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A Measurement for Social Experience and Its Evaluation: A Case Study of University Student

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ABSTRACT

Social experience refers to interactions and relationships that individuals have with others within their environments. According to researchers, higher levels of social experience can affect many aspects that an individual has, such as self-awareness, social skills, moral reasoning, intelligence, and emotional intelligence. Despite its importance, it is difficult to determine the valid and reliable measurement of social experience. The writer decided to create a survey as a measurement of social experience with 2 latent variables: self-efficacy and self-regulation to know the influence of both indicators on the measurement of social experience with 300 Bina Nusantara University students as its respondents. From the results of the survey, we conclude that verbal persuasion is the most impactful source from self-efficacy that influences social experience, while motivation is the most impactful source from self-regulation that influences social experience. All self-efficacy and self-regulation statements are both valid and reliable with convincing results. Although our results are convincing, it is essential to bear in mind that this study is not without limitations. These limitations include a limited sample size and the potential for biases in sampling and response due to the characteristics of our participants. Therefore, it is advisable for future research endeavors within this field to select participants from various universities and implement preliminary testing procedures to authenticate the survey.

Keywords: *Self-Efficacy; Self-Regulation; Social Experience; Students*

INTRODUCTION

Social experience is an aspect of human life that refers to both interactions and relationships that individuals have with others in their community. Duran conceptualized social experience as "an individual's desire for and experience with communication in novel contexts" (Duran & Kelly, 1994). According to Narvaez, higher levels of social experiences provide an individual with greater self-awareness, superior social skills, moral reasoning, intelligence, and the ability to utilize emotions effectively to solve problems (Narvaez, 2010). Despite the importance of social experience, there are difficulties in determining which indicators are most relevant and reliable for measuring social experience, as the topic itself can vary across individuals and contexts. In this topic, the writer decided to conduct survey research to create a measurement for social experiences. Check & Schutt defines survey research as “the collection of information from a sample of individuals through their responses to questions” (Check & Schutt, 2013). This type of research is frequently used in social and psychological research due to its capabilities to represent human behavior (Singleton et al., 1988). In survey research, a portion of population is chosen for observation to ascertain the precision of survey outcomes, referred to as a sample. Vehovar et al defines a sample as “a subset of

population" whereas the researcher's goal is to survey the selected units from this sample to gain knowledge about the entire population (Vehovar et al., 2016). The writer will use a sample consisting of university students to assess their social experience quality based on two latent variables: self-efficacy and self-regulation.

The remaining sections of this paper are structured as follows: the Literature Review provides the groundwork and points of reference for this study. Next, the writer elaborates the discussion on the methodology used for our data and study, followed by an emphasis on outcomes and conclusions. Following the survey's completion, the results are examined and presented within a report. We scrutinize the survey data, draw conclusions based on validation and reliability testing, and lastly, offer suggestions for future research in our conclusion.

Social experience is a broad topic that encompass on variance areas and fields of study. At its core, social experience refers to how individuals interact and engage with other in social situations, and how these interactions shape their thoughts, emotions, and behaviours. Social experience used as a criterion for the assessment of the benefits of education (Faleeva et al., 2017). According to similar studies, social experiences in college can influence how they value themselves and how they are viewed by others. This study shows that students who have positive social experiences in college have higher levels of self-confidence and are prouder to be part of their campus (Rubin & Hewstone, 1998). Self-efficacy takes part as one of the important factors for students. This is evidenced in a study conducted on third-year students in French elementary schools that examined groups of female and male students. The groups of female students are inclined to doubt their abilities, even though they are on par with male students. The results of the study show that belief has an impact on their actions and dream careers in the future (Joët et al., 2011). A similar study was also conducted on 5,465 Norway students. The study raised the topic of the relationship between self-efficacy, peer victimization, and the academic performance of students. Most likely that the students' problems lie in their peers and psychosocial problems (Raskauskas et al., 2015). Further findings also showed a declining trust between students and lecturers which led to a decreased level of confidence in building relationships between them [10]. Education level can also be a contributing factor, with higher academic demand can cause one's low esteem, increase stress levels and trigger a decline in the student's characteristics (Prewett et al., 2018).

