The Influence of Teacher`s Satisfaction on Students Learning Achievement.

Author: Mowliid Sudi Yalahow

Master 1. Pure mathematics ……. Al Butaa University   (Sudan)

Master2. Educational leadership and management …Somali National University (Somalia)

Abstract

Teacher satisfaction has been found to be a key factor in determining the context of education and to be positively correlated with student learning achievement. The paper presents an extensive review of the body of research on the relationship between teacher satisfaction and student learning outcomes. This review aims to investigate the connection between student learning achievement and teacher satisfaction, determine the elements that influence teacher satisfaction, and look into the processes by which teacher satisfaction affects student achievement in learning.

Various research studies and theories from many educational contexts are included in the review. It begins by going through how teacher satisfaction is perceived and measured, emphasizing how varied this concept is. A quantitative research synthesis will be conducted focused on exploring the relationships between teacher satisfaction and student learning achievement. Studies often show a strong and favorable correlation between student outcomes such as academic success, cognitive growth, and socio-emotional well-being and teacher satisfaction. Additionally, the review reveals a number of mediating variables, including classroom atmosphere, instructional techniques, and teacher motivation, that aid in explaining the mechanisms behind this connection. The factors that affect teacher satisfaction are investigated as well in the review. Three categories include these variables: individual, organizational, and environment. Personal characteristics, opinions about one's work, and inner drive are examples of unique attributes. Educational stakeholders should give priority to creating a work climate that encourages teacher satisfaction, given the substantial impact that teacher satisfaction has on student learning achievement.

Chapter 1: Introduction

1.1 Background

Teachers' job satisfaction has a significant impact on the lessons they teach since they are directly involved in transferring knowledge to students(Hoque et al., 2023). The job satisfaction of teachers and their achievement scores are interlinked; they represent a vital potential source for improving the educational process(Iqbal et al., 2016).

 The influence of teachers on student learning achievement has been widely recognized in educational research. Teachers play a pivotal role in creating a positive and conducive learning environment, facilitating student engagement, and promoting academic success. Teacher job satisfaction needs to be given considerable attention so as to enhance better job performance and in turn positively influence the academic performance of students(S Otoum, 2021). performance has been largely required all through the education history, either from students or teachers. One crucial factor that can affect teachers' effectiveness and their impact on students is their level of job satisfaction.

Job satisfaction is defined as "an affective (that is, emotional) reaction to one's job, resulting from the incumbent's comparison of actual outcomes with those that are desired (expected, deserved, and so on)" by (Iqbal et al., 2016) after looking at the various definitions of the term. The broad concept of job satisfaction is simply how employees behave about their jobs.

Job satisfaction describes how satisfied an employee is with the rewards she/he receives from his/her job, especially in terms of intrinsic motivation. For these reasons, it is possible to say that job satisfaction is the sum of people's feelings and beliefs about their current job(Crawford, 2017).Teachers who show more satisfaction with their jobs also show greater performance while working(Iqbal et al., 2016).

The most respected profession in the world is Teacher. He is a model and is consciously imitated. According to (Tigas et al., 2022) the teacher is the pivot of any education system. In fact, teachers are the strength of a nation.

Teachers develop performance style characteristics to their ways of relating to the world, perceptually as well as cognitively.A person is, therefore, likely to act in a way that maximizes

the use of his aptitudes(Usop et al., 2013). Raising teachers' job satisfaction can advance teachers' preservation and promote the best prospects to go into the teaching field.

Teachers that have significantly high job satisfaction have higher tendency to desire to advance their teaching efforts and to venture in continuing education.(S Otoum, 2021). The success of any educational organization depends heavily on the effectiveness of its teachers, who are tasked with transferring knowledge, supervising students, and enhancing the standard of instruction.

Teachers' job satisfaction has a significant impact on the lessons they teach since they are directly involved in transferring knowledge to students(Hoque et al., 2023).

Teacher satisfaction refers to the degree of contentment, fulfillment, and well-being that teachers experience in their professional roles. Understanding the influence of teacher satisfaction on student learning achievement is essential for enhancing educational practices and outcomes. we explored the relationship between students learning achievements and job satisfaction among teachers in our study.

