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Determining The Impact of Student Self-Regulation and Emotional Regulation on Collaborative Work Groups

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Abstract

The goal of this study was to see how students' self-regulation and emotional control affected collaborative group work in an online learning environment. At Padang State University, 250 college students participated in this study, which took place in a collaborative group work environment during online learning. Self-administered questionnaires were used to collect data, which was then analyzed using multiple linear regression. According to the findings of this study, self-regulation and emotion control during online learning had a combined influence of 64.2 percent on collaborative group work. Self-regulation, in particular, was shown to have the highest influence, accounting for 54.1 percent of the total. Furthermore, the t-test findings revealed that the proclivity to manage emotions through expressive repression had a detrimental influence on collaborative group work.

Keywords: Collaborative Work Groups, Online Learning, Self-Regulation, Emotion Regulation

1. Introduction

During the pandemic, the Indonesian government ordered that all educational institutions move from face-to-face learning to online learning through the Ministry of Education and Culture. This regulation was implemented to prevent the possibility of the Covid-19 virus from spreading. Since April 2020, the Minister of Education and Culture has required online learning activities. Online learning allows students to study at their own pace and in their location (Sahir *et al*., 2021) [7]. As a result, students who engage in online learning require more autonomy in their studies. Students are needed to actively organize courses, define learning objectives, and assess their learning processes and outcomes when participating in online learning (self-regulated online learning) (Edi *et al*., 2021) [2].

Students that have good self-regulation will participate actively in the learning process. They can manage themselves well, beginning with the preparation for learning, continuing through the learning process, and concluding with an assessment of learning and achievement (Jermann *et al*., 2006) [3]. Self-regulation encourages students to become unbiased and autonomous learners, allowing them to continue their education as lifelong learners despite a lack of professor assistance Operational self-regulation is defined as a set of behavioral patterns that involve awareness, comprehension, and cognitive control. In addition to effective time and resource management, the capacity to coordinate efforts, including the ability to retain concentration and accomplish tasks, and the ability to detect the need for support and pinpoint and use sources of assistance are required (Lawson *et al*., 2019) [6].

During online learning, students' experiences and emotions shift tremendously. This major lifestyle shift is tough, particularly in terms of a student's ability to manage his emotions during the learning process. Emotions are necessary for survival because they serve as a reminder to actively pursue rewards and avoid losses. Strong emotions, on the other hand, are not always adaptable. Emotion control success is associated to better outcomes such as greater self-regulation and psychological well-being. Emotion regulation approaches can have a wide range of implications on human experience, cognitive processing, behavioral patterns, and well-being (Samsir *et al*., 2021) [8], (Zhafira *et al*., 2020) [10].

Emotion control tactics such as cognitive reappraisal and expressive suppression are used by people. Emotion regulation's major purpose is to comprehend and recognize one's emotions, control and regulate them into more pleasant feelings, interpret emotions in peer relationships in healthier ways, and make better judgments. Furthermore, pleasant and negative emotions can have a significant influence on task-related metacognition, engagement, and subsequent task motivation. These attributes are crucial in determining one's capacity to participate in group work and helping one's self-regulation.

Collaborating with peers has been proved in studies to boost learning and success. As a result, supporting and developing collaborative group work is quite advantageous. As a result of technological advancements, many teachers are attempting to include online groups in their teaching techniques. Several study findings also point to the importance of collaborative group work in fostering student self-regulation in the classroom. Giving children the opportunity to practice self-regulation in a peer group is the most effective technique for improving their self-regulation (Karudin & Jalinus, 2016) [4] (Jermann *et al*., 2006) [3].

The collaborative group work method promotes student growth and allows them to put their new abilities to practice. Students must acquire self-awareness, self-management, social awareness, relational skills, and responsible decision-making abilities in the learning environment. Collaborative group work is critical for students to become more active in their learning, more autonomous and accountable for their learning, and attain greater self-regulation in their academic accomplishments. This strategy stimulates student engagement and develops a culture of cooperation and mutual respect.

However, the majority of prior empirical findings have been on collaborative group work in face-to-face learning contexts (Karudin *et al*., 2017) [5] (Silalahi & Abdullah, 2020) [9].

