

Perceived Socio-Economic, Psychological and Academic Effects of Gold Mining in the Lives of Learners in Panique National High School

Raizel May F. Legaspi

Master of Arts in Education, Major in Administration and Supervision, Osmeña Colleges, Masbate City, Masbate, Philippines

Publication history: Received: July 21, 2026; Revised: August 1, 2026; Accepted: August 5, 2026

Email of Corresponding Author: raimayflegaspi@gmail.com

Abstract

This study determined the perceived socio-economic, psychological, and academic effects of gold mining on learners of Panique National High School in Aroroy, Masbate. Guided by the System Theory, Symbolic Interactionism, and Conflict Theory, the study employed descriptive-comparative and descriptive-correlational research designs to examine differences and relationships among the study variables. A survey questionnaire using a five-point Likert scale was administered to 293 randomly selected learners from a population of 1,101 through stratified random sampling based on Slovin's Formula. Data were analyzed using frequency count, percentage, weighted mean, Pearson Product-Moment Correlation Coefficient, and the independent samples t-test. The findings revealed that learners perceived gold mining to have a very high socio-economic effect, an extremely high psychological effect, and a very high academic effect. No significant differences were found between male and female respondents regarding the socio-economic and psychological effects, whereas a significant difference was observed in the perceived academic effects. Significant positive relationships were identified between respondents' age, grade level, and years of residency and their perceived socio-economic, psychological, and academic effects of gold mining. Respondents strongly supported interventions emphasizing learner welfare, environmental protection, educational continuity, and community development. The study concludes that gold mining substantially influences learners' socio-economic conditions, psychological well-being, and academic experiences and recommends collaborative interventions among local government units, mining companies, educational institutions, and other stakeholders, as well as further studies involving a broader population of learners. The study aligns with Sustainable Development Goal (SDG) 3: Good Health and Well-Being, SDG 4: Quality Education, SDG 8: Decent Work and Economic Growth, SDG 12: Responsible Consumption and Production, and SDG 16: Peace, Justice, and Strong Institutions by promoting learner well-being, responsible mining practices, quality education, and effective governance. Its findings contribute to educational, public health, environmental, socio-economic, and policy sustainability by providing evidence that can support informed decision-making and sustainable interventions in mining-affected communities.

Keywords: Academic Performance, Gold Mining, Learners, Psychological Effects, Socio-Economic Effects, Sustainable Development, Panique National High School

1. Introduction

Gold mining remains a major economic activity that contributes to employment and local development but also presents environmental, socio-economic, psychological, and educational challenges, particularly for communities situated near mining sites. This study focuses on the perceived socio-economic, psychological, and academic effects of gold mining on learners of Panique National High School in Aroroy, Masbate. The study recognizes that prolonged exposure to mining-related conditions may influence learners' holistic development, including their economic conditions, emotional well-being, and academic performance. It also emphasizes the importance of balancing economic development with environmental protection, community welfare, and quality education through evidence-based interventions and sustainable governance.

1.1 Background of the Study on the Perceived Socio-Economic, Psychological, and Academic Effects of Gold Mining among Learners

Educational institutions play a vital role in promoting learners' holistic development while supporting the achievement of quality education (Quebec et al., 2020; Rieckmann, 2017; Groenewald et al., 2024). However, learners' development is influenced by social, economic, political, cultural, and environmental conditions. Panique National High School is situated near active gold mining operations, exposing learners to mining-related socio-economic, psychological, environmental, and academic challenges. Although mining contributes to economic opportunities, it may also result in environmental degradation, health risks, economic dependence, and educational difficulties (De Leon, 2017; Mining-Technology, 2021; Mensah, 2012). Given these conditions, the study investigates the perceived socio-economic, psychological, and academic effects of gold mining among learners to provide evidence for appropriate interventions and policy development.

