

### Teachers' Expectations and Students' Achievement

To what extent do teachers' expectations function as a self-fulfilling prophecy in influencing student achievement, and how does intrinsic motivation act as a mediator in this relationship?

Psychology

Word count: 3954

**Table of Contents**

Teachers' expectations and students' achievement..... 3

    Introduction..... 3

    The Effects of Teachers' Expectations on Students' Achievement ..... 4

    Rosenthal's Four-Factor Theory ..... 7

    The Effect of Accuracy of Teachers' Expectations on Their Behaviours..... 8

    Motivation..... 11

    Rosenthal's Four Factor Theory and Self-Determination Theory..... 12

    Role of intrinsic motivation in students' achievement ..... 13

    Conclusion..... 14

References ..... 18

## **Teachers' expectations and students' achievement**

### **Introduction**

From the first day of school, teachers play an important role in students' education and learning process. Teacher's behaviours, educational techniques, and expectations for their students all impact students' achievement and motivation (Gentrup, Lorenz, Kristen, & Kogan, 2020; Hostetter, 2024; Shah, 2009). Therefore, understanding the factors—particularly the impact of teachers' expectations and behaviours—on students' motivation and academic performance is essential. This area of study not only helps educators become more aware of their own behaviours but also provides valuable insights for academicians aiming to improve teaching techniques, ultimately ensuring that students' motivation, and thus their achievement, is not negatively affected.

Expectation refers to making inferences about potential future occurrences from past experiences. Brophy and Good (1974) define teacher expectations as: "inferences that teachers make about the present and future academic achievement and general classroom behaviour of their students" (Brophy & Good 1974, as cited in Hoge, 1984). The impact of teachers' expectations on students' achievement has been a significant topic of debate across several decades (Jussim & Harber 2005, as cited in Speybroeck et al., 2012).

This concept was explained firstly by Merton (1948) with the term "self-fulfilling prophecy", which suggests that an incorrect interpretation of a situation can lead to behaviours that derive the initial misunderstanding. Merton provided various examples demonstrating the effects of expectations, indicating that these expectations broadly influence social contexts such as, education, work life and social interactions (Merton, 1948).

This essay investigates the extent to which teachers' expectations influence students' academic achievement through behaviours that may either encourage or inhibit intrinsic motivation. The essay begins by discussing the concept of the self-fulfilling prophecy and its

relationship to teachers' behaviours, including an analysis of the effect of accuracy of those expectations on teachers' behaviours. This analysis will also utilize the four factors identified by Rosenthal as mediators in the expectancy effect. The final section will explore how these behaviours impact students' intrinsic motivation by integrating Rosenthal's Four-Factor Theory with Self-Determination Theory and, consequently, their academic achievement. Both quantitative and qualitative studies from past and recent research will be described, analysed, evaluated, and compared to provide a comprehensive understanding of the topic. The conclusion will aim to answer the research question based on the findings presented, address the essay's limitations, propose ideas for further research, and offer recommendations for teachers regarding their expectations.

### **The Effects of Teachers' Expectations on Students' Achievement**

Rosenthal and Jacobson (1968) were the first to investigate the relationship between teachers' expectations and students' achievement. In the research, they informed elementary school teachers that, based on IQ test scores, certain students were probably become academic "bloomers" the following year. In reality, however, these students were selected at random (so the expectations were inaccurate). During the academic year, the researchers conducted classroom observations, and at the end of the year, students took an IQ test. Findings showed that students labelled as "bloomers" showed higher achievement than their classmates (Popov, Parker & Seath, 2017, p.238). Based on this study, the relationship between expectations and outcomes might appear simple and direct. While the study demonstrated the effect of teachers' expectations on students' outcomes, it has several limitations: Since only elementary students were involved, the study's generalizability is limited, as some researchers suggest that that these expectations only have an effect during the initial years of a new school environment such as in the 1st, 2nd and 7th grade (Raudenbush, 1984).