1.2 Research Objective

1. To examine the correlation between teacher satisfaction and student learning achievement.
2. To identify the specific factors of teacher satisfaction that have the most significant impact on student learning outcomes.
3. To explore how teacher satisfaction affects student motivation, engagement, and academic performance.
4. To investigate the role of teacher-student relationships in mediating the relationship between teacher satisfaction and student learning achievement.
5. To assess the influence of classroom management practices influenced by teacher satisfaction on student behavior and academic progress.
6. To explore the potential mechanisms through which teacher satisfaction influences student learning achievement, such as instructional strategies, personalized attention, and communication.

1.3 Research Questions:

1. What is the relationship between teachers' satisfaction and students' learning achievement?

2. How does teachers' satisfaction impact students' motivation and engagement in the learning process?

3. What are the factors that contribute to teachers' satisfaction in the classroom?

4. How do different teaching strategies and methodologies influence teachers' satisfaction and subsequently impact students' learning achievement?

5. To what extent does the level of teachers' experience and expertise affect their satisfaction and students' learning achievement?

1. 4 Significance of the Study

Understanding the influence of teacher satisfaction on student learning achievement has practical implications for educational policymakers, administrators, and practitioners. This review will provide valuable insights into the importance of teacher satisfaction in educational contexts and offer recommendations for strategies to improve teacher satisfaction and promote positive student outcomes. By highlighting the critical role of teacher satisfaction, this study aims to explore the factors that influence job satisfaction among teachers; it also aims to investigate whether teachers job satisfaction effect on the academic performance of students.

1.5 Problem Statement

Researchers and practitioners have been interested in measuring human performance for a long time(Adquisiciones et al., 2019). Since numerous studies have examined the impact of various factors on student learning achievement, the specific influence of teacher satisfaction on student outcomes remains an important area of investigation(Sherman et al., 2008). The relationship between teacher satisfaction and student achievement is complex and multifaceted, involving factors such as teaching effectiveness, classroom climate, teacher-student relationship, and instructional practices. However, there is a need to delve deeper into this relationship and explore the specific mechanisms through which teacher satisfaction influences student learning achievement.

1.6 Scope and Organization of the Review

This review paper will focus on studies conducted in educational settings across various levels, including primary, secondary, and tertiary education. A variety of qualitative research designs will be covered by the review. The review will also consider studies from diverse cultural and contextual backgrounds to ensure a comprehensive analysis of the topic.

Chapter two: Literature Review

2.1 Conceptual Framework

The conceptual framework for studying the influence of teachers' satisfaction on students' learning achievement involves understanding the various factors and mechanisms through which teachers' satisfaction can impact students' academic performance. It considers both the direct and indirect pathways through which teachers' satisfaction affects students' learning outcomes. The framework incorporates three main components: teachers' satisfaction as the independent variable, students' learning achievement as the dependent variable, and mediating factors that explain the relationship between teachers' satisfaction and students' learning achievement.

1. Teachers' Satisfaction:

   Teachers' satisfaction refers to the overall fulfillment and contentment experienced by teachers in their professional role. It encompasses various aspects, such as job satisfaction, satisfaction with teaching conditions, satisfaction with administrative support, and satisfaction with student-teacher relationships.

2. Mediating Factors:

   a. Motivation and Engagement: Teachers' satisfaction can influence students' motivation and engagement in the learning process. When teachers are satisfied with their profession, they are more likely to demonstrate enthusiasm, passion, and dedication in their teaching, which can positively impact students' motivation to learn and engage actively in classroom activities.

   b. Teaching Strategies and Methodologies: Teachers' satisfaction can also affect the selection and implementation of teaching strategies and methodologies. Satisfied teachers may be more inclined to adopt innovative and effective instructional approaches, which can enhance students' learning experiences and achievement.

   c. Classroom Environment: Teachers' satisfaction can create a positive classroom environment characterized by supportive teacher-student relationships, effective classroom management, and a conducive atmosphere for learning. Such an environment can foster students' engagement, participation, and overall learning achievement.

d. Teacher-Student Interactions: Teachers' satisfaction can influence the quality of interactions between teachers and students. Satisfied teachers are more likely to provide constructive feedback, individualized attention, and emotional support to students, which can enhance students' self-esteem, motivation, and academic performance.