There are various literature and interpretations regarding self-efficacy. Bandura (Chipchase et al., 2017) specifically defines it as an individual's belief in their capacity to effectively coordinate and execute a series of actions required to successfully complete a particular task. There are 4 sources of Self-efficacy according to Bandura's Theory: Enactive Mastery Experience, Vicarious Experience, Verbal Persuasion, and Physiological and Affective States (Bandura, 1997). In (Bandura, 1997), Bandura states that enactive mastery experiences refer to an individual's firsthand experience in a particular field. Succeeding in a certain field or task can improve one's belief in their efficacy, while experiencing a failure can diminish it. In addition, experiences are not solely gained from personal experiences and efforts; they can also be acquired from various external sources. One of such sources that can significantly impact an individual's level of self-efficacy is "Vicarious Experience". According to Schunk (Schunk, 2012), a person can learn about their self-efficacy by observing one or more models. Furthermore, Bandura (Bandura, 1997) also states that this model can effectively facilitate the development of a strong belief in one's self-efficacy. Verbal persuasion, apart from personal experience, is an additional factor that can impact an individual's self-efficacy. Bandura (Bandura, 1997) remarks that showing trust rather than doubts in someone's personal abilities can serve as motivation for them to sustain their efforts in a specific task. Regarding physiological and affective states, Individuals also depend on information from their physiological condition to assess their abilities (Bandura, 1997). People are more likely to anticipate success when they are free from unpleasant arousal compared to when they feel tense and agitated.

Synergically, Self-regulation is also a measurement of social experience. It is interpreted that a person who can control their behavioral self-efficacy can regulate their emotional state more easily (Leventhal et al., 1998). The ability to process good self-regulation tends to be possessed by students with high academic scores (Howse, Calkins et al., 2003). There are 4 aspects of self-regulation, according to (Baumeister & Vohs, 2007), that serves as main ingredients of self-regulation process: Standards, Monitoring, Willpower, and Motivation. The first aspect of self-regulation is standards. As stated in (Baumeister & Vohs, 2007), regulation involves making adjustments to comply with a certain benchmark, and consequently, successful self-regulation is achieved by a precise and clearly defined standard. If standards are ambiguous, uncertain, inconsistent, or conflicting, achieving self-regulation can be challenging. For self-regulation to function effectively,

monitoring is essential and become the second aspect of self-regulation. According to (Baumeister & Vohs, 2007), it can be challenging to regulate a behavior without proper tracking and monitoring. Carver & Scheier (Carver & Scheier, 1981) mentioned that self-awareness consistently involves comparing oneself to a standard. Individuals experience positive emotions not only upon achieving their goals but also when they attained significant progress (Carver & Scheier, 1990). The third aspect of self-regulation, commonly referred to as "willpower" as indicated by (Baumeister & Vohs, 2007), involves the capacity to adapt and exercise self-control over behaviors, thoughts, or actions. (Hagger et al., 2010), implies that numerous studies have observed that following the exertion of self-regulation to modify a certain response, individuals tend to have reduced energy and exhibit worse performance on the subsequent unrelated task that also demands self-regulation. This state of reduced energy for self-regulation is commonly known as "ego depletion," as described by (Baumeister et al., 1998). The fourth aspect of self-regulation is motivation – more precisely, the motivation to accomplish the goal or meet the established standard, as indicated in (Baumeister & Vohs, 2007). In (Baumeister & Vohs, 2007), it is implied that motivation can serve as a potent replacement for willpower.

