0731121414536141
15. Stovall I. Engagement and Online Learning. UIS Community of Practice for E-Learning. http://otel.uis.edu/copel/EngagementandOnlineLearning.pp
16. Zhao Y, Zheng Z, Pan C, Zhou L. Self-Esteem and Academic Engagement Among Adolescents: A Moderated Mediation Model. Frontiers in Psychology. 2021;12:690828. https://doi.org/10.3389/fpsyg.2021.690828
17. Rosenberg B, VanCamp L. The successful regression of large solid sarcoma 180 tumors by platinum compounds. Cancer Research. 1970 Jun 1;30(6):1799-802.
18. Rasheed RA, Kamsin A, Abdullah NA. Challenges in the online component of blended learning: A systematic review. Computers & Education. 2020 Jan 1;144:103701.
19. Biggs J. What the student does: Teaching for enhanced learning. Higher education research & development. 1999 Apr 1;18(1):57-75.
20. Filippello P, Buzzai C, Costa S, Sorrenti L. School refusal and absenteeism: Perception of teacher behaviors, psychological basic needs, and academic achievement. Frontiers in psychology. 2019 Jun 27;10:1471.
21. Kort-Butler LA, Hagewen KJ. School-based extracurricular activity involvement and adolescent self-esteem: A growth-curve analysis. Journal of youth and adolescence. 2011 May;40:568-81.
22. Eccles JS, Midgley C, Wigfield A, Buchanan CM, Reuman D, Flanagan C, Mac Iver D. Development during adolescence: The impact of stage–environment fit on young adolescents' experiences in schools and in families; c1993.
23. Anderman EM, Eccles JS, Yoon KS, Roeser R, Wigfield A, Blumenfeld P. Learning to value mathematics and reading: Relations to mastery and performance-oriented instructional practices. Contemporary educational psychology. 2001 Jan 1;26(1):76-95.