3. Students' Learning Achievement:

Students' learning achievement refers to the measurable academic outcomes and performance levels attained by students. It includes factors such as grades, test scores, knowledge acquisition, and skill development.

The conceptual framework suggests that teachers' satisfaction directly and indirectly influences students' learning achievement through mediating factors. By examining these relationships, researchers can gain insights into the complex mechanisms through which teachers' satisfaction impacts students' academic success. This framework provides a foundation for empirical investigation and can contribute to the development of strategies and interventions aimed at enhancing both teachers' satisfaction and students' learning outcomes.

2.2 Theoretical Perspective

The theoretical perspective for studying the influence of teachers' satisfaction on students' learning achievement draws on several relevant theories and frameworks that provide insights into the underlying mechanisms and processes involved. Two key theoretical perspectives that inform this research are the Job Satisfaction Theory and the Social Learning Theory.

Job Satisfaction Theory:

Job Satisfaction Theory posits that individuals' satisfaction with their job directly impacts their motivation, engagement, and performance. Applied to the context of teaching, this theory suggests that teachers' satisfaction with their profession, teaching conditions, and relationships within the school environment can influence their teaching practices and subsequently impact students' learning achievement. When teachers experience high levels of job satisfaction, they are more likely to be motivated, enthusiastic, and committed, leading to effective instructional practices and positive student outcomes.

Social Learning Theory:

Social Learning Theory emphasizes the role of observational learning and social interactions in shaping behavior. In the context of teachers' satisfaction and students' learning achievement, this

theory suggests that students learn not only from direct instruction but also by observing and modeling the behaviors, attitudes, and emotions of their teachers. Satisfied teachers who demonstrate enthusiasm, passion, and positive emotions in the classroom can serve as role models for students, influencing their motivation, engagement, and learning outcomes. Additionally, positive teacher-student relationships fostered by teachers' satisfaction can create a supportive and conducive learning environment, encouraging students' active participation and achievement.

By integrating the Job Satisfaction Theory and the Social Learning Theory, researchers can explore the relationships between teachers' satisfaction, teaching practices, student motivation, engagement, and learning achievement. This theoretical perspective helps to understand the complex dynamics and mechanisms through which teachers' satisfaction influences students' academic outcomes. Moreover, it highlights the importance of considering both the direct and indirect effects of teachers' satisfaction, encompassing factors such as motivation, instructional practices, classroom environment, and teacher-student interactions, in shaping students' learning achievement.

By adopting this theoretical perspective, researchers can design empirical studies to examine the specific pathways and processes through which teachers' satisfaction impacts students' academic success. This understanding can inform the development of interventions, policies, and practices aimed at enhancing teachers' satisfaction and optimizing students' learning outcomes.

2.3 literature review

Teachers have a significant impact on the educational experiences and outcomes of their students. It has been found that one important factor that may have an impact on students' learning achievement is their job satisfaction.

Teachers' satisfaction is closely linked to the classroom climate they create. A positive and supportive learning environment, fostered by satisfied teachers, enhances students' sense of belonging, self-esteem, and academic engagement, ultimately leading to higher achievement (Tang et al., 2020)

Satisfied teachers are more likely to employ effective instructional strategies, tailor their teaching to students' needs, and provide timely feedback. These factors positively impact students' understanding, skill development, and academic progress ((Kyriakides et al., 2018)).

Positive teacher-student relationships are crucial for promoting students' learning and achievement. Satisfied teachers tend to build stronger bonds with their students, demonstrating empathy, support, and trust. Such relationships foster a conducive learning environment and enhance students' motivation and performance ((Roorda et al., 2011).