METHODS

Research Flowchart

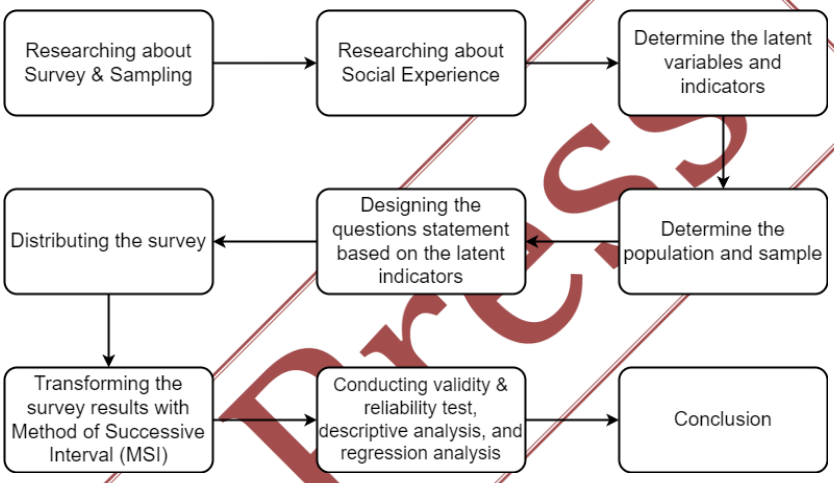

Figure. 1. Research Flowchart

Research Method

This chapter will involve conducting various research methods to learn more about social experience and its indicators. Students who enrolled at Bina Nusantara University were invited to participate in the survey. Respondents were provided with a form to fill out an online survey that inquired about the correlation between students' social experiences, self-efficacy, and self-regulation. All questions were measured on a 6-point Likert scale ranging from 0 to 6 (1 very disagree; 2 disagree; 3 quite disagree; 4 quite agree; 5 agree; 6 very agree) to ensure that respondents didn't pick neutral on the questions. The students were facilitated in completing the survey using Microsoft Forms. Likert-type questionnaire can be considered an ordinal data or interval data, depending on the purpose of the research. (South et al., 2022) mentions that the interpretations of measurements obtained through Likert scales can vary as either ordinal (discrete) or interval (continuous) in nature, depending on how the scale is used. Based on the statement above, the writer decided to interpret the data into ordinal scale. It is advisable to use additional methods to transform the ordinal scale into interval scale, namely using Method of Successive Interval (MSI). According to Waryanto & Millafati (Waryanto & Millafati, 2006), The transformation of an ordinal scale into interval scale can be achieved through the Method of Successive Intervals (MSI). As a result, it becomes possible to use parametric statistical tests. The conducted survey also needs to be tested and demonstrated on its validity and reliability. In addition to conducting validity and reliability tests, the data is also analyzed using correlation analysis.

Research Question

The next step in the research process is designing the questions for the survey that will be distributed to Bina Nusantara University students. This is an important step in collecting data that will be used to measure social experience. The writer will design the questions based on the determined latent and its sources. Table 1. provides the statement based on self-efficacy sources, while Table 2. provides the statement based on self-regulation sources.

Table 1. Self-Efficacy statement

Self-Efficacy	
Sources	**Statement**
Enactive Mastery Experience	When working with a challenging assignment, I am certain that I can finish it successfully.
Vicarious Experience	Knowing what my friend has accomplished, I believe I can do as well in the same field.
Verbal Persuasion	The support I got from others encourage me to attend college activities.
	I consider feedback from others as an approach of self-introspection.
Physiological & Affective States	I can implement the class's materials in everyday life.

Table 2. Self-Regulation statement

Self-Regulation	
Sources	**Statement**
Standards	When interacting with others, I set social boundaries (right and wrong).
Monitoring	I evaluate myself on how I act toward others.
Willpower	I am thinking carefully before speaking to others.
	During social interactions with others, I'm capable of handling my emotions well.
Motivation	In college, I am motivated to maintain positive friendships.

RESULTS AND DISCUSSION

Respondent Data

Conducted in July 2023, the data for this study were collected via online questionnaire and interviews conducted with college students in Jakarta. The writer selected students from Bina Nusantara University's School of Computer Science as our sampling frame, with an assessment of self-efficacy and self-regulation exhibited by each participant. The final sample size for analysis consisted of a total of 300 individuals. Table 3. provides an overview of the key characteristics within the dataset.

Table 3. Respondent description

Characteristic	Percentage
Gender	
Female	23
Male	77
Field of Study	
Computer Science	24
Computer Science and Mathematics	8.67
Computer Science and Statistics	10
Cyber Security	16.67
Data Science	12.67
Game Application and Technology	14.33
Mobile Application and Technology	13.67
Class Standing	
Sophomore	78
Junior	19.67
Senior	2.33

Respondent Answers

1) Self-Efficacy

The data of the collected respondents is displayed as below:

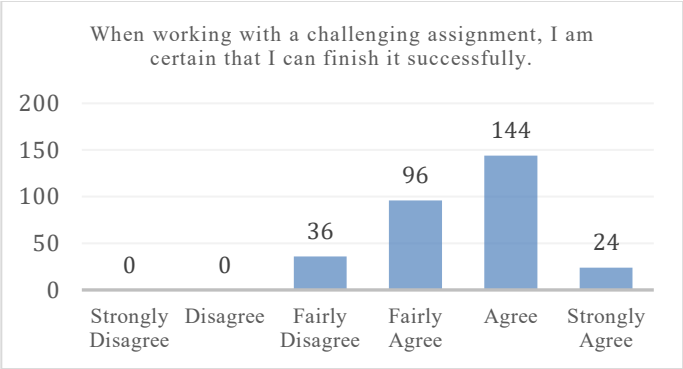

Figure 2. Statement 1 (Enactive Mastery Experience)

- *Statement 1*: As depicted in Figure 2, most of the respondents (48%) indicated agreement with the statement. Furthermore, a substantial proportion (32%) of respondents expressed a slight agreement. In contrast, a noteworthy number of respondents (12%) displayed moderate disagreement. Remarkably, a smaller fraction (8%) of respondents endorsed strong agreement.

