

# An Overview of Learning Motivation Among Students Working as Tin Miners

Sigra Tan Magita<sup>1</sup> and Satiningsih<sup>1</sup>

<sup>1</sup>Universitas Negeri Surabaya, Surabaya, Indonesia  
[sigra.20049@mhs.unesa.ac.id](mailto:sigra.20049@mhs.unesa.ac.id); [satiningsih@unesa.ac.id](mailto:satiningsih@unesa.ac.id)

**Abstract:** The phenomenon of tin mining among students on Bangka Island is prevalent. The abundance of tin resources and the ease of access to mining activities have led to the widespread involvement of students in mining operations. The practice of tin mining among students raises concerns that it may diminish their motivation to learn, thereby threatening their future prospects. This study aims to explore the learning motivation of students who work as tin miners. A qualitative case study approach was employed to investigate this issue. Data were collected through in-depth interviews with three high school students actively engaged in tin mining. Thematic analysis was conducted on the interview data, and source triangulation was used to ensure the validity of the findings. The study revealed that the students involved in tin mining exhibited low learning motivation due to the limited time and energy available to them as a result of their working conditions.

**Keywords:** *Tin Mining; Student Motivation; Bangka Island; Learning Motivation*

## 1 INTRODUCTION

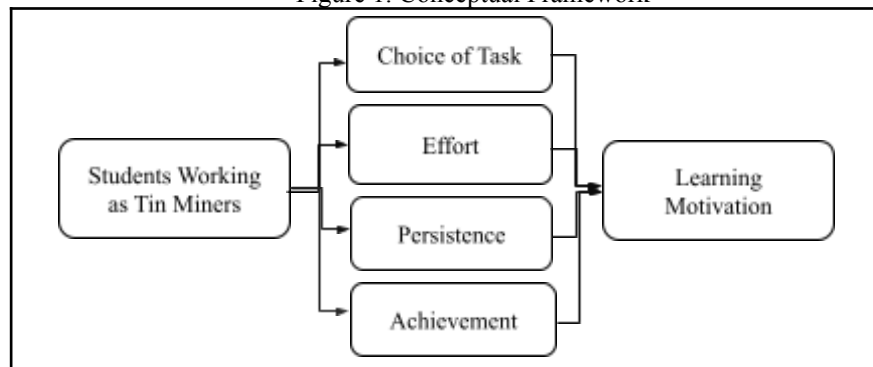
Quality education is pivotal for developing a skilled and knowledgeable workforce, which is crucial for future prosperity (Solas & Sutton, 2018). It significantly enhances individuals' quality of life by improving health, equipping them with essential skills and knowledge, providing better job opportunities, and ultimately increasing productivity and income (Arsani et al., 2020). In Indonesia, with over 52 million students and 218,000 schools as of 2017, the education sector faces substantial challenges (Kemendikbud, 2019). The country's educational system has come under scrutiny, particularly following the 2015 Program for International Student Assessment (PISA) results, where Indonesia ranked 65th out of 72 participating countries (Argina et al., 2017). By 2018, Indonesia's literacy rate had further declined, ranking 62nd out of 70 countries, placing it among the bottom 10 in terms of literacy (OECD, 2019). This educational lag raises concerns about potential negative repercussions across other sectors. The low PISA scores indicate that Indonesian students encounter numerous obstacles in their learning processes. Additionally, inadequate support from their environment can lead to a decline in academic performance, feelings of inadequacy, and a loss of motivation to learn (Prasetyaningtyas et al., 2022). These issues are particularly pronounced in Bangka Belitung, where educational challenges are exacerbated by the widespread practice of tin mining among students. Tin mining has been a generational occupation in the region for over 200 years (Ahmadi, 2022). Students engaged in mining face significant risks, including workplace accidents, poor sanitation, skin diseases, exposure to radioactive materials, loss of social interactions, and diminished study time, all of which negatively impact their educational experiences (Safitri & Susanto, 2023). These challenges have contributed to one of the highest dropout rates in the country, surpassing the national average in 2022 (Fajriansyah, 2024). The accessibility of mining activities in Bangka Belitung has led to high student involvement in mining, often prioritizing work over education. This shift in priorities, driven by the income from mining, threatens students' learning motivation and overall educational outcomes.