1.2 Themes and Insights from Related Literature on the Perceived Effects of Gold Mining among Learners

Related literature consistently shows that gold mining contributes to employment, economic growth, and infrastructure development but also creates socio-economic inequalities, environmental degradation, health risks, psychological stress, and educational challenges (Hilson, 2002; Bridge, 2004; Bury, 2005; World Bank, 2023; UNEP, 2022; OECD, 2021). Studies indicate that learners in mining communities are vulnerable to poverty, unstable household income, pollution, child labor, absenteeism, reduced academic performance, and psychosocial problems (Aryee, Ntibery, and Atorkui, 2003; Hentschel, Hruschka, and Priester, 2002; ILO, 2019; WHO, 2023; UNICEF, 2024). Philippine literature similarly emphasizes that while mining supports local economic development, it also presents environmental, health, and educational concerns that require responsible governance and sustainable community development (DENR; MGB, 2021; NEDA, 2023; DepEd, 2023; PIDS, 2023).

1.3 Local, National, and Global Context of Gold Mining and Learners' Development

Globally, mining remains an important economic activity but poses environmental, health, psychological, and educational challenges for mining communities (World Bank, 2023; WHO, 2023; UNICEF, 2024). Nationally, the Philippines promotes responsible mining while recognizing the need to balance economic growth, environmental protection, and community welfare (Executive Order No. 79; NEDA, 2023; DENR–MGB, 2023). Locally, Panique National High School in Aroroy, Masbate is located near active mining operations, making it an appropriate setting to examine the perceived socio-economic, psychological, and academic effects of gold mining on learners.

1.4 Theoretical or Conceptual Basis of the Perceived Effects of Gold Mining among Learners

The reviewed literature suggests that gold mining influences learners through interconnected socio-economic, psychological, environmental, health, and educational factors. While mining provides livelihood opportunities, it may also contribute to environmental pollution, economic instability, psychosocial stress, and reduced educational participation, thereby affecting learners' academic performance and overall well-being (Hilson, 2002; Bury, 2005; WHO, 2023; UNICEF, 2024; DepEd, 2023). These perspectives provide the conceptual basis for examining the perceived socio-economic, psychological, and academic effects of gold mining among learners.

1.5 Research Gaps and Rationale

Although previous studies have examined the socio-economic, environmental, psychological, and educational impacts of mining, limited evidence focuses on the combined perceived effects of gold mining among learners in Panique National High School, Aroroy, Masbate. Considering the school's proximity to active mining operations, this study seeks to provide localized evidence that may guide interventions, educational programs, and policy decisions for mining-affected learners and communities.

1.6 Alignment with Relevant Sustainable Development Goals (SDGs)

This study supports SDG 3 (Good Health and Well-Being) by addressing the health and psychological effects of mining on learners, SDG 4 (Quality Education) by examining factors affecting academic performance and learning, SDG 8 (Decent Work and Economic Growth) by recognizing mining's socio-economic contributions and challenges, SDG 12 (Responsible Consumption and Production) through responsible mining and environmental management, and SDG 16 (Peace, Justice, and Strong Institutions) by promoting responsible governance, community participation, and environmental accountability.

1.7 Importance of the Study to Multidisciplinary Sustainability

The study contributes to educational sustainability by providing evidence to improve learning conditions in mining communities; public health sustainability by highlighting learners' health and psychological concerns; environmental sustainability by emphasizing responsible mining and ecological protection; socio-economic sustainability by supporting balanced community development; and policy and governance sustainability by providing information that may assist educational institutions, government agencies, and mining stakeholders in developing responsive programs and interventions.

2. Material and methods

2.1 Research Design

This study employed descriptive-comparative and descriptive-correlational research designs. The descriptive-comparative design was used to determine differences in the perceived socio-economic, psychological, and academic effects of gold mining among respondents based on sex, while the descriptive-correlational design examined the relationship between respondents' demographic profile (age, grade level, and years of residency) and their perceived effects of gold mining. These non-experimental research designs allowed the researcher to observe, measure, compare, and analyze the variables without manipulation (Creswell, 2012).