While Rosenthal and Jacobson's study focuses on the effect of high expectations, examining the effects of low expectations offers additional insights. In a more recent study, Gentrup et al. (2020) explored both high and low expectations of teachers and their influence on student achievement. They used a sample of 1026 first-grade students and employed various methods, including databases, survey designs, observations (video), interviews, and tests, to assess teachers' expectations and students' achievement in reading and mathematics. Data collection occurred three times throughout the school year: first, at the beginning (where students took an achievement test and participated in interviews, while teachers completed questionnaires about their expectations); second, in the middle (where teacher-student interactions were recorded, and students were interviewed) and third, at the end of the year (where students were performed test and interviewed).

First, the researchers assessed the accuracy of teachers' expectations and found that these expectations are not based on students' current achievements, indicating their inaccuracy. The main results demonstrated that students' year-end achievements are predicted by these inaccurate teacher's expectations. Higher achievement in reading and mathematics are linked to teachers' high expectations, while lower achievement is associated only with teachers' low expectations in reading. When comparing Gentrup et al. (2020) with the original study, it is evident that Gentrup et al. (2020) utilized a richer methodology, larger sample size, and considered both high and low expectations. This results in higher validity and accuracy in their findings, even though both studies concluded similar outcomes regarding high expectation teachers. However, according to Gentrup et al. (2020), the link between teachers' low expectations and student performance was found only in reading achievement, not in mathematics. One limitation may be the age of the students; they typically have some mathematical knowledge before entering first grade, whereas they usually do not learn to read until they start elementary school, as noted by the researchers

(Gentrup et al., 2020). Nonetheless, this raises questions about the different effects of expectations in various academic areas. For instance, the original study investigated the effects of expectations on students' IQ levels, which is also a distinct area. Future research could explore the impact of expectations across different subjects that align with students' overall achievements.

One of the limitations of the Gentrup et al. (2020) is the limited diversity of its sample, as it investigated only one school in Germany. A more diverse sample with broader ethnic representation would allow for a more accurate analysis of the topic. Supporting the original study, Rubie-Davies, Hattie, and Hamilton (2006) aimed to compare teacher expectations and student achievement among different ethnic groups in New Zealand, focusing on the majority white group and three significant minority groups. The study included 540 students from various ethnic backgrounds (New Zealand European, Māori, Pacific Island, and Asian) and 21 primary teachers in Auckland. At the start of the year, teachers completed a survey about their expectations for students' reading abilities. These results were later compared with the actual reading abilities of students by the end of the year. Results indicated that teachers held lower expectations for Māori students than for other ethnic groups, and by year-end, Māori students showed the lowest reading achievement, despite starting with similar abilities.

In addition to other studies, this research supports the effect of teachers' expectations on different ethnic groups by using a more diverse sample. Although the study's conclusions were generally drawn, it specifically found that teachers' expectations were not based on students' reading abilities, as these abilities were similar across groups at the start of the year. However, teachers had lower expectations for Māori students compared to others. Thus, the only significant difference between groups appears to be ethnicity, meaning the teachers' expectations were inaccurate (Rubie-Davies et al., 2006).

Comparing the studies discussed so far reveals a shared perspective on how teachers' expectations affect student achievement. In all three studies—Rosenthal and Jacobson (1968), Gentrup et al. (2020), and Rubie-Davies et al. (2006)—teachers' expectations are found to be inaccurate, shaped by external factors like ethnicity and other biases rather than by students' actual academic abilities (Gentrup et al., 2020; Popov et al., 2017, p. 238; Rubie-Davies et al., 2006). Jussim (1989) similarly found that only inaccurate, and thus biased, expectations can lead to self-fulfilling prophecies, as accurate expectations tend to simply predict student achievement (Jussim, 1989, as cited in de Boer, Bosker & van der Werf, 2010). Likewise, Jussim and Harber (2005) concluded that when teachers' expectations are accurate, they reflect rather than shape student performance. In such cases, student achievement is largely driven by students' actual capabilities not teacher expectations.