As a result, the purpose of this study is to place a greater focus on a collaborative group work method in an online learning environment. The goal of this study was to see how students' self-control and emotional regulation affected their capacity to interact in group work contexts, particularly in online learning environments. This study is designed to improve knowledge of self-regulation and emotion management as determinants of students' capacity to work collaboratively in groups.

2. Research methods

The quantitative research approach employed in this study comprised of two variables: students' capacity to self-regulate and manage their emotions, and students' ability to self-regulate and regulate their emotions. Furthermore, in this study, the capacity of students to work in collaborative groups is an independent variable. An independent online learning questionnaire was used to assess students' self-regulation abilities in this study. Gross and John's Emotion Regulation Questionnaire (ERQ) was used to test emotion regulation skills (Jermann *et al*., 2006) [3]. Cognitive reassessment and expressive emphasis were employed to test students' capacity to manage emotions. The dependent variable was assessed using a collaborative group work questionnaire, which includes four elements of collaborative group work: 1) Cooperation 2) Coordination, 3) Communication, 4) Certainty, and 5) Conflict Resolution are all important (Betegón *et al*., 2022) [1].

The questionnaire was filled out by 250 students who took part in collaborative group projects as part of their online learning. As a sampling approach, purposeful sampling was performed. Two independent variables and one dependent variable were exposed to a battery of classical assumption tests in this study, including the normality test, linearity test, multicollinearity test, and heteroscedasticity test. Based on the results of the classical assumption test, it is clear that the independent and dependent variables in this study are normally distributed and linear, with no evidence of multicollinearity or heteroscedasticity, indicating that the requirements for performing multiple linear regression analysis are met and can be implemented.

3. Results and discussion

According to Table 1 below, the significance value (Sig.) in the F test is 0.000 0.05, and the F-value is 85.291 > 2.79 (F_{table}), it can be concluded that the hypothesis in this study is accepted, or in other words, self-regulation and emotional regulation influence collaborative group work simultaneously. Table 1 further demonstrates that in this study, self-regulation and emotion control both contribute 64.2 percent to the collaborative group workability variable.

Table 1: Multiple Regression Analysis

R	R Square	Adjusted R Square	Sig.	F_{value}	F_{table}
0.793	0.629	0.621	0.000	85.291	2.79

According to the t-test findings, the Self-Regulation variable (X1) has a significance value (Sig.) of 0.000 0.05 and a t-count value of 12,514 > 1,750 (t_{table}), implying that the first hypothesis is accepted. This suggests that the self-regulation variable (X1) influences the capacity to operate in a collaborative group (Y). Furthermore, with a Sig. of 0.009 0.05 and a t value of 2.5400 > 1.570 (t_{table}), it can be inferred that the Cognitive Reappraisal Emotion Regulation (X2) variable influences collaborative group work capacity (Y).

With a Sig. of 0.481 > 0.05 and a t-count of -0.720 1.750 (ttable), it can be inferred that the Expressive Suppression Emotion Regulation (X_3) variable has no impact and is adversely associated to collaborative group work ability (Y). Following that, Table 2 summarizes the findings of statistical calculations for the effective and relative contribution of the self-regulation and emotional regulation variables to the collaborative group work ability variable.

Table 2: The values of effective contribution and relative contribution

Variable	Effective Contribution (%)	Relative Contribution (%)
Self-Regulation (X_1)	56.3	89.5
Cognitive Reappraisal Emotion Regulation (X_2)	10	14
Expressive Suppression Emotion Regulation (X_3)	-4.85	-6.8

According to the data analysis above, the variable regulatory authority (X1) has an effective contribution of 56.3% and a relative contribution of 89.5%. As a comparison, the variable Cognitive Reappraisal Emotion Regulation (X2) has an effective contribution of 10% and a relative contribution of 14%. However, the variable Expressive Suppression Emotion Regulation (X3) has an effective contribution of -4.85 percent and a relative contribution of -6.8 percent. Based on the results of the analysis, we can conclude that the variable of self-regulation (X1) has a greater effect on the variable of teamwork (Y) than the two variables of emotional regulation (X2 dan X3).