2.2 Locale of the Study

The study was conducted at Panique National High School in Barangay Panique, Aroroy, Masbate. The school was selected because it is situated near active gold mining operations, allowing learners to provide firsthand information regarding the socio-economic, psychological, and academic effects of mining within their community. Its proximity to mining areas makes it an appropriate setting for examining how mining activities influence the environmental, economic, psychological, and academic experiences of learners. Aroroy is a first-class municipality in the province of Masbate and is historically recognized for its abundant gold resources and long-standing mining industry. The location of the municipality within the province illustrates the geographical context of the study, while the location of Panique National High School within Barangay Panique highlights its closeness to mining operations. These locations demonstrate why the school provides a relevant setting for investigating the perceived socio-economic, psychological, and academic effects of gold mining on learners.

2.3 Respondents of the Study

The respondents were 293 learners enrolled at Panique National High School during the School Year 2025–2026. They were selected from a total population of 1,101 learners because they could provide firsthand information regarding the perceived socio-economic, psychological, and academic effects of gold mining. Their responses served as the primary source of data for the study.

2.4 Sample and Sampling Procedure

The study utilized stratified random sampling to ensure proportional representation of learners from different year levels. The required sample size was determined using Slovin's Formula with a 5% margin of error, after which proportional allocation was applied to identify the number of respondents from each stratum. Respondents within each year level were then selected through simple random sampling, providing every eligible learner an equal opportunity to participate and improving the representativeness of the sample.

2.5 Research Instrument

The researcher utilized a survey questionnaire as the primary instrument for data collection. The questionnaire consisted of three parts: the respondents' demographic profile, the perceived socio-economic, psychological, and academic effects of gold mining, and the respondents' recommendations. The instrument was designed to obtain the information necessary to address the objectives of the study. A five-point Likert scale was used to measure the respondents' perceptions, with corresponding numerical ranges and descriptive ratings that facilitated the interpretation of the responses. The scale enabled the researcher to quantify the level of perceived effects and the degree of recommendations provided by the respondents, ensuring a consistent basis for data analysis and interpretation.

2.6 Data Gathering Procedure

Before data collection, the researcher secured the approval of the adviser regarding the survey questionnaire and prepared formal communication letters requesting permission to conduct the study. Approval and assistance were obtained from the School Superintendent, School Principal, and other concerned authorities. After securing the necessary permissions, the questionnaires were administered to the selected respondents, who were allowed to answer freely. The collected data were then organized, summarized, analyzed, and interpreted to address the objectives of the study.

2.7 Data Analysis Techniques

The collected data were analyzed using frequency count, percentage, weighted mean, Pearson Product-Moment Correlation Coefficient (Pearson r), and the independent samples t-test. Frequency count and percentage described the respondents' demographic profile, while the weighted mean determined the respondents' perceived socio-economic, psychological, and academic effects of gold mining (Triola, 2018). Pearson Product-Moment Correlation Coefficient determined the relationship between the variables (Schober, Boer, & Schwarte, 2018), whereas the independent samples t-test determined significant differences in the perceived effects of gold mining between respondents grouped according to profile variables with two categories, such as sex (Field, 2018).

2.8 Ethical Considerations

The researcher obtained informed consent from all participants before conducting the study and explained its purpose, duration, and procedures. Participation was voluntary, and respondents were informed of their right to withdraw at any time without penalty. The questionnaire was designed using respectful and culturally sensitive language while considering the respondents' privacy and backgrounds. Confidentiality and anonymity were strictly maintained, and all collected data were used solely for research purposes to ensure the safety and protection of the participants.

3. Results and Discussion

3.1 Profile of the Respondents

3.1.1 Age of the Respondents

The respondents were predominantly 14–15 years old (45.39%), followed by those aged 12–13 years (27.30%), 16–17 years (22.18%), and 18–19 years (5.12%). These findings indicate that most participants belonged to the middle adolescent stage. The predominance of middle adolescents suggests that the respondents possess the cognitive, emotional, and social maturity needed to understand and evaluate issues affecting their community. According to the World Health Organization (2023), adolescents at this developmental stage become more capable of interpreting community-related concerns and forming informed perceptions regarding experiences that directly affect their daily lives.