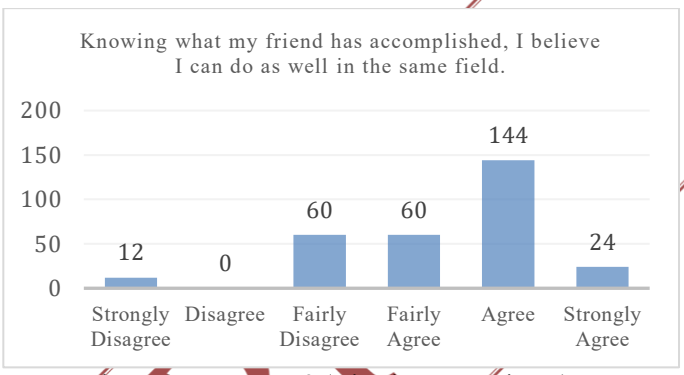

Figure 3. Statement 2 (Vicarious Experience)

- *Statement 2*: As illustrated in Figure 3, the highest percentage of respondents (48%) exhibited agreement with the statement. Additionally, 20% of the respondents demonstrated good agreement. Another 20% of respondents indicated moderate disagreement. Lastly, a fraction (8%) of respondents strongly agreed and 4% respondents strongly disagreed.

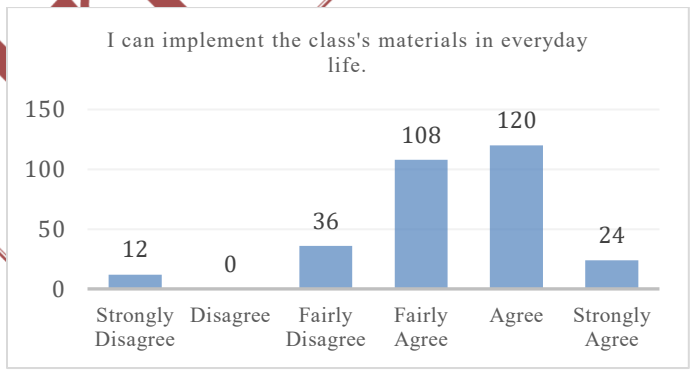

Figure 4. Statement 3 (Physiological & Affective States)

- *Statement 3*: As depicted in Figure 4, most of the respondents (40%) indicated agreement with the statement. Furthermore, a substantial proportion (36%) of participants expressed slight agreement. In contrast, a noteworthy number of respondents (12%) displayed moderate disagreement. Remarkably, a smaller fraction (4%) endorsed strong disagreement.

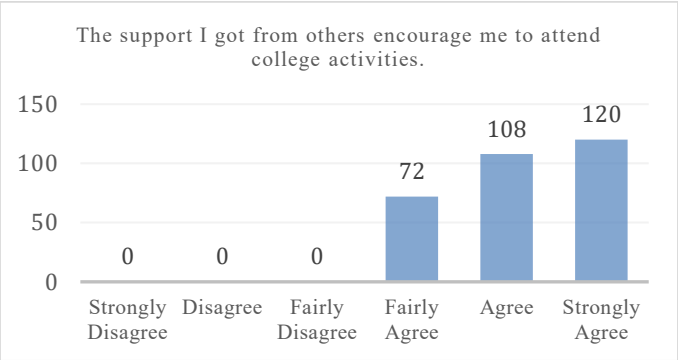

Figure 5. Statement 4 (Verbal Persuasion)

- *Statement 4*: As illustrated in Figure 5, the highest percentage of respondents (40%) exhibited strong agreement with the statement. Additionally, a comparable 36% of the participants demonstrated agreement. Additionally, another 24% of respondents indicated slight agreement. Conversely, none of the participants showed their disagreement with the statement.