This paper investigates the learning motivation of students engaged in tin mining activities in Bangka Belitung. It explores the impact of these activities on students' motivation to learn, providing insights into the unique challenges they face. The study employs a qualitative approach, utilizing case studies to examine the various factors influencing students' learning motivation. Data were collected through in-depth interviews with students actively involved in tin mining. The analysis focuses on how the demands of mining work affect students' time, energy, and overall engagement with their education. This research aims to illuminate the broader implications of student involvement in tin mining, particularly concerning the alarming dropout rates and the ongoing normalization of child labor in the region.

## 2 MATERIALS AND METHODS

This study explores the learning motivation of students involved in tin mining activities in Bangka Belitung through a qualitative case study approach, aiming for a comprehensive understanding of this complex issue. Purposive sampling was employed to select participants, focusing on middle school students aged 13-15 who are actively engaged in mining. Primary data were gathered via semi-structured interviews with three students meeting these criteria, supplemented by relevant literature and documentation. Schunk's Motivation Theory serves as the conceptual framework, focusing on how mining activities influence choice of task, effort, persistence, and achievement (Schunk et al., 2014).

Figure 1. Conceptual Framework



The research employed triangulation for data validation, cross-referencing information from various sources, and conducting member checks with teachers and parents to confirm interview findings. Thematic analysis was utilized to identify and refine themes from the data, providing an in-depth examination of the challenges these students face in balancing their educational pursuits with their work in the mines.

## 3 RESULTS

This study involved three subjects who were selected according to the established research criteria. All three subjects are currently active junior high school students who also work as tin miners.

### 1. Subject 1 (KN)

KN is the first subject who participated in this study. She is a 14-year-old girl currently in the 8th grade of junior high school. KN began working as a tin miner at the age of 10, spending her time outside of school engaged in mining activities. She comes from a family that relies on tin mining for their livelihood. The wages KN earns from mining are saved by her mother to cover school expenses. KN is the eldest of two siblings and has a younger sister. She lives in an area where the majority of the population depends on tin mining to support their economy.

### 2. Subject 2 (FD)

The second subject in this study is FD, who has just entered the 8th grade of junior high school and is 14 years old. FD is a girl from the village of Simpang Katis and is the eldest child in her family. She began working as a tin miner when she was in the 3rd grade of elementary school, after being introduced to mining by her mother. FD lives with her grandmother, as her parents separated when she was in the 4th grade. FD enjoys mining because it allows her to earn money to buy the things she wants.

### 3. Subject 3 (BY)

BY is the third subject and the only male participant in this study. He is a 13-year-old boy currently in the 8th grade of junior high school. He started mining in the 4th grade of elementary school. BY was introduced to mining by his parents, who also rely on tin mining for their livelihood. In addition to working as a miner, BY is actively involved in activities at the mosque near his home. During his free time, he enjoys playing online games on his device, which he purchased with the money he earned from mining. The community around BY takes pride in his ability to earn his own income through mining activities.

Based on the data obtained from interviews with the three subjects and their respective significant others, two main themes and eight sub-themes were identified. The main themes are the background of students working as miners and the aspects of learning motivation. The presentation and explanation of the research findings will be described in accordance with the conditions in the field and the focus of the study as follows.

Table 1. Thematic Table

Theme	Sub-theme
Background of Student Miners	Economic Conditions
	Social Environment
	Family Environment
	Ease of Access to Mining Work
Aspects of Learning Motivation	Influence choice of Task
	Effort
	Persistence
	Achievement

## 1. Background of Student Miners

### a. Economic Conditions

#### Supporting Family Finances

KN explained the economic reasons behind their involvement in mining. KN did not want to burden their parents financially and wanted to contribute to the family by helping their parents work. The hope was that the money earned would assist the family's financial situation.

*"E., the reason is..., to help the family economy and not to burden the family financially" (KN-S1-L18-21).*

For Subject BY, the earnings from mining were used to buy daily necessities and to meet school needs. The money was spent on supplies such as books, pens, and even pocket money when attending school.

*"The money is for buying daily necessities, for example, if I need money for school, I use my own money for school" (BY-S3-L40-44).*

#### Additional Pocket Money

Slightly different from other subjects, Subject FD engaged in mining not only to help the family's economy but also to meet personal needs.

*"Yes, I just wanted to earn some extra money; there was no pressure from my parents" (FD-S2-L17-19).*

This statement aligns with SO1's comments regarding the substantial income earned by the subject, which had an impact on their learning process.