The findings revealed that self-regulation and emotion management had a 65.5 percent simultaneous influence on

the collaborative group workability variable. The remaining 35.5 percent is impacted by variables that were not investigated in this study. Self-regulation had the greatest effect, according to the data analysis findings, with an effective contribution of 56.3 percent and a relative contribution of 89.5 percent. As a result, students who are stronger at self-regulation tend to be better at collaborative group learning.

The findings of the coefficient of determination analysis for the emotional regulation variable of cognitive reassessment show that emotion regulation associated with cognitive reassessment has a simultaneous positive influence on a person's ability to work in groups with an effective contribution value of 10% and a relative contribution value of 15%. Individual emotional intelligence and social relationships between students, according to the findings of this study, are essential variables in fostering pleasant interactions in online learning and have the ability to minimize transactional distance between individuals.

4. Conclusion

It may be inferred that self-regulation and emotional regulation both have an influence on the collaborative group workability variable at the same time. The form of emotion management with cognitive evaluation had the largest influence on a person's capacity to participate in group work when compared to expressive suppression. This study's conclusions are solely based on self-report data acquired via a questionnaire. Several tools might be used in a future study to assess collaborative group work processes. As a result, the research findings can give a full picture of the difficulties encountered in collaborative group work.

5. References

1. Betegón E, Rodríguez-Medina J, Del-Valle M, Irurtia MJ. Emotion Regulation in Adolescents: Evidence of the Validity and Factor Structure of the Cognitive Emotion Regulation Questionnaire (CERQ). International Journal of Environmental Research and Public Health. 2022; 19(6):3602. https://doi.org/10.3390/ijerph19063602
2. Edi F, Ambiyar Verawardina U, Samsir, Watrianthos R. Improving Lesson Plan Models Using Online-Based in the New Normal Era. EDUTEC: Journal of Education and Technology. 2021; 4(3). http://ejournal.ijshs.org/index.php/edu/article/download/109/158
3. Jermann F, Van der Linden M, D'Acremont M, Zermatten A. Cognitive Emotion Regulation Questionnaire (CERQ). European Journal of Psychological Assessment. 2006; 22(2):126-131. https://doi.org/10.1027/1015-5759.22.2.126
4. Karudin A, Jalinus N. Effect of Collaborative Learning Model Jigsaw Type to Motivation, Responsibility and Laerning Results of Students on Thermodynamic Learning in Vocational Education, 2016.
5. Karudin A, Jalinus N, Krismadinata K. Collaborative Project-Based Learning: An Instructional Design Model in Themodynamics on Technical Vocational Education and Training (TVET), 2017.
6. Lawson MJ, Vosniadou S, Van Deur P, Wyra M, Jeffries D. Teachers' and Students' Belief Systems About the Self-Regulation of Learning. Educational Psychology Review. 2019; 31(1):223-251. https://doi.org/10.1007/s10648-018-9453-7
7. Sahir SH, Ayu Ramadhana RS, Romadhon Marpaung MF, Munthe SR, Watrianthos R. Online learning sentiment analysis during the covid-19 Indonesia pandemic using twitter data. IOP Conference Series: Materials Science and Engineering. 2021; 1156(1):012011. https://doi.org/10.1088/1757-899x/1156/1/012011
8. Samsir Ambiyar, Verawardina U, Edi F, Watrianthos R. Analisis Sentimen Pembelajaran Daring Pada Twitter di Masa Pandemi COVID-19. Jurnal Media Informatika Budidarmajurnal Media Informatika Budidarma. 2021; 5(10):174-179. https://doi.org/10.30865/mib.v4i4.2293
9. Silalahi J, Abdullah R. Effects of problem-based learning model and collaborative learning model on the learning outcomes of mechanics engineering. Journal of Physics: Conference Series. 2020; 1456(1):12035.
10. Zhafira NH, Ertika Y, Chairiyaton. Persepsi Mahasiswa Terhadap Perkuliahan Daring Sebagai Sarana Pembelajaran Selama Masa Karantina Covid-19. Jurnal Bisnis Dan Kajian Strategi Manajemen. 2020; 4:37-45.