3.1.2 Sex of the Respondents

The majority of the respondents were female (62.80%), while 37.20% were male. This indicates that female learners comprised a larger proportion of the respondents included in the study. The higher representation of female learners reflects the school's student population and provides balanced perspectives regarding the effects of gold mining. This finding is consistent with the Philippine Statistics Authority (2023), which reported substantial female participation in basic education, with females slightly outnumbering males in some educational levels.

3.1.3 Grade Level of the Respondents

The respondents represented all junior high school levels, with Grade 7 (27.65%) having the highest proportion, followed by Grade 8 (25.94%), Grade 9 (24.57%), and Grade 10 (21.84%). The distribution indicates adequate representation across grade levels. The representation of learners from different grade levels provides diverse perspectives regarding the effects of gold mining. The Department of Education recognizes that learners in Grades 7 to 10 progressively develop critical thinking, analytical skills, and greater awareness of issues affecting their school and community, making them reliable respondents for the study.

3.1.4 Years of Residency of the Respondents

Most respondents (84.64%) had resided in the community for more than 10 years, while 13.65% had lived there for approximately ten years and 1.71% had stayed for three to five years. These findings indicate that the respondents had long-term exposure to the mining environment. Long-term residency allows individuals to observe changes within their community over time. According to the United Nations Development Programme (2020), prolonged residency enables community members to better understand the developmental and social impacts of local industries, supporting the reliability of the respondents' perceptions regarding the effects of gold mining.

3.2 Perceived Effects of Gold Mining among Learners

3.2.1 Perceived Socio-Economic Effects

The respondents generally perceived that gold mining had a very high socio-economic effect on their lives, with a composite mean of 3.90 (Very Affected). The highest-rated indicator showed that gold mining provides economic opportunities for parents to sustain their children's education (WM = 4.78; Extremely Affected), while the lowest-rated indicator indicated that mining corporations' social responsibility initiatives were only Moderately Affected (WM = 3.24). These findings indicate that learners recognize the economic benefits generated by mining, particularly in supporting household income and educational needs, while perceiving corporate social responsibility efforts as less influential. The discussion in the study explains that system theory emphasizes the interconnected nature of social systems, where economic activities influence community life. The findings also acknowledge that mining contributes to employment and economic development but may simultaneously create social, environmental, and livelihood challenges if not responsibly managed.

3.2.2 Perceived Psychological Effects

The respondents perceived that gold mining had an extremely high psychological effect, with a composite mean of 4.59 (Extremely Affected). The greatest concern involved worries about open-pit mining causing soil erosion and landslides (WM = 5.00; Extremely Affected), whereas concerns regarding possible water contamination received the lowest rating (WM = 3.71; Very Affected), although it remained a significant concern. These findings suggest that learners experience considerable psychological concerns related to their safety and the environmental hazards associated with nearby mining operations. Their responses demonstrate that perceived risks from mining activities extend beyond physical effects and influence emotional well-being and feelings of security within the school and community.

3.2.3 Perceived Academic Effects

The respondents perceived that gold mining had a very high effect on academic performance, with a composite mean of 3.60 (Very Affected). The highest-rated indicator showed that mining activities contribute to learners' loss of interest in learning because of an unconducive learning environment (WM = 4.96; Extremely Affected). The lowest-rated indicator indicated that engaging in other activities instead of attending school was Moderately Affected (WM = 2.55). These

findings indicate that mining-related conditions primarily affect learners by reducing their motivation and interest in learning rather than directly encouraging school absenteeism. This supports the findings of Maconachie and Hilson (2011), who reported that children in mining communities often experience reduced academic engagement because of mining-related economic and environmental conditions. Similarly, the respondents perceived that gold mining influences their academic participation and educational experiences.