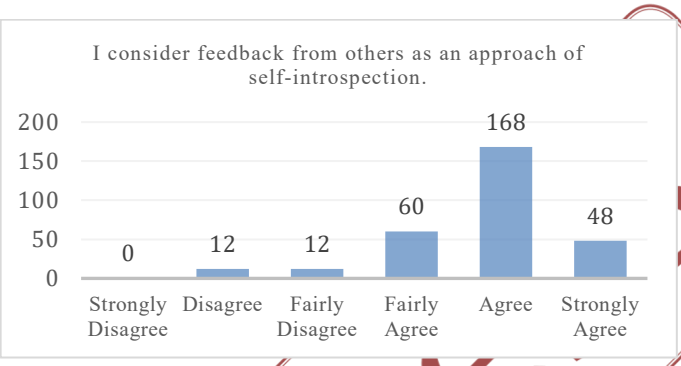

Figure 6. Statement 5 (Verbal Persuasion)

- *Statement 5*: As illustrated in Figure 6, the majority of the respondents (56%) indicated agreement with the statement. Furthermore, a substantial proportion (24%) of participants expressed slight agreement. Additionally, a noteworthy number of responders (12%) displayed strong agreement. Remarkably, a smaller fraction (4%) endorsed disagreement. Another 4% indicated fairly high disagreement.

2) Self-Regulation

The data of the collected respondents is displayed as below:

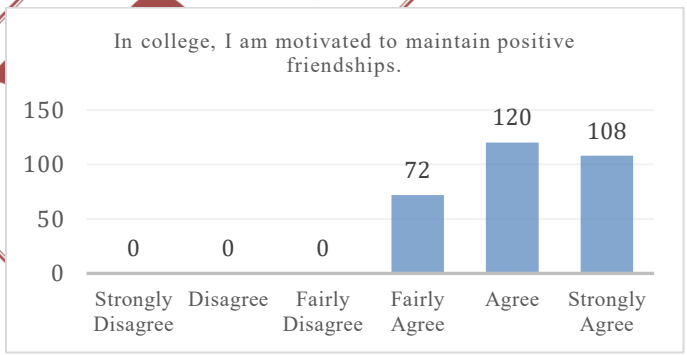

Figure 7. Statement 6 (Motivation)

- *Statement 6*: As illustrated in Figure 7, the highest percentage of respondents (40%) exhibited agreement with the statement. Additionally, a comparable 36% of the participants demonstrated strong agreement. Additionally, another 24% of respondents indicated slight agreement. Conversely, none of the participants showed their disagreement with the statement.

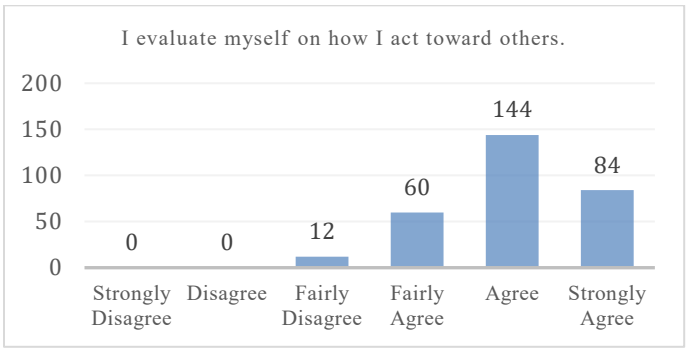

Figure 8. Statement 7 (Monitoring)

- *Statement 7*: As depicted in Figure 8, the majority of the respondents (48%) indicated agreement with the statement. Furthermore, a substantial proportion (28%) of participants expressed strong agreement. Additionally, a noteworthy number of respondents (20%) displayed fairly good agreement. Remarkably, a smaller fraction (4%) endorsed fairly disagreeable.

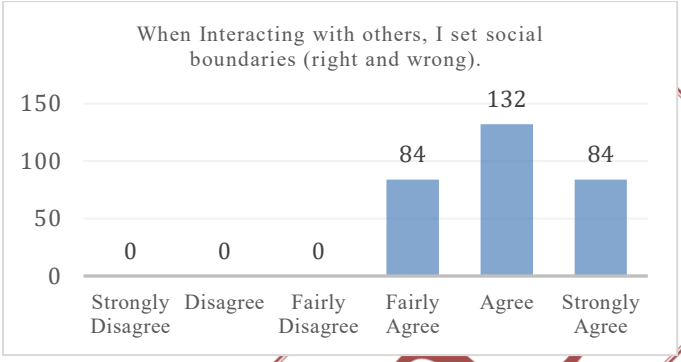

Figure 9. Statement 8 (Standards)

- *Statement 8*: As illustrated in Figure 9, the majority of the respondents (56%) indicated agreement with the statement. Furthermore, a substantial proportion (24%) of participants expressed slight agreement. Additionally, a noteworthy number of responders (8%) displayed strong agreement. Remarkably, a smaller fraction (4%) endorsed disagreement. Another 4% indicated fairly high disagreement.