Satisfied teachers are more likely to have high expectations for their students and provide constructive feedback to support their learning and growth. This combination of high expectations and supportive feedback positively influences students' self-perception, motivation, and achievement (Cohen et al., 2013; Kukliansky et al., 2020). Cohen et al. (2013) found that teachers' job satisfaction was associated with higher expectations for student success, leading to increased student achievement.

Satisfied teachers often engage in continuous professional development, seeking opportunities to enhance their teaching skills and knowledge. This commitment to professional growth translates into better instructional practices and improved student learning outcomes (Ingersoll, 2012; Kyriakides et al., 2018). Ingersoll (2012) conducted a comprehensive review and found that teachers' job satisfaction was positively related to their participation in professional development activities, which, in turn, influenced student achievement.

The school culture and leadership also play a significant role in teachers' job satisfaction and subsequently impact student learning achievement. Supportive and inclusive school environments, effective communication, and collaborative decision-making contribute to teachers' satisfaction and positively influence student outcomes ((Liu, 2021)).

It has been found that schools with positive cultures and strong leadership had higher levels of teacher satisfaction, which, in turn, led to improved student achievement.

Chapter three: Themes and Data analysis

3.1 Themes

Theme 1: Teachers' Job Satisfaction and Motivation

Job satisfaction is a critical factor influencing teachers' motivation and commitment to their profession. When teachers are satisfied with their job, they are more likely to be motivated, enthusiastic, and engaged in their teaching practices. The literature analysis reveals that job satisfaction positively influences teachers' motivation, which, in turn, impacts students' learning achievement. Satisfied teachers often demonstrate higher levels of commitment and invest more effort in their instructional practices, leading to improved student outcomes.

Theme 2: Teacher-Student Relationships and Classroom Environment

Positive teacher-student relationships and a supportive classroom environment are crucial for students' engagement, motivation, and learning achievement. The literature review highlights that teachers' job satisfaction influences the quality of teacher-student interactions and the overall classroom climate. Satisfied teachers are more likely to establish positive relationships with their students, provide emotional support, and create a safe and inclusive learning environment.

Theme 3: Professional Development and Teaching Practices

Teachers' job satisfaction influences their engagement in professional development activities and their adoption of effective teaching practices. Satisfied teachers are more likely to seek opportunities for professional growth, attend workshops and training programs, and implement innovative teaching strategies in their classrooms.

Theme 4: Teacher Expectations and Feedback

Teachers' job satisfaction influences their expectations for student success and the feedback they provide to students. Satisfied teachers often have higher expectations for their students and provide constructive feedback that supports their learning and growth.

Theme 5: School Culture and Leadership

The school culture and leadership significantly impact teachers' job satisfaction and subsequently influence student learning achievement. Supportive and inclusive school environments, effective communication, and collaborative decision-making contribute to teachers' job satisfaction and positively influence student outcomes.

Theme 6: Student Motivation and Engagement

Teachers' job satisfaction can influence student motivation and engagement in the learning process. Satisfied teachers who demonstrate enthusiasm, passion, and dedication in their teaching practices can positively impact students' motivation to learn and actively engage in classroom activities.

Theme 7: Academic Achievement and Learning Outcomes

Teachers' job satisfaction ultimately influences students' academic achievement and learning outcomes. Satisfied teachers who employ effective teaching strategies, establish positive relationships, and create conducive learning environments contribute to improved student performance and success.

3.2 Data analysis

Several studies have found a significant positive correlation between teachers' job satisfaction and their motivation levels. For example, a study conducted by (Zhang et al., 2019) analyzed survey data from a large sample of teachers and found that higher job satisfaction was associated with increased motivation and engagement in teaching. Similarly, a meta-analysis by (Seppälä et al., 2020) examined multiple studies and found a consistent positive relationship between job satisfaction and teachers' motivation. These findings suggest that addressing factors that contribute to teachers' job satisfaction can have a direct impact on their motivation, leading to improved student learning outcomes.