*"[...] one of the reasons is income. Their income as tin miners is substantial, so when it comes to studying, they might feel bored or think it's unimportant because there's no money involved" (L-SO1-B30-36).*

Subject BY also mentioned that their mining activities were not only for supporting the family but also for purchasing things they desired.

*"At school, it's for gaining knowledge and achieving dreams, but mining is about earning money for daily necessities, that's all" (BY-S3-L95-99).*

SO2 added that the students working as miners were often tempted by the income they could earn, which allowed them to purchase things they wanted.

*"Sometimes parents don't directly involve their children, but the children themselves are tempted to work. Once they feel the decent income, they get into it" (L-SO2-L54-61).*

As a parent and a member of the community who works as a miner, SO3 confirmed that students engaged in mining can provide additional income for their families and also earn money for themselves.

*"Um... yes, a lot, especially, um... the economy of the Bangka community really depends on tin, and these children, um... yeah... add to the family's income, or for themselves, one way is by participating in mining" (A-SO3-L17-24).*

b. Social Environment

Peers

Subject FD described the mining environment, where friends of the same age group also participated in mining activities.

*"It depends, usually there are one or two friends of the same age, but the rest are mostly adults" (FD-S2-L48-50).*

SO1, who is the teacher of the first subject, confirmed that many students at the school choose to study while also working as miners.

*"For my students, since I teach at a junior high school, many students work as miners while attending school" (L-SO1-L14-17).*

The response from Subject 2's school friends, who normalized the fatigue caused by working, indicates that such conditions are not considered unusual among students, whether it's due to mining activities or the resulting fatigue.

*"[...] their friends think it's normal, it's not strange for them if there is a student who is tired or sleepy in class" (L-SO2-L112-117).*

Responses from Workers

Miners generally normalized the presence of underage children in mining activities, with responses that tended not to question the situation, as described by FD.

*"Some feel pity, but most of them think it's normal" (FD-S2-L54-55).*

BY also reinforced this statement based on their own experience, noting that workers even saw the subject's actions as something to be proud of because it demonstrated independence.

*"Maybe they think it's normal, or they're proud because I'm young but already earning money for daily needs" (BY-S3-L67-71).*

c. Family Environment

Parents Working in Mining

KN comes from a family where the father works as a tin miner, while the mother is a housewife who also helps the father at work.

*"Yes, my father is a tin miner, and my mother is a housewife" (KN-S1-L30-32).*

SO2 provided insight into FD's family background, where the subject was born into a family that also relies on tin mining for their livelihood. FD's mother is a miner, so FD often helps with the work.

*"Yes, because he doesn't have a father, he feels responsible for the family, and his mother is also a miner" (L-SO2-L33-37).*

Family Response

The response from the subject's close family to mining activities while attending school tended to normalize this practice.

*"The family's response is just normal" (KN-S1-L41-42).*

FD was also not questioned, even though they had to work after school until the evening on school days.

*"It's just normal, they don't mind" (FD-S2-L23-24).*

Working while attending school was considered a source of pride for BY's family, given the subject's young age, which still required mandatory education, but the subject was able to earn their own money.

*"They think it's normal, or they're proud because I'm earning money for myself" (BY-S3-L36-38).*

According to SO2, mining families perceive their children's involvement in mining as something ordinary, which leads them not to prohibit their children from participating in mining activities, as they view it as a common phenomenon.

*"In the family environment, it's not that they're indifferent, but they're used to it, so there's no effort from the parents to stop the child from working or focus on studying [...]" (L-SO2-L106-111).*

d. Ease of Access to Mining Work

Mining Environment Near Homes

SO2 expressed concern that miners should consider the accessibility of mining sites to children in the surrounding area, as the ease of access from the subject's home has facilitated their desire to work.

*"[...] sometimes the mining environment is close to their homes, so they play while mining" [...]* (L-SO1-L126-129).

2. Aspects of Learning Motivations

a. Influence Choice of Task

Fatigue

KN experiences fatigue from mining activities, which often makes him feel tired and causes him to fall asleep in class.

*"I usually feel tired and often fall asleep in class." (KN-S1-L46-47).*

KN starts mining activities after school and finishes after Maghrib, so this routine affects his condition in class.

*"I usually come home late, I get home after Maghrib, so I feel exhausted in class." (KN-S1-L49-52).*

Falling asleep in class is also something FD experiences due to fatigue from mining activities.