According to Merton's explanation, an **inaccurate** expectation about a situation can lead to changes in **behaviour** that ultimately confirm the initial misunderstanding (Merton, 1948). This is supported by the findings of Jussim (1989), Jussim and Harber (2005), as well as the studies discussed above. This raises an important question: Are there specific teacher behaviours or factors that differ according to the accuracy of their expectations, thus influencing student achievement?

### **Rosenthal's Four-Factor Theory**

Rosenthal's Four-Factor Theory provides a nuanced framework for understanding the impact of teacher expectations on student achievement through four mediating factors: climate, feedback, input, and output, which collectively shape the expectancy effect in educational contexts (Harris & Rosenthal, 1986; Gentrup et al. 2020; Shan, 2022).

The climate factor refers to the emotional and social environment cultivated by teachers in the classroom. Teachers with high expectations generally create a warmer, more supportive climate. The feedback factor highlights the differential responses teachers provide

based on their expectations of student's performance. Teachers who hold high expectations tend to give more feedback, which helps reinforce learning and guides students toward improvement. The input factor reflects teachers' tendency to provide extensive and challenging material to students. Teachers expecting high from their students are more likely to present challenging and varied learning materials. Finally, the output factor refers to teachers providing opportunities for students to participate and respond in class. High expectations often lead teachers to offer students more opportunities to participate (Harris & Rosenthal, 1986).

Rosenthal's Four-Factor Theory elucidates how each of these factors may act as mediators of the expectancy effect in educational settings, influencing teachers' behaviours based on their expectations (Gentrup et al., 2020; Shan, 2022).

According to the theory, teachers who hold inaccurate high expectations of their students tend to create a positive classroom climate. They provide more feedback, ask challenging questions, and offer greater opportunities for student engagement. Conversely, this implies that teachers with inaccurate low expectations may struggle to cultivate a supportive classroom environment, they may give less feedback, avoid posing challenging questions, and fail to provide greater opportunities for student engagement.

Then, how do teachers with accurate expectations behave differently toward their students compared to those with inaccurate expectations?

### **The Effect of Accuracy of Teachers' Expectations on Their Behaviours**

The impact of teachers' expectations on their behaviours toward students has been studied and confirmed by various researchers (Brandmiller, Schnitzler & Dumont, 2023; Brophy & Good, 1971; Denessen, Keller, van den Bergh & van den Broek, 2020; Good, Cooper & Blakey, 1980; Rubie-Davies, 2007). For example, Rubie-Davies (2007) investigated how the behaviours of teachers with high and low expectations differed and how

these differences affected classroom dynamics. To explore teacher-student interactions, Rubie-Davies conducted observations with 12 teachers from eight randomly selected schools, who were then divided into three groups based on their expectations of students: overestimated high expectations, underestimated low expectations, and average progress. (Here, "overestimation" and "underestimation" refer to inaccurate expectations.)

Each teacher's interactions were observed twice during a half-hour reading lesson over the school year. During each session, two observers were present—one completed an observation protocol while the other took notes and recorded audio. To maintain unbiased interactions, teachers were informed that the study focused on teacher-student interaction, though they were not told the study's true purpose. The researchers measured five types of teacher statements: teaching, feedback, questioning, behaviour management, and procedural statements.

The findings demonstrated that teacher behaviours differed significantly across expectation groups for nearly every statement. Teachers with high expectations spent more time establishing a framework for their students' learning, offered more praise for correct answers, posed higher-order questions, and provided more feedback than teachers in other groups. The use of negative management statements also varied: while all three groups employed both positive and negative behavioural statements, high-expectation teachers used a higher proportion of positive statements to manage behaviour (Rubie-Davies, 2007). Despite the study's limitation of a small teacher sample, it provides a detailed analysis of how teachers' inaccurate expectations shape their behaviour. Later studies by Rubie-Davies (2015) and Good (1969) found similar results, reinforcing these findings (Good, 1969, as cited in Brophy & Good, 1971; Rubie-Davies, 2015, as cited in Denessen et al., 2020).