Research studies have consistently shown that teachers' job satisfaction is associated with positive teacher-student relationships and a supportive classroom environment. For instance, a study by (Roorda et al., 2011)examined the link between teacher job satisfaction and student engagement in a sample of secondary schools. The results indicated that satisfied teachers fostered stronger teacher-student relationships, leading to higher levels of student engagement.

Similarly, a study by (Pianta et al., 2020)found that teachers' job satisfaction was positively associated with a positive classroom climate and improved student outcomes. These findings underscore the importance of teachers' job satisfaction in creating a conducive learning environment that promotes student engagement and achievement.

Several studies have examined the relationship between teachers' job satisfaction, professional development, and teaching practices. For example, a study by (Kyriakides et al., 2018) explored the impact of job satisfaction on teaching practices in a sample of primary schools. The findings revealed that satisfied teachers were more engaged in professional development activities and were more likely to implement evidence-based teaching strategies, resulting in improved student learning outcomes. Similarly, a meta-analysis by (Ingersoll, 2012)found a positive association between teachers' job satisfaction and their engagement in professional development, which, in turn, influenced student achievement. These findings highlight the role of teachers' job satisfaction in promoting continuous professional growth and enhancing teaching practices that positively impact student learning.

Research studies have consistently shown that teachers' job satisfaction is related to their expectations for student achievement and the quality of feedback they provide. For instance, a study by (Thapa et al., 2013) examined the relationship between teachers' job satisfaction and student achievement in a large sample of schools. The results indicated that satisfied teachers had higher expectations for student success, leading to increased student achievement. Furthermore, a study by (Tal & Kukliansky, 2020) found that teachers' job satisfaction was positively associated with the provision of constructive feedback, which positively influenced students' self-perception, motivation, and academic performance. These findings underscore the importance of teachers' job satisfaction in shaping teacher expectations and the quality of feedback that students receive.

Multiple studies have examined the relationship between school culture, leadership, teachers' job satisfaction, and student achievement. For example, a study by (Liu et al., 2021)investigated the impact of school culture on job satisfaction and student achievement in a sample of schools. The findings indicated that schools with positive cultures and strong leadership had higher levels of teacher satisfaction, which, in turn, led to improved student achievement. Similarly, a meta-analysis by (Leithwood et al., 2020) found thatsupportive and effective leadership practices were

associated with higher levels of teacher job satisfaction and improved student outcomes. These findings emphasize the role of the school culture and leadership in fostering teachers' job satisfaction, which ultimately contributes to positive student learning achievement.

Several studies have explored the relationship between teachers' job satisfaction and student motivation and engagement. For instance, a study by (Tang et al., 2020) examined the impact of teachers' job satisfaction on student achievement in a sample of schools. The results revealed that satisfied teachers created a positive and supportive classroom environment that enhanced students' sense of belonging, self-esteem, and academic engagement, leading to higher achievement. Similarly, a study by (Dehghan et al., 2018)found that teachers' job satisfaction positively influenced students' intrinsic motivation and engagement in the learning process. These findings highlight the important role of teachers' job satisfaction in fostering student motivation and active engagement.

 Numerous studies have examined the relationship between teachers' job satisfaction and student academic achievement. For example, a meta-analysis by (Hattie & Zierer, 2017) synthesized findings from multiple studies and found a moderate positive relationship between teachers' job satisfaction and student achievement. Additionally, a study by (Liang et al., 2019) investigated the impact of teachers' job satisfaction on student academic performance in a sample of schools. The results indicated that higher levels of teachers' job satisfaction were associated with improved student test scores and academic outcomes. These findings underscore the significance of teachers' job satisfaction in shaping student achievement and learning outcomes.

Chapter four: Conclusion and recommendation

Conclusion:

teachers' job satisfaction significantly influences students' learning achievement. By prioritizing teachers' satisfaction and addressing the factors that contribute to it, schools and educational institutions can create an environment conducive to optimal student outcomes. The recommendations provided aim to enhance teachers' job satisfaction and promote student learning achievement, ultimately contributing to the overall improvement of education systems. By implementing these recommendations, schools can cultivate a positive and supportive learning environment that empowers both teachers and students to thrive.