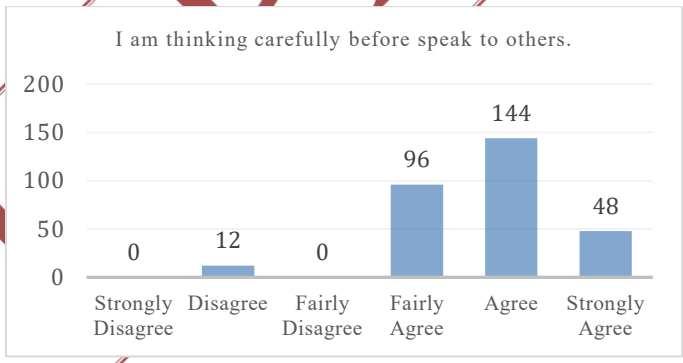

Figure 10. Statement 9 (Willpower)

- *Statement 9*: As depicted in Figure 10, most of the respondents (48%) indicated agreement with the statement. Furthermore, a substantial proportion (32%) of participants expressed fair agreement. In contrast, a noteworthy number of respondents (16%) displayed strong agreement. Remarkably, a smaller fraction (4%) endorsed disagreement.

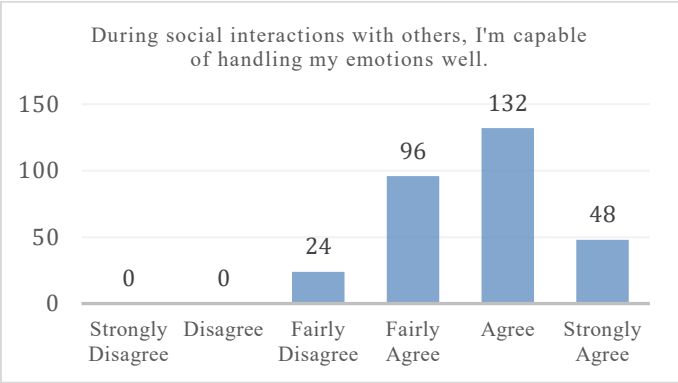

Figure 11. Statement 10 (Willpower)

• *Statement 10*: As illustrated in Figure 11, the highest percentage of respondents (44%) exhibited agreement with the statement. Additionally, a comparable 32% of the participants demonstrated fairly good agreement. On the other hand, 16% of respondents indicated strong agreement. Strikingly, a smaller fraction (8%) slightly disagreed with the statement.

Survey Result Analysis

1) Validity Test

• *Self-Efficacy:* The validity results for self-efficacy are provided in Table 4. Within a 95% confidence interval, each correlation established between the domains and total scores has exhibited a statistical significance of $p < 0.5$. The correlation between the items and the cumulative scores is as follows: Q1 (r= .460); Q2 (r= .433); Q3 (r= .525); Q4 (r= .538); and Q5 (r= .399) are all considered valid. In an effort to optimize the overall alpha coefficient, computations are presented in the column titled 'Cronbach Alpha if Item Deleted'. These values span the interval from .643 to .684. It is noteworthy that all values recorded in the column are below the threshold of .713. This indicated that no item warrants exclusion from the data.

Table 4. Self-efficacy internal validity result

	Q1	Q2	Q3	Q4	Q5
Cronbach Alpha if Item deleted	.669	.681	.643	.637	.694
Corrected Item - Total Correlation	.460	.433	.525	.538	.399
r table 5%	.095	.095	.095	.095	.095
Interpretation	Valid	Valid	Valid	Valid	Valid

• *Self-Regulation*: The validity results for self-regulation are provided in Table 5. Within a 95% confidence interval, each correlation established between the domains and total scores has exhibited a statistical significance of $p < 0.5$. The correlation between the items and the cumulative scores is as follows: Q1 (r= .403); Q2 (r= .449); Q3 (r= .455); Q4 (r= .385); and Q5 (r= .416) are all considered valid. In an effort to optimize the overall alpha coefficient, computations are presented in the column titled 'Cronbach Alpha if Item Deleted'. These values span the interval from .602 to .634. It is noteworthy that all values recorded in the column are below the threshold of .669. This indicated that no item warrants exclusion from the data.