*"I often fall asleep in class and feel exhausted, I miss out on lessons because I fell asleep." (FD-S2-L28-30).*

The fatigue KN experiences is also observed by SO1, a teacher who notices KN during class.

*"There is a clear difference because KN actually has competence, but maybe because of fatigue, or... yes, fatigue, I think, his interest in learning is disrupted [...]" (L-SO1-L49-54).*

SO1 also added that KN actually has a desire to learn, but the fatigue from working has a significant impact on his body.

*"Actually, the child has a desire to learn, but due to his physical condition, his body is not supporting him, so there's nothing we can do, and their psychological condition is also affected by the need to earn money, which also has a psychological impact." (L-SO1-L81-89).*

SO1 said that a supportive environment for learning will not yield optimal results if the students are exhausted from working.

*"Yes, it has a significant impact, but even if their environment supports learning, if their physical state is exhausted, we can't force it." (L-SO1-L101-104).*

FD's physical condition also worsens his interest in learning, making him more prone to fatigue and lethargy.

*"As for FD, maybe because, sorry, his body is rather large, so he is lazy to study, lethargic, and maybe also tired." (L-SO2-L65-68).*

Difficulty in Understanding Lessons

KN finds it difficult to understand the material explained by the teacher due to a lack of focus.

*"It is quite difficult; usually, I don't understand when the teacher explains, it's hard because I can't focus." (KN-S1-L107-110).*

KN's lack of focus stems from the fatigue caused by working as a tin miner.

*"Sometimes I lack focus, usually because I just feel tired." (KN-S1-L66-68).*

FD often struggles to understand the material given by the teacher in class; he feels unable to follow the lessons, especially when assignments are given simultaneously.

*"I often don't understand because the explanation isn't clear, and when it's explained, we immediately get assignments." (FD-S2-L36-38).*

BY stated that difficult material makes him reluctant to participate in school lessons.

*"It's just normal, it depends, if the material is easy, I'm happy, but if it's hard, I feel lazy." (BY-S3-L81-83).*

SO2 explained the situation FD faces, who also has to support his family, so fatigue is a consequence he has to bear.

*"He is the eldest child, and maybe he also helps support the family because FD doesn't have a father, and he still has siblings, if I'm not mistaken, so when learning, it's hard for him to grasp [...]" (L-SO2-L16-23).*

As a parent, SO3 understands and accepts the impact that mining has on his child's education.

*"Yes... the consequence is that... he can't focus, he can't focus because he's studying while mining [...]" (A-SO3-L28-31).*

#### Initiative to Attend School

KN realizes that education will provide a better life in the future.

*"I prefer learning at school because it makes me think about the future." (KN-S1-L72-74).*

KN understands that working as a miner will not help him achieve his dreams.

*"No, I quite like studying, if I focus on mining, I won't be able to think about the future." (KN-S1-L81-83).*

FD prefers studying at school over working because he enjoys meeting his friends.

*"Studying, because school is... how to say it... I get to meet more friends." (FD-S2-L42-44).*

BY feels the same way; going to school allows him to interact with his friends.

*"It's just normal, I'm happy, maybe because I can meet my friends." (BY-S3-L57-59).*

For FD, school is a means to achieve his dreams.

*"Because... I want to achieve my dreams." (FD-S2-L122-123).*

As a parent, SO3 hopes that his child can continue to a higher level of education.

*"Yes, I hope he can continue to higher education." (A-SO3-L76-77).*

#### b. Effort

##### Time Management Strategy

KN works as a tin miner after school hours and on school holidays.

*"Usually, I work on holidays, but on school days, for example, after school as well." (KN-S1-L35-38).*

FD also mentioned that he works after school and on school holidays.

*"After school or on school holidays. During semester breaks, I work full-time with my mother." (FD-S2-L66-68).*

BY explained that he starts working at 4 PM, right after school.

*"On Sundays or holidays, I work from morning until evening, but on school days, I work from 4 PM or after school until 5 or 5:30 PM." (BY-S3-L29-33).*

##### Completing Assignments

School assignments are often completed at school because KN feels too tired when he gets home.

*"It depends; I usually do it in class because I'm too tired at home, so I do it in class." (KN-S1-L95-98).*

FD stated that if he gets home early, he can complete assignments at home, but usually, mining ends after Maghrib or Isha, so he doesn't have the energy to do assignments when he gets home.