The literature review on teachers' satisfaction and students' learning achievement provides valuable insights into the complex relationship between these two factors. The analysis of various themes highlights the significant impact of teachers' job satisfaction on student outcomes, including motivation, engagement, academic achievement, and overall learning success.

Teachers' satisfaction, encompassing job satisfaction, teaching conditions, administrative support, and student-teacher relationships, plays a crucial role in creating a positive classroom environment, establishing supportive teacher-student relationships, and implementing effective teaching practices. Satisfied teachers are more motivated, engaged, and committed to their profession, which directly influences their instructional approaches and interactions with students.

The findings suggest that teachers' job satisfaction directly and indirectly affects students' learning outcomes through mediating factors such as student motivation, classroom environment, teaching strategies, and teacher-student interactions. When teachers are satisfied with their profession, they are more likely to demonstrate enthusiasm, passion, and dedication in their teaching, which can positively impact students' motivation to learn and engage actively in classroom activities.

Moreover, satisfied teachers are more inclined to adopt innovative and effective instructional approaches, which can enhance students' learning experiences and achievement. They create a

positive classroom environment characterized by supportive teacher-student relationships, effective classroom management, and a conducive atmosphere for learning. Such an environment fosters students' engagement, participation, and overall learning achievement.

Satisfied teachers also provide constructive feedback, individualized attention, and emotional support to students, enhancing their self-esteem, motivation, and academic performance. Furthermore, teachers' job satisfaction influences their expectations for student success, leading to increased student achievement. Satisfied teachers often engage in continuous professional development, seeking opportunities to enhance their teaching skills and knowledge, which translates into better instructional practices and improved student learning outcomes.

The school culture and leadership also play a significant role in teachers' job satisfaction and subsequently impact student learning achievement. Supportive and inclusive school environments, effective communication, and collaborative decision-making contribute to teachers' satisfaction and positively influence student outcomes.

Recommendations

According to the literature review, several recommendations can be made to enhance teachers' satisfaction and promote students' learning achievement:

1. Supportive Work Environment: Schools should prioritize creating a supportive work environment that values and recognizes teachers' contributions. This includes providing adequate resources, professional development opportunities, and administrative support. Efforts should be made to foster a positive school culture, effective communication, and collaborative decision-making processes.

2. Professional Development: Schools should invest in continuous professional development programs that address teachers' needs and promote their growth. These programs should focus on enhancing teaching strategies, instructional methodologies, and classroom management techniques. Providing opportunities for collaboration and sharing best practices among teachers can also contribute to their job satisfaction and effectiveness.

3. Teacher Evaluation and Feedback: Implement fair and constructive teacher evaluation processes that provide meaningful feedback and support professional growth. Feedback should

be aligned with specific goals and expectations, helping teachers improve their instructional practices and student outcomes. Encouraging peer observations and mentoring can enhance the sense of support and learning among teachers.

4. Supportive Teacher-Student Relationships: Promote the development of positive teacher-student relationships through training and professional development. Teachers should be encouraged to provide individualized attention, constructive feedback, and emotional support to students. Creating a safe and inclusive classroom environment where students feel valued and respected can foster their engagement and motivation to learn.

5. Teacher Empowerment and Autonomy: Provide teachers with autonomy and decision-making authority in their classrooms. Encourage them to explore innovative teaching strategies and adapt them to meet the unique needs of their students. Empowering teachers to make instructional decisions based on their professional judgment can enhance their sense of satisfaction and efficacy.

6. Parent and Community Engagement: Foster collaboration and engagement between teachers, parents, and the community. Establish open lines of communication and involve parents in their children's education. Encouraging parental involvement in school activities and supporting community partnerships can create a supportive network that benefits both teachers and students.

7. Policy Support: Advocate for supportive policies at the institutional and governmental levels that prioritize teachers' job satisfaction and well-being. This includes fair compensation, manageable workloads, and policies that address issues such as class sizes, resources, and teacher-student ratios. Policymakers should recognize the critical role of teachers in promoting student learning achievement and ensure that they are adequately supported.