3.3 Significant Difference in the Perceived Effects of Gold Mining According to Sex

3.3.1 Socio-Economic Effects According to Sex

The analysis revealed no significant difference between the perceptions of male and female respondents regarding the socio-economic effects of gold mining ($t = -1.37$, $p = 0.17$), indicating that both groups had comparable views on how mining influences their socio-economic conditions. This finding suggests that regardless of sex, learners share similar experiences concerning the socio-economic effects of mining within their community. Their comparable perceptions indicate that the economic benefits and challenges associated with mining are experienced similarly by both male and female learners.

3.3.2 Psychological Effects According to Sex

There was no significant difference between the perceptions of male and female respondents regarding the psychological effects of gold mining ($t = 0.45$, $p = 0.6735$). Both groups similarly perceived the psychological impacts associated with mining activities. The result indicates that concerns related to safety, environmental hazards, and emotional well-being are commonly experienced by learners regardless of sex. Thus, psychological effects associated with mining appear to affect both male and female respondents in a similar manner.

3.3.3 Academic Effects According to Sex

The findings revealed a significant difference between the perceptions of male and female respondents regarding the academic effects of gold mining ($t = 2.83$, $p = 0.0071$). This indicates that male and female learners differed in how they perceived the influence of mining on their academic performance. This finding partially supports Garcia and Way (2019), who reported that adolescents may respond differently to environmental and socio-economic stressors, resulting in variations in academic engagement and educational experiences. However, while differences were observed in academic perceptions, the respondents shared similar perceptions regarding the socio-economic and psychological effects of gold mining.

3.4 Relationship Between Respondents' Profile and the Perceived Effects of Gold Mining

3.4.1 Relationship Between Age and the Perceived Effects of Gold Mining

The results showed a significant positive relationship between respondents' age and all three dimensions of the perceived effects of gold mining. Age demonstrated a moderate positive relationship with socio-economic effects ($r = 0.46$, $p = 0.0185$) and psychological effects ($r = 0.43$, $p = 0.0164$), while a strong positive relationship was found with academic effects ($r = 0.61$, $p = 0.0023$). Since all p-values were below the 0.05 level of significance, the null hypothesis was rejected. These findings indicate that older learners tend to have greater awareness of how mining affects their families, community, emotional well-being, and educational experiences. This is consistent with Evans and Kim (2013), who reported that children's responses to environmental and socio-economic stressors vary according to developmental stage. Likewise, Garcia and Way (2019) found that age influences adolescents' academic engagement and perceptions of community challenges, supporting the relationships observed in this study.

3.4.2 Relationship Between Grade Level and the Perceived Effects of Gold Mining

The analysis revealed that respondents' grade level had a significant positive relationship with all dimensions of the perceived effects of gold mining. Grade level showed moderate positive relationships with socio-economic ($r = 0.51$, $p = 0.0131$) and psychological effects ($r = 0.56$, $p = 0.0121$), while a strong positive relationship was found with academic effects ($r = 0.68$, $p = 0.0018$). All computed p-values were below 0.05, leading to the rejection of the null hypothesis. The findings suggest that learners become more aware of the effects of mining as they progress through school. This supports Maconachie and Hilson (2011), who reported that learners in mining communities develop greater awareness of mining-related educational and community issues over time. Similarly, Evans and Kim (2013) emphasized that academically advanced learners demonstrate increased awareness of environmental and socio-economic stressors, consistent with the present findings.

3.4.3 Relationship Between Years of Residency and the Perceived Effects of Gold Mining

A significant positive relationship was also found between years of residency and the perceived effects of gold mining. Years of residency demonstrated moderate positive relationships with socio-economic ($r = 0.47$, $p = 0.0128$) and psychological effects ($r = 0.54$, $p = 0.0125$), while a strong positive relationship was observed with academic effects ($r = 0.61$, $p = 0.0102$). All relationships were statistically significant, resulting in the rejection of the null hypothesis. These findings indicate that learners who have lived longer in the community tend to have stronger perceptions of the socio-

economic, psychological, and academic effects of mining because of their prolonged exposure to mining activities. This supports Franks et al. (2014), who emphasized that prolonged exposure to mining influences community perceptions of its social, environmental, and psychological consequences. Likewise, Tschakert and Singha (2007) reported that long-term residents are more aware of the cumulative impacts of mining, which is consistent with the present study.