*"At home, depending on when I get home early, if it's late, I do it at school." (FD-S2-L94-97).*

SO2 limits the assignments given to students who work as miners, understanding that their condition might not allow them to complete tasks effectively.

*"[...] I limit assignments because I feel bad giving them homework while they work after school, and the quality of their work is often not optimal." (L-SO2-L76-82).*

#### Studying at Home

When at home, KN does not have time to study or do assignments, so he only studies and completes tasks at school.

*"No, I study and do assignments in class; I work until at least 5 PM." (KN-S1-L102-104).*

The time FD comes home from work determines whether he studies; he will study if he comes home early.

*"If I come home early, I study, usually after Isha, or if it's early, after Maghrib." (FD-S2-L86-88).*

BY explained that he finishes working by 5:30 PM, allowing him some time to study at home.

*"[...] After school, I go to the mine, work until 5 or 5:30 PM, and then I pray Maghrib. After that, I go to recite the Quran, and once everything is done, I can study or do my homework." (BY-S3-L111-123).*

SO3 mentioned that BY still studies at home when preparing for exams or when he has homework.

*"Yes, he studies when he has homework or assignments, just like that." (A-SO3-L41-43).*

#### c. Persistence

##### Seeking Help

Asking friends about materials they don't understand is KN's way of dealing with difficult subjects.

*"I usually ask my friends how to do it, and if I still don't understand, I ask the teacher." (KN-S1-L114-117).*

FD, on the other hand, prefers to ask the teacher directly when he doesn't understand the material.

*"I prefer to ask the teacher because it's clearer." (FD-S2-L106-107).*

BY relies on both his friends and teachers when he doesn't understand a subject.

*"Maybe I'll ask my friends or ask the teacher." (BY-S3-L86-87).*

SO1, as a teacher, provided a different perspective, noting that student miners tend to be passive and quiet in class.

*"They tend to be quiet, more passive." (L-SO1-L94-95).*

##### Obstacles

Morning hours pose a challenge for FD in studying, as they are more prone to drowsiness during this time due to fatigue from work.

*"In the morning, I get sleepy because I'm tired from working." (FD-S2-L113-114).*

Unlike FD, BY finds that the time around 8 or 9 p.m., when they are no longer working, is a challenging time to study.

*"Yes, sometimes at night, around 8 or 9 p.m." (BY-S3-L148-149).*

SO1 noted that the students' lack of concentration and their divided focus between earning money and studying significantly hinder their persistence in learning.

*"[...] children who work tend to be less focused, less concentrated. Their minds are already preoccupied with earning money, and they start thinking about their income while sitting in class [...]" (L-SO1-L65-73).*

#### d. Achievement

##### Suboptimal Performance

Subject 1 expressed dissatisfaction with their academic performance, feeling that they have not studied enough, which has hindered their progress.

*"Not satisfied, because my studies have been lacking, so it's been a bit of a setback." (KN-S1-L133-134).*

Subject 2 also experienced the impact of insufficient study time on their academic achievements.

*"Not great, because I often don't study." (FD-S2-L117-118).*

SO1 observed that students who work as miners tend to have a lower interest in learning due to the influence of their jobs.

*"In terms of learning interest, my students who also work generally have lower interest, probably because of the impact of their jobs [...]" (L-SO1-L26-30).*

This low interest has led to unremarkable academic achievements.

*"It's just average, nothing outstanding." (L-SO1-L107-108).*

SO3 assessed their child's academic performance as average.

*"Just normal, average. Not particularly smart, but not dumb either. Just in the middle, nothing special." (A-SO3-L63-65).*

#### Decline in Academic Performance

Meanwhile, FD noticed a decline in their academic performance, observing a drop in their ranking.

*"Back in 1st and 2nd grade, I was doing well, but after I started working, my ranking dropped to just the top 10." (FD-S2-L61-63).*

SO2 confirmed the decline in FD's performance.

*"Before working, FD was quite active, often answering questions that other students couldn't. But after they started working, the impact was significant. Maybe they don't study enough anymore, or maybe something else, but it seems like FD is studying less." (L-SO2-L90-98).*

## 4 DISCUSSIONS

The results of this study indicate that the three subjects are tin-mining students who share similar backgrounds and environments. The economic conditions of their families, which require financial support, motivate them to work even while attending school. None of the subjects' families force them to work in mining; rather, the desire to lighten their parents' burden and assist the family economy by mining comes from their initiative. The earnings they receive are not only used to support their families but also for their own needs, such as BY, who uses his income to purchase school supplies. The income they generate is relatively large for children their age, which drives them to continue working and view school as less important. The initial intent of mining to help the family economy gradually shifts to fulfilling their desires with the money earned.