While Rubie-Davies (2007) examined the impact of teachers' inaccurate expectations on their behaviours, Denessen et al. (2020) explored the effects of accurate expectations. This

study included 152 fourth-grade students and 8 teachers in the Netherlands and aimed to assess the relationship between student achievement, teachers' expectations, and teacher-student interactions. Teachers completed a questionnaire about their expectations, while students took a math test to assess their current achievement levels. The second author observed and recorded 24 math lessons, discussing findings with the first author. Teachers were informed that their interactions with different students would be observed (Denessen et al., 2020).

The researchers used correlational analysis to examine the relationship between teachers' expectations, student achievement, and teacher-student interactions. First, they found a strong correlation between students' achievement and teachers' expectations, indicating accuracy in these expectations. Second, teachers interacted more frequently with low-expectation students, providing them with more feedback compared to high-expectation students, in both whole-class and individual settings (Denessen et al., 2020).

Denessen et al. (2020) acknowledge that correlational analysis does not establish causation, limiting the study's ability to confirm that teachers' expectations derive solely from student achievement and therefore drive teacher-student interactions. Another limitation is potential participant bias; teachers were aware of the study's aim, possibly altering their behaviour. When comparing generalizability and validity, Rubie-Davies (2007) used a larger, more diverse sample and minimized participant bias by not revealing the study's true aim.

Furthermore, the findings of Rubie-Davies (2007) closely align with Rosenthal's Four-Factor Theory, which outlines four factors that mediate the relationship between teachers' expectations and student achievement (Harris & Rosenthal, 1986). Inaccurate high-expectation teachers cultivate a positive classroom climate by establishing supportive learning frameworks and utilizing more positive management statements. They provide increased feedback that reinforces student learning. While the study does not explicitly address the input

and output factor, it can be inferred that high-expectation teachers present more challenging material, fostering deeper engagement among students.

In contrast, Denessen et al. (2020) found that teachers with accurate expectations interacted more frequently with low-expectation students, giving them more feedback. According to Rosenthal's Four-Factor Theory, while teachers with inaccurate high expectations enhance the classroom climate, feedback, input, and output primarily for high-achieving students, those with accurate low expectations can positively influence these same factors, particularly for low-achieving students as the findings of Denessen et al. (2020) suggest.

Overall, both studies illustrate how accuracy of teachers' expectations shape their behaviours.

### **Motivation**

Motivation is a critical factor in the learning process and is widely recognized as one of the determinants of students' academic achievement (Marbibi et al., 2022; Mulaudzi, 2023). Thus, Self-Determination Theory has been widely used to understand student motivation in school settings (Guay, 2021). Self-Determination Theory (SDT), developed by Deci and Ryan in 1985, is a comprehensive framework designed to explain human motivation, personality, and the fulfilment of key psychological needs: autonomy (the need to feel in control of one's action), competence (the need to feel effective), and relatedness (the need to connect with others). According to SDT, satisfying these needs is essential for fostering intrinsic motivation, which involves engaging in activities for their inherent satisfaction and enjoyment (Lopez-Garrido, 2023).

Kastuhandani and Ke (2022) emphasize the importance of intrinsic motivation in enhancing engagement with complex reading tasks, aligning with SDT. The study reveals that Cambodian undergraduate students often struggle with low intrinsic motivation due to

language barriers and complex texts, leading to passive engagement. The researchers implement a supportive learning environment for 27 students that addresses students' basic psychological needs—competence, autonomy, and relatedness. Their findings indicate a significant increase in intrinsic motivation following these interventions, demonstrating that fulfilling these needs fosters student engagement and aligns with SDT principles, thereby supporting the theory.

### **Rosenthal's Four Factor Theory and Self-Determination Theory**

When Rosenthal's Four-Factor Theory viewed through the lens of SDT, each of these factors also appears to influence student motivation by addressing their psychological needs for autonomy, competence, and relatedness (Shan, 2022).