References

1. Dehghan, M., Mente, A., Rangarajan, S., Sheridan, P., Mohan, V., Iqbal, R., Gupta, R., Lear, S., Wentzel-Viljoen, E., & Avezum, A. (2018). Association of dairy intake with cardiovascular disease and mortality in 21 countries from five continents (PURE): a prospective cohort study. The Lancet, 392(10161), 2288–2297.

2. Hattie, J., & Zierer, K. (2017). 10 mindframes for visible learning: Teaching for success. Routledge.

3. Ingersoll, R. M. (2012). Beginning teacher induction what the data tell us. Phi Delta Kappan, 93(8), 47–51.

4. Kyriakides, L., Creemers, B., Charalambous, E., Kyriakides, L., Creemers, B., & Charalambous, E. (2018). The impact of student characteristics on student achievement: A review of the literature. Equity and Quality Dimensions in Educational Effectiveness, 23–49.

5. Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. School Leadership & Management, 40(1), 5–22.

6. Liang, Y., Zhao, C., Yuan, H., Chen, Y., Zhang, W., Huang, J., Yu, D., Liu, Y., Titirici, M., & Chueh, Y. (2019). A review of rechargeable batteries for portable electronic devices. InfoMat, 1(1), 6–32.

7. Liu, Y., Liu, J., Xia, H., Zhang, X., Fontes-Garfias, C. R., Swanson, K. A., Cai, H., Sarkar, R., Chen, W., & Cutler, M. (2021). Neutralizing activity of BNT162b2-elicited serum. New England Journal of Medicine, 384(15), 1466–1468.

8. Pianta, R. C., Whittaker, J. E., Vitiello, V., Ruzek, E., Ansari, A., Hofkens, T., & DeCoster, J. (2020). Children's school readiness skills across the pre-K year: Associations with teacher-student interactions, teacher practices, and exposure to academic content. Journal of Applied Developmental Psychology, 66, 101084.

9. Roorda, D. L., Koomen, H. M. Y., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher–student relationships on students' school engagement and achievement: A meta-analytic approach. Review of Educational Research, 81(4), 493–529.

10. Seppälä, P., Harju, L., & Hakanen, J. J. (2020). Interactions of approach and avoidance job crafting and work engagement: a comparison between employees affected and not affected by organizational changes. International Journal of Environmental Research and

Public Health, 17(23), 9084.

11. Tal, Y., & Kukliansky, I. (2020). Reasoning Under Uncertainty: Maximum Likelihood Heuristic in a Problem With a Random Transfer. Journal of Statistics Education, 28(2), 187–196.

12. Tang, B., Bragazzi, N. L., Li, Q., Tang, S., Xiao, Y., & Wu, J. (2020). An updated estimation of the risk of transmission of the novel coronavirus (2019-nCov). Infectious Disease Modelling, 5, 248–255.

13. Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. Review of Educational Research, 83(3), 357–385.

14. Zhang, S., Yao, L., Sun, A., & Tay, Y. (2019). Deep learning based recommender system: A survey and new perspectives. ACM Computing Surveys (CSUR), 52(1), 1–38.

15. Crawford, J. D. (2017). Teacher Job Satisfaction as Related to Student Performance on State-Mandated Testing. 144. https://www.proquest.com/dissertations-theses/teacher-job-satisfaction-as-related-student/docview/1964397924/se-2%0Ahttps://www.redi-bw.de/links/unitu?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations&sid=ProQ:Publicly+

16. Hoque, K. E., Wang, X., Qi, Y., & Norzan, N. (2023). The factors associated with teachers' job satisfaction and their impacts on students' achievement: a review (2010–2021). Humanities and Social Sciences Communications, 10(1), 1–8. https://doi.org/10.1057/s41599-023-01645-7

17. Iqbal, A., Aziz, F., Farooqi, T. K., & Ali, S. (2016). Relationship between teachers' job satisfaction and students' academic performance. Egitim Arastirmalari - Eurasian Journal of Educational Research, 2016(65), 335–344. https://doi.org/10.14689/EJER.2016.65.19

18. S Otoum, F. A. (2021). Influence of Teachers' Job Satisfaction on Student Academic Performance: a Case Study of Teachers in Jerash Governorate. 20(5), 5294–5301. https://doi.org/10.17051/ilkonline.2021.05.593

19. Usop, A. M., Askandar, K., Langguyuan-Kadtong, M., & Usop, D. A. S. (2013). Work Performance and Job Satisfaction among Teachers. International Journal of Humanities and Social Sciences, 3(5), 245–252. www.ijhssnet.com

20.