The social environment surrounding these child miners tends to normalize the practice of child labor in mining. BY often encounters peers of his age working in the mines, and teachers acknowledge that it is common to see students working as miners. The adult miners' response to underage children working is largely indifferent. Awareness of the dangers, children's rights to play, and the importance of socializing in a healthier environment is lacking. This situation reinforces the notion that schooling and mining are common practices that society tolerates.

Families, as the closest individuals to the students, have a strong influence on their decision to work as tin miners. All three subjects come from families that rely on tin mining for their livelihood. Their parents, who also work as miners, do not object to their children helping in the mines. Parents generally perceive their children's involvement in mining as acceptable, which explains the lack of any prohibitive measures from families. BY, for instance, explains that his parents feel proud when he earns money through his hard work, interpreting it as a form of independence.

The ease of access to mining sites is another sub-theme related to the students' backgrounds. The abundance of mining resources allows residents of Bangka to open new mining sites easily. This accessibility also results in a widespread distribution of mining locations, making it easy for nearby residents, including underage children, to access them. SO1 explains that mining areas are often located near residential areas, making it easy for underage children to engage in mining activities.

These conditions contribute to the prevalence of mining practices among students still attending school in Bangka. Student miners face unique challenges when participating in classroom learning. Consistent with the study's focus on examining the learning motivation of student miners, aspects of learning motivation are used to describe the situation.

In terms of learning interest, this study found that fatigue from work is the main complaint affecting students' interest in classroom learning. KN often falls asleep in class due to exhaustion from working after school until after evening prayers. FD experiences similar issues, as she often falls behind in lessons because she frequently falls asleep when the



teacher is explaining the material. SO1, the teacher of these students, notes that their physical exhaustion results in a lack of interest in the learning process. The fatigue they experience also makes it difficult for them to understand the lessons. KN mentions that difficulty focusing on learning often leads to challenges in comprehending the material presented. Similarly, FD and BY also struggle to understand the lessons in school. Despite their fatigue, all three subjects remain motivated to attend school to achieve their dreams, knowing that education is essential for realizing their aspirations. However, the physical exhaustion they experience significantly impacts their learning process, diminishing their interest in learning.

The second aspect of learning motivation discussed in this study is effort. The limited time available leads student miners to seek solutions to balance both activities. KN and FD work outside school hours, either after school or during school holidays. BY starts mining activities at 4 PM and finishes around 6 PM on school days and also works during school holidays. This strategy successfully avoids disrupting school hours, but both KN and FD feel they lack time to study at home. They complete school assignments at school, and after mining, they use their time to rest. Unlike KN and FD, BY schedules his mining activities earlier to allow some time for studying and completing assignments. Although the efforts of the three subjects to avoid disrupting school hours are successful, the quality of effort they put into learning is still lacking due to the limited time they have.

Persistence is the third aspect of learning motivation among student miners. The energy-draining and time-consuming nature of their work hinders their learning process. All three subjects rely on their friends for help when they struggle to understand lessons. SO1, their teacher, explains that these students tend to be passive when faced with difficulties, not daring to ask the teacher for further clarification on challenging material. Their persistence in learning is not evident, given the obstacles they face. FD admits that morning classes around 7 or 8 AM make her sleepy, and BY also struggles to stay awake during his designated study time at home, which is around 8 to 9 PM. SO1 further explains that these student miners are no longer focused on learning, as their orientation has shifted to earning money. Learning seems to have less immediate value to them compared to working, where they can see tangible results daily. As a result, their persistence in learning has diminished, as it is now seen as merely a waiting period before they can start working and earning money.

The fourth aspect of learning motivation in this study is achievement. Learning activities in school are sacrificed as students engage in mining. All three subjects feel that their academic achievements are still not optimal. The time they could have used for studying after school is taken over by mining activities. As a result, KN feels that her study time is reduced, hindering her ability to maximize her achievements. FD also feels that her achievements are lacking due to the circumstances that prevent her from studying. SO1 states that the achievements of students who work as miners are average, with nothing particularly outstanding. SO3, as a parent, shares the same opinion as SO1. FD, who once ranked among the top students, has experienced a decline in her academic performance after starting to mine. SO1 adds that FD was an active student in class before she began mining. The suboptimal learning process in class affects the limited academic achievements of students who work as miners.