In terms of Rosenthal's climate factor, it is reasonable to assume that a warmer, more supportive environment enhances students' feelings of relatedness and competence, which in turn can bolster their intrinsic motivation. Regarding the feedback factor, students who receive more feedback may experience a greater sense of competence, autonomy, and relatedness, leading to increased intrinsic motivation. The input factor also has the potential to strengthen students' sense of competence by presenting them with challenging content. By being challenged in this way, students gain a sense of control over their learning, which further enhances intrinsic motivation. Finally, the output factor may enhance students' sense of competence by enabling them to demonstrate their knowledge and skills. Additionally, this factor could foster autonomy by encouraging students to actively engage in their learning process, giving them the power to contribute and make choices. Furthermore, increased opportunities for participation also might strengthen relatedness by fostering connections within the learning environment. This triad of competence, autonomy, and relatedness ultimately serves to boost students' intrinsic motivation.

While these factors can be analysed separately, they collectively link to intrinsic motivation through the basic psychological needs (Shan, 2022). Since motivation could integrate all of these factors, it can be viewed as a crucial mediator in the expectancy effect too. Thus, its framework is valuable for investigating the impact of teachers' behaviours on students' intrinsic motivation and, subsequently, their academic outcomes.

### **Role of intrinsic motivation in students' achievement**

The role of intrinsic motivation in students' achievement has been the subject of numerous studies (Fitriwati, 2019; Lihong, Xiaofeng & Jian, 2020; Raysharie et al., 2023; Tokan & Imakulata, 2019).

Fitriwati (2019) investigated the effect of both intrinsic and extrinsic motivation on the academic performance of eighth-grade English learners in Indonesia. Data on intrinsic and extrinsic motivation were collected through questionnaires, while students' English scores were obtained from mid-semester exams. The analysis revealed a significant correlation between intrinsic motivation and English learning achievement, indicating that students with higher intrinsic motivation tended to achieve better results. Conversely, no significant correlation was found between extrinsic motivation and academic performance, suggesting that extrinsic factors did not substantially influence students' achievements. Notably, when considering both intrinsic and extrinsic motivation, intrinsic motivation emerged as the stronger predictor of academic success. However, the study's reliance on self-reported questionnaires may introduce bias, as students might overestimate their motivation levels. Additionally, the demographic characteristics of the sample—predominantly Indonesian eighth graders—may limit the generalizability of the findings to other educational contexts.

Similar findings have been reported in other studies. For instance, Tokan and Imakulata (2019) found that intrinsic motivation has a direct effect on students' achievement, further supporting the notion that intrinsic motivation plays a vital role in academic success.

Raysharie et al. (2023) demonstrated that students with high intrinsic motivation achieved better academic outcomes compared to those with low intrinsic motivation. Collectively, these studies highlight the significance of intrinsic motivation in influencing students' academic performance, indicating that fostering intrinsic motivation—not diminishing it—is vital for enhancing overall student achievement.

### **Conclusion**

Based on the research, it can be concluded that to high extent teachers' inaccurate expectations act as a self-fulfilling prophecy, thereby significantly impacting students' academic achievement. This influence is notably mediated by intrinsic motivation, which emerges as a critical factor in enhancing student achievement.

According to Merton's explanation, when teachers hold **inaccurate expectations**, their **behaviors** can manifest those misconceptions, thus affecting student outcomes (Merton, 1948). Merton's emphasis on "behavior" is particularly relevant, as it underscores the critical role that teacher behaviours play in shaping self-fulfilling prophecies. Rosenthal's Four-Factor Theory elucidates four specific factors—climate, feedback, input, and output—through which teachers' expectations influence their behaviors and, consequently, student achievement. Moreover, Merton's distinction between accurate and inaccurate expectations reveals that their effects on behavior differ significantly.