Table 5. Self-regulation internal validity result

	Q1	Q2	Q3	Q4	Q5
Cronbach Alpha if Item deleted	.626	.605	.602	.634	.620
Corrected Item- Total Correlation	.403	.449	.455	.385	.416
r table 5%	.095	.095	.095	.095	.095
Interpretation	Valid	Valid	Valid	Valid	Valid

2) Reliability Test

• *Self-Efficacy:* The reliability results for self-efficacy are provided in Table 6. The overall Cronbach's alpha coefficient indicates a value of .713. Based on these findings, it can be inferred that Cronbach's alpha value of .713, which exceeds the threshold of .60, signifies that the set of five items encompassing self-efficacy can be considered reliable.

Table 6. Self-regulation internal validity result.qw3

Cronbach Alpha	N of Items
.713	5

- *Self-Regulation:* The reliability results for self-regulation are provided in Table 7. The overall Cronbach's alpha coefficient indicates a value of .669. Based on these findings, it can be inferred that the Cronbach's alpha value of .669, which exceeds the threshold of .60, signifies that the set of five items encompassing self-regulation can be considered reliable.

Table 7. Self-regulation internal validity result

Cronbach Alpha	N of Items
.669	5

3) Correlation Test

To examine the influence of self-efficacy and self-regulation on individuals' social experiences, we developed a model and correlation analysis using the collected data. Social experience is assigned the role of the dependent variable, while both self-efficacy and self-regulation are assigned as independent variables. The Pearson correlation is displayed in Table 8. Both self-efficacy and self-regulation exhibit coefficient values within the range of .5 and 1, indicating a high degree of correlation. Specifically, the correlations attributed to each of the independent variables are as follows: self-efficacy (r =.687) and self-regulation (r =.677) are classified as strongly correlated.

Table 8. Pearson Correlation

	social experience	self-efficacy	self-regulation
social experience	1.00	.687	.677
self-efficacy	.687	1.00	
self-regulation	.677		1.00

The detailed attributes of the model are outlined in Table 9. The R value denotes the correlation between the dependent and independent variables. Based on these findings, it can be deduced that the R value of .821, which surpasses the threshold of .4, indicates a high-level quality. The number of variances elucidated by the independent variable is shown on the R square. The value of .674, exceeding .5, signifies the model's effectiveness. The adjusted R-square represents the degree to which the dataset's variation can be generalized. An Adjusted R-value of .672, differing by a slight .002 from the R square coefficient, indicated that the model can be relied upon.

Table 9. Model Summary

R	R Square	Adjusted R Square	Std. error of the Estimate
.821	.674	.672	.30503

CONCLUSION

This study examined prior research regarding the influence of connection between self-efficacy, self-regulation, and social experience. Through the analysis of these previous studies, the writer evaluates the survey with validation, reliability, and correlation assessments. This evaluation led us to deduce that numerous factors contribute to determining their relative importance. Firstly, most students agree that verbal persuasion is the most impactful source from self-efficacy that influences their social experiences. All the self-efficacy statements are valid with values ranging from .643 to .684 and reliable with Cronbach's alpha value of .713. Secondly, most students agree that motivation is the most impactful source from self-regulation with none of the participants showing their disagreement with the statement. All the self-regulation statements are valid with values ranging from .602 to .634 and reliable with Cronbach's alpha value of .669. Multiple linear regression analysis shows correlations attributed to each of the independent variables: self-efficacy (r =.687) and self-regulation (r =.677) which are classified as strongly correlated. Multiple linear regression analysis also shows the R value of .821, which surpasses the threshold of .4, indicates a high-level quality. The number of variances elucidated by the independent variable is shown on the R square. The value of .674, exceeding .5, signifies the model's effectiveness. The adjusted R-square

represents the degree to which the dataset's variation can be generalized. An Adjusted R-value of .672, differing by a slight .002 from the R square coefficient, indicated that the model can be relied upon.

According to our analysis, we recommend that future studies incorporate a wider range of variables and a substantial number of participants. Additionally, it would be beneficial to determine the factor(s) that hold the most significant influence between self-efficacy and self-regulation on student's social experience.

REFERENCES

Bandura, A. (1997). Self-efficacy: The exercise of control. New York, NY: W. H. Freeman.