This study faced several limitations. Since the research was conducted after the largest tin mining corruption case was exposed, the economy in Bangka weakened due to restricted tin trading. The researcher had limited subjects due to the reduced number of active student miners. Despite this, the researcher successfully recruited three subjects who met the criteria related to the research focus.

## **5 CONCLUSIONS**

This research reveals that the three subjects, who are actively working as tin miners, exhibit low learning motivation due to the limited time and energy resulting from their work conditions. The direct impact of mining activities on their academic performance is evident in the poor quality of learning both at school and at home. The students demonstrate minimal interest, effort, persistence, and achievement in their studies, largely due to the physical exhaustion from their labor. The study further identifies that economic factors are not the sole drivers behind their decision to work as miners; social environment, family influence, and the ease of access to mining locations also play significant roles in their involvement in mining activities.

## **ACKNOWLEDGEMENTS**

This work is dedicated to my parents and my brother, who have been essential pillars in my life and this research journey. My deepest gratitude goes to Mrs. Satiningsih S.Psi., M.Si, my supervisor, for her invaluable advice, guidance,

and patience throughout this process. I would also like to extend my sincere thanks to the tin-mining students, their parents, and teachers who participated in this study, providing the crucial insights that made this research possible. Finally, my heartfelt thanks to a special person who has been a constant source of support and encouragement, as well as to my friends who have accompanied me during my time in Surabaya.

## REFERENCES

- Ahmadi. (2022). Mengubah bekas tambang menjadi objek wisata di pulau timah. *Antara*. Retrieved from <https://www.antaraneews.com/berita/3084201/mengubah-bekas-tambang-menjadi-objek-wisata-di-pulau-timah>
- Argina, A. W., Mitra, D., Ijabah, N., & Setiawan, R. (2017). Indonesian PISA result: What factors and what should be fixed? *Jurnal Unissula*, 1(1) 69-79. <https://jurnal.unissula.ac.id/index.php/ELIC/article/view/1212/921>
- Arsani, A. M., Ario, B., & Ramadhan, A. F. (2020). Impact of education on poverty and health: Evidence from Indonesia. *Economics Development Analysis Journal*, 9(1) 87-96. <https://doi.org/10.15294/edaj.v9i1.34921>
- Fajriansyah. (2024). Korupsi timah sisakan kerusakan lingkungan dan anak putus sekolah. *Harian Kompas*. Retrieved from <https://www.kompas.id/baca/nusantara/2024/03/31/korupsi-timah-sisakan-kerusakan-lingkungan-dan-anak-putus-sekolah>
- Kementerian Pendidikan, Kebudayaan, Riset & Teknologi. (2019). *Pendidikan di Indonesia belajar dari hasil PISA 2018*. Pusat Penilaian Pendidikan Balitbang Kemendikbud. <http://repositori.kemdikbud.go.id/id/eprint/16742>
- Organisation for Economic Co-operation & Development. (2019). *Programme for international student assessment (Pisa) result from pisa*. OECD Publishing. <https://www.oecd.org/en/about/programmes/pisa.html>
- Prasetyaningtyas, W. E., Rangka, I. B., Folastris, S., & Sofyan, A. (2022). Kecemasan akademik siswa di sekolah: suatu tinjauan singkat. *Journal of Learning and Instructional Studies*, 2(3), 107-114. <http://jilis.iicet.org/index.php/jilis/article/view/32>
- Safitri, I. S., & Susanto, L. (2023). Children of miners in Bangka Belitung face an uncertain future. *Ekuatorial*. Retrieved from <https://www.ekuatorial.com/en/2023/07/how-tin-mining-in-bangka-belitung-harms-children-and-the-environment>
- Schunk, D., Meece, J., & Pintrich, P. (2014). *Motivation in education: theory, research and applications* (4<sup>th</sup>ed). Pearson.
- Solas, E., & Sutton, F. (2018). Incorporating digital technology in the general education classroom. *Research in Social Sciences and Technology*, 3(1), 1-15. <https://doi.org/10.46303/ressat.03.01.1>