Study by Rubie-Davies (2007) and Denessen et al. (2020) support this claim, demonstrating that teacher behaviours vary significantly based on accuracy of their expectations. Teachers with inaccurate high expectations found typically foster a more positive interaction with high-achieving students, providing them with more feedback, posing challenging questions, and offering greater opportunities (Harris & Rosenthal, 1986). Conversely, teachers with inaccurate low expectations may exhibit less engagement and support toward low-achieving students.

Furthermore, intrinsic motivation serves as a significant mediator in the relationship between teacher expectations and student achievement, as outlined by Self-Determination Theory and Rosenthal's Four-Factor Model. Teachers with high inaccurate expectations can positively influence the classroom climate, as well as the quality of feedback, input, and output (Rubie-Davies, 2007). This enhancement fulfils students' basic psychological needs, leading to increased intrinsic motivation and, therefore, improved academic achievement. Conversely, when teachers hold inaccurate low expectations for students, the impact can be detrimental. In such cases, the failure to fulfil basic psychological needs results in a decrease in intrinsic motivation, subsequently leading to lower academic achievement.

The effects of accurate expectations can be more complex than they initially appear and may not align with Merton's self-fulfilling prophecy framework. This is because accurate expectations are inherently valid, making them less likely to be perceived as self-fulfilling. As demonstrated by Denessen et al. (2020), teachers with accurate low expectations spent more time with low-achieving students and provided them with more feedback. This behaviour reflects an essential aspect of effective teaching, as it is the low-achieving students who require the most support. But do accurate expectations not impact student achievement? While they certainly do, they just do not act as a self-fulfilling prophecy. According to the combined insights of Rosenthal's Four-Factor Theory, Self-Determination Theory and Denessen et al. (2020), teachers with accurate low expectations provided more feedback and engaged more with low-achieving students, likely fulfil these students' basic psychological needs and, consequently, increasing their intrinsic motivation and academic achievement.

It is crucial to note that both Denessen et al. (2020) and Rubie-Davies (2007) did not state that teachers with low (high) expectations completely failed to interact with high (low) expected students. Instead, these studies emphasized the proportions of interactions and behaviours exhibited by teachers toward students with varying expectations. Therefore, it can

be assumed that teachers with accurate high expectations exert sufficient effort regarding the four factors to support high-achieving students. However, further research is necessary to clarify this relationship and explore the broader implications of accurate expectations.

There are, however, many challenges to researching the effect of teacher expectations on student achievement. This topic has been presented from a third-person perspective; however, in reality, students' perceptions of a situation or behaviour can differ significantly, potentially leading to different effects. This variability can be challenging, if not impossible, to control for. Additionally, the behaviours outlined in Rosenthal's Four-Factor Model is limited. There may be other behaviours, such as body language and smiling, which could also influence student motivation, thus student achievement. Moreover, ethical challenges arise as well; given that both students' intrinsic motivation and achievement can significantly impact their future lives, researchers must exercise caution to avoid harming students' intrinsic motivation and achievement in real-life settings to a degree that could cause harm. Furthermore, the role of bias in shaping teacher expectations raises ethical implications for educational equity. It is difficult to use control groups in field experiments, yet these experiments are essential because they possess higher ecological validity compared to studies conducted in artificial settings (Popov et al., 2017, p.19). As well, the predominant reliance on qualitative research methods, such as interviews, could result in both participant and researcher bias. In addition, there is a notable lack of research that comprehensively addresses key aspects—teacher expectations, teacher behaviour, intrinsic motivation, and student achievement—within a single framework. This gap limits our understanding of how these components interact and collectively shape educational outcomes. In this essay, I aim to explore these aspects by connecting various studies in educational contexts with relevant theories. However, in the absence of a unified framework, the transitions between these aspects and their specific impacts on one another are challenging to assess accurately. For

example, a study by Kastuhandani and Ke (2022) found that intrinsic motivation is influenced by language barriers, suggesting that additional unaccounted-for factors may affect outcomes. Consequently, this lack of a unified framework may lead to additional factors, making the overall findings of this essay more complex.