Baumeister, R. F., & Vohs, K. D. (2007). Self-regulation, ego depletion, and motivation. Social and Personality Psychology Compass, 1(1), 115–128. https://doi.org/10.1111/j.1751-9004.2007.00001.x

Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? Journal of Personality and Social Psychology, 74(5), 1252–1265. https://doi.org/10.1037/0022-3514.74.5.1252

Carver, C. S., & Scheier, M. F. (1981). Attention and self-regulation: A control theory approach to human behavior. New York, NY: Springer-Verlag. https://doi.org/10.1007/978-1-4612-5887-2

Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. Psychological Review, 97(1), 19–35. https://doi.org/10.1037/0033-295X.97.1.19

Check, J. W., & Schutt, R. K. (2013). Research methods in education. SAGE Publications.

Chipchase, L., Davidson, M., Blackstock, F., Bye, R., Colthier, P., Krupp, N., Dickson, W., Turner, D., & Williams, M. (2017). Conceptualising and measuring student disengagement in higher education: A synthesis of the literature. International Journal of Higher Education, 6(2), 31–42. https://doi.org/10.5430/ijhe.v6n2p31

Duran, R. L., & Kelly, L. (1994). The role of social experience in the development of communication competence. Communication Research Reports, 11(2), 119–126. https://doi.org/10.1080/08824099409359948

Faleeva, L., Ganieva, Y., Valeeva, R., Valeyeva, N., & Zakirova, V. (2017). Student's social experience forming in university vocational training. Eurasian Journal of Analytical Chemistry, 12(7b), 1127–1135.

Hagger, M. S., Wood, C., Stiff, C., & Chatzisarantis, N. L. D. (2010). Ego depletion and the strength model of self-control: A meta-analysis. Psychological Bulletin, 136(4), 495–525. https://doi.org/10.1037/a0019486

Howse, R. B., Calkins, S. D., Anastopoulos, A. D., Keane, S. P., & Shelton, T. L. (2003). Regulatory contributors to children's kindergarten achievement. Early Education and Development, 14(1), 101–120. https://doi.org/10.1207/s15566935eed1401_7

Joët, G., Usher, E. L., & Bressoux, P. (2011). Sources of self-efficacy: An investigation of elementary school students in France. Journal of Educational Psychology, 103(3), 649–663. https://doi.org/10.1037/a0024048

Leventhal, H., Leventhal, E. A., & Contrada, R. J. (1998). Self-regulation, health, and behavior: A perceptual-cognitive approach. Psychology & Health, 13(4), 717–733. https://doi.org/10.1080/08870449808407425

Narvaez, D. (2010). The emotional foundations of high moral intelligence. New Directions for Child and Adolescent Development, 2010(129), 77–94. https://doi.org/10.1002/cd.275

Prewett, S. L., Bergin, D. A., & Huang, F. L. (2018). Student and teacher perceptions on student-teacher relationship quality: A middle school perspective. School Psychology International, 40(1), 66–87. https://doi.org/10.1177/0143034318807743

Raskauskas, J., Rubiano, S., Offen, I., & Wayland, A. K. (2015). Do social self-efficacy and self-esteem moderate the relationship between peer victimization and academic performance? Social Psychology of Education, 18(2), 297–314. https://doi.org/10.1007/s11218-014-9285-x

Rubin, M., & Hewstone, M. (1998). Social identity theory's self-esteem hypothesis: A review and some suggestions for clarification. Personality and Social Psychology Review, 2(1), 40–62. https://doi.org/10.1207/s15327957pspr0201_3

Schunk, D. H. (2012). Learning theories: An educational perspective. International edition, 6th ed. Upper Saddle River, Pearson.

Singleton, R., Jr., Straits, B. C., Straits, M. M., & McAllister, R. J. (1988). Approaches to social research. Oxford University Press.

South, L., Saffo, D., Vitek, O., Dunne, C., & Borkin, M. A. (2022). Effective use of Likert scales in visualization evaluations: A systematic review. Computer Graphics Forum, 41(3), 43–55. https://doi.org/10.1111/cgf.14538

Vehovar, V., Toepoel, V., & Steinmetz, S. (2016). Non-probability sampling. In C. Wolf, D. Joye, T. W. Smith, & Y. C. Fu (Eds.), The SAGE handbook of survey methodology (pp. 329–346). SAGE Publications. https://doi.org/10.4135/9781473957893

Waryanto, B., & Millafati, Y. A. (2006). Transformasi data skala ordinal ke interval dengan menggunakan makro Minitab. Jurnal Informatika Pertanian, 15, 881–895.