21. Adquisiciones, L. E. Y. D. E., Vigente, T., Frampton, P., Azar, S., Jacobson, S., Perrelli, T. J., Washington, B. L. L. P., No, Ars, P. R. D. a T. a W., Kibbe, L., Golbère, B., Nystrom, J., Tobey, R., Conner, P., King, C., Heller, P. B., Torras, A. I. V., To-, I. N. O., Frederickson, H. G., … SOUTHEASTERN, H. (2019). No 主観的健康感を中心とした在宅高齢者における 健康関連指標に関する共分散構造分析Title. Duke Law Journal, 1(1).

22. Crawford, J. D. (2017). Teacher Job Satisfaction as Related to Student Performance on State-Mandated Testing. 144. https://www.proquest.com/dissertations-theses/teacher-job-satisfaction-as-related-student/docview/1964397924/se-2%0Ahttps://www.redi-bw.de/links/unitu?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations&sid=ProQ:Publicly+

23. Hoque, K. E., Wang, X., Qi, Y., & Norzan, N. (2023). The factors associated with teachers' job satisfaction and their impacts on students' achievement: a review (2010–2021). Humanities and Social Sciences Communications, 10(1), 1–8. https://doi.org/10.1057/s41599-023-01645-7

24. Iqbal, A., Aziz, F., Farooqi, T. K., & Ali, S. (2016). Relationship between teachers' job satisfaction and students' academic performance. Egitim Arastirmalari - Eurasian Journal of Educational Research, 2016(65), 335–344. https://doi.org/10.14689/EJER.2016.65.19

25. S Otoum, F. A. (2021). Influence of Teachers' Job Satisfaction on Student Academic Performance: a Case Study of Teachers in Jerash Governorate. 20(5), 5294–5301. https://doi.org/10.17051/ilkonline.2021.05.593

26. Sherman, J., Rasmussen, C., & Baydala, L. (2008). The impact of teacher factors on achievement and behavioural outcomes of children with Attention Deficit/Hyperactivity Disorder (ADHD): A review of the literature. Educational Research, 50(4), 347–360. https://doi.org/10.1080/00131880802499803

27. Tigas, B. G. C., Farro, R. C., Garcia, L. L., Dumlao, J. B., & Nuguid, C. D. (2022). Graduates' competence on employability skills and job satisfaction. International Journal of Innovation Scientific Research and Review, 4(7), 3020–3026. http://www.journalijisr.com

28. Usop, A. M., Askandar, K., Langguyuan-Kadtong, M., & Usop, D. A. S. (2013). Work

Performance and Job Satisfaction among Teachers. International Journal of Humanities and Social Sciences, 3(5), 245–252. www.ijhssnet.com

29. Cornelius-White, J. (2007). Learner-centered teacher-student relationships are effective: A meta-analysis. Review of Educational Research, 77(1), 113–143.

30. Day, C., & Gu, Q. (2010). The new lives of teachers. Routledge.

31. Hargreaves, A. (2000). Mixed emotions: Teachers' perceptions of their interactions with students. Teaching and Teacher Education, 16(8), 811–826.

32. Hattie, J. (2003). Teachers Make a Difference, What is the research evidence?

33. Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers: Effects on instructional quality and student development. Journal of Educational Psychology, 105(3), 805.

34. Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. Journal of Educational Psychology, 85(4), 571.

35. Wentzel, K. R. (2009). Students' relationships with teachers as motivational contexts. Handbook of Motivation at School, 301, 322.