Furthermore, this essay has not addressed several other relevant considerations that could enhance understanding of the topic. For instance, the effect of cultural background on students' responses to expectations is an important factor that warrants further exploration. Further research should also consider the influence of self-concept on student achievement. Understanding how students view themselves academically may provide a deeper understanding of their reactions to both high and low expectations.

Despite the limitations of this essay, it is clear that the accuracy of teachers' expectations is a critical determinant of student achievement. When teachers base their expectations on students' other non-academic factors rather than their actual abilities, it can result in unfair treatment between students. Addressing these biases is essential to fostering equitable educational practices that promote the achievement of all students, teachers must be aware of their expectations and behaviours.

### References

- Brandmiller, C., Schnitzler, K., & Dumont, H. (2023). Teacher perceptions of student motivation and engagement: longitudinal associations with student outcomes. *European Journal of Psychology of Education, 39*(2), 1397–1420. <https://doi.org/10.1007/s10212-023-00741-1>
- de Boer, H., Bosker, R. J., & van der Werf, M. P. C. (2010). Sustainability of teacher expectation bias effects on long-term student performance. *Journal of Educational Psychology, 102*(1), 168–179. <https://doi.org/10.1037/a0017289>
- Denessen, E., Keller, A., van den Bergh, L., & van den Broek, P. (2020). Do Teachers Treat Their Students Differently? An Observational Study on Teacher-Student Interactions as a Function of Teacher Expectations and Student Achievement. *Education Research International, 2020*, 1–8. <https://doi.org/10.1155/2020/2471956>
- Fitriwati, D. G. (2019). The effect of motivation on the learning achievement. *English Language Teaching, 4*(1). <https://doi.org/10.24014/IJIELT.V4I2.6666>
- Gentrup, S., Lorenz, G., Kristen, C., & Kogan, I. (2020). Self-fulfilling prophecies in the classroom: Teacher expectations, teacher feedback and student achievement. *Learning and Instruction, 66*(101296), 101296. <https://doi.org/10.1016/j.learninstruc.2019.101296>
- Good, T. L., Cooper, H. M., & Blakey, S. L. (1980). Classroom interaction as a function of teacher expectations, student sex, and time of year. *Journal of Educational Psychology, 72*(3), 378–385. <https://doi.org/10.1037/0022-0663.72.3.378>
- Good, T. L., & Brophy, J. E. (1971). Analyzing Classroom Interaction: A More Powerful Alternative. *Educational Technology, 11*(10), 36–41. <http://www.jstor.org/stable/44418266>

- Guay, F. (2021). Applying self-determination theory to education: Regulations types, psychological needs, and autonomy supporting behaviors. *Canadian Journal of School Psychology, 37*(1), 75–92. <https://doi.org/10.1177/08295735211055355>
- Harris, M. J., & Rosenthal, R. (1986). Four factors in the mediation of teacher expectancy effects. In R. S. Feldman (Ed.), *The social psychology of education: Current research and theory*, (pp.91–114). Cambridge University Press.  
<https://psycnet.apa.org/record/1986-98347-004>
- Hoge, R. D. (1984). The Definition and Measurement of Teacher Expectations: Problems and Prospects. *Canadian Journal of Education / Revue Canadienne de l'éducation, 9*(2), 213–228. <https://doi.org/10.2307/1494604>
- Hostetter, T. (2024, April 19). The Impact of Teacher Expectations on Students. Atlearning. Retrieved from <https://www.atlearning.org/blog/the-impact-of-teacher-expectations-on-students>
- Jussim, L., & Harber, K. D. (2005). Teacher Expectations and Self-Fulfilling Prophecies: Knowns and Unknowns, Resolved and Unresolved Controversies. *Personality and Social Psychology Review, 9*(2), 131-155.  
[https://doi.org/10.1207/s15327957pspr0902\\_3](https://doi.org/10.1207/s15327957pspr0902_3)
- Kastuhandani, F. C., & Ke, S. (2022). Developing students' intrinsic interest in reading challenging articles: An application of basic psychological need supports. *Sukma: Jurnal Pendidikan, 6*(2), 131–145. <https://doi.org/10.32533/06201.2022>
- Lihong, M., Xiaofeng, D., & Jian, L. (2020). Mediating role of motivation on the effects of teacher-student relationships on foreign language achievement. *Porta Linguarum An International Journal of Foreign Language Teaching and Learning, (33)*, 129–144.  
<https://doi.org/10.30827/portalin.vi33.26641>

- Lopez-Garrido, G. (2023). Self-Determination Theory: How it Explains motivation. *Simply Psychology*. <https://www.simplypsychology.org/self-determination-theory.html>
- Marbibi, D., Añover, H., Gerilla, N., Lapidario, T. M., Mabag, T. M., Gerez, E. K., Lagahit, A. Torrerros, M. (2022). Teachers' feedback: Influence on first year social studies students' motivation towards new normal learning in Leyte normal university. *International Journal of Social Science and Human Research*, 05(07).  
<https://doi.org/10.47191/ijsshr/v5-i7-30>
- Merton, R. K. (1948). The Self-Fulfilling Prophecy. *The Antioch Review*, 8(2), 193–210.  
<https://doi.org/10.2307/4609267>
- Mulaudzi, I. C. (2023). Factors Affecting Students' Academic Performance: A Case Study of the University Context. *Journal of Social Science for Policy Implications*, 11(1), 18-26. <https://doi.org/10.15640/jsspi.v11n1a3>
- Popov, A., Parker, L. & Seath, D. (2017). *Psychology: Course Companion* (2<sup>nd</sup> ed.). United Kingdom: Oxford University Press.
- Raysharie, P. I., Harinie, L. T., Inglesia, N., Vita, V., Wati, S., Sianipar, B., Ongki, O., Pasha, R., Abdurrahman, M., Fadilla, K. A., & Putri, F. (2023). The effect of student's motivation on academic achievement. *Journal Pendidikan Ilmu Pengetahuan Sosial*, 15(1), 168–175. <https://doi.org/10.37304/jpips.v15i1.9552>
- Raudenbush, S. W. (1984). Magnitude of teacher expectancy effects on pupil IQ as a function of the credibility of expectancy induction: A synthesis of findings from 18 experiments. *Journal of Educational Psychology*, 76(1), 85–97.  
<https://doi.org/10.1037/0022-0663.76.1.85>
- Rubie-Davies, C., Hattie, J., & Hamilton, R. (2006). Expecting the best for students: Teacher expectations and academic outcomes. *The British Journal of Educational Psychology*, 76(3), 429–444. <https://doi.org/10.1348/000709905x53589>

- Rubie-Davies, C. M. (2007). Classroom interactions: Exploring the practices of high- and low-expectation teachers. *The British Journal of Educational Psychology*, 77(2), 289–306. <https://doi.org/10.1348/000709906x101601>
- Shah, S. S. A. (2009). Impact of teachers behaviour on the academic achievement of university students. *Journal of College Teaching and Learning*, 6(1). <https://doi.org/10.19030/tlc.v6i1.1183>
- Shan, C. (2022). The Effect of Teacher Expectation to Students' Intrinsic Motivation. In *Proceedings of the 2021 International Conference on Education, Language and Art (ICELA 2021)*, 637. Atlantis Press. <https://doi.org/10.2991/assehr.k.220131.027>
- Speybroeck, S., Kuppens, S., Van Damme, J., Van Petegem, P., Lamote, C., Boonen, T., & de Bilde, J. (2012). The role of teachers' expectations in the association between children's SES and performance in kindergarten: A moderated mediation analysis. *PloS One*, 7(4), e34502. <https://doi.org/10.1371/journal.pone.0034502>
- Tokan, M. K., & Imakulata, M. M. (2019). The effect of motivation and learning behaviour on student achievement. *South African Journal of Education*, 39(1). <https://doi.org/10.15700/SAJE.V39N1A1510>