3.5 Recommended Interventions

The respondents strongly supported interventions to address the effects of gold mining, obtaining an overall composite mean of 4.95 (Strongly Recommended). The highest-rated recommendations emphasized allocating stable funds for students' health needs, relocating schools to safer areas, sustaining the academic and social needs of affected learners after relocation, ensuring strict compliance with environmental laws, and implementing sustainable socio-environmental rehabilitation. Monthly psychological counseling for affected students and parents received the lowest rating but remained Strongly Recommended, indicating broad support for comprehensive interventions. These findings demonstrate the respondents' strong preference for interventions that prioritize learners' health, safety, educational continuity, environmental protection, and community welfare. The results are supported by Franks et al. (2014), who emphasized the importance of integrating environmental protection, education, community participation, and social development in mining communities. Similarly, the International Council on Mining and Metals (ICMM, 2023) highlighted that responsible mining should invest in education, health services, environmental rehabilitation, and sustainable development, which is consistent with the respondents' recommendations.

4. Conclusion & Recommendations

The study concludes that the respondents were qualified to provide reliable perceptions regarding the socio-economic, psychological, and academic effects of gold mining based on their age, grade level, sex, and years of residency. The findings revealed that learners were generally very affected to extremely affected by gold mining in terms of socio-economic, psychological, and academic aspects. No significant difference was found between male and female respondents regarding the socio-economic and psychological effects of gold mining; however, a significant difference was observed in the perceived academic effects. Furthermore, respondents' age, grade level, and years of residency were significantly associated with their perceptions of the effects of gold mining, showing moderate correlations with socio-economic and psychological effects and strong correlations with academic performance. The respondents also strongly supported the proposed recommendations and interventions to address the effects of gold mining.

Based on the findings, future studies should include Grade 11, Grade 12, and college students residing in the eight mining-affected barangays to further validate the results. The Local Government Unit of Aroroy, the Masbate Gold Project, and other concerned agencies should implement the proposed interventions to minimize the socio-economic, psychological, and academic effects of gold mining on learners. Gold mining corporations should continue providing financial support for the socio-economic and educational needs of learners, while the Local Government Unit should strictly enforce environmental laws to safeguard the welfare of the community.

The study was limited to Grade 7 to Grade 10 learners of Panique National High School during the period of data collection and focused only on their perceived socio-economic, psychological, and academic effects of gold mining. The findings were based on respondents residing within the study area and did not include learners from Grade 11, Grade 12, college, or other mining-affected barangays, indicating the need for broader participant coverage in future studies.

Compliance with ethical standards

The author declares no conflict of interest, and this study received no external funding. The researchers acknowledge the participation of the learners of Panique National High School and the support of the school in the conduct of the study; participation was voluntary, informed consent was obtained, and data were collected through a non-invasive survey questionnaire. All responses were treated with strict confidentiality and anonymity, no identifying information was disclosed, and the data were used solely for research purposes.

REFERENCES

- Adu-Gyamf. (2014). The effect of illegal mining on school attendance and academic performance of junior high school students in Upper Denkyira West District of Ghana. *Journal of Education & Human Development*, 3.
- Aragon, F. M., & Rud, J. P. (2013). Natural resources and local communities: Evidence from mining employment in Peru. *American Economic Journal: Economic Policy*, 5(2), 1–25.
- Arellano-Yanguas, J. (2011). Aggravating the resource curse: Decentralisation, mining and conflict in Peru. *Journal of Development Studies*, 47(4), 617–638.
- Arsel, M., Hogenboom, B., & Pellegrini, L. (2016). The extractive imperative in Latin America. *World Development*, 84, 122–135.
- Auty, R. (2007). Natural resources, capital accumulation and the resource curse. *Ecological Economics*, 61(4), 627–634.
- Bainton, N. A., & Holcombe, S. (2018). A critical review of mining and development in the Pacific. *The Extractive Industries and Society*, 5(3), 389–395.
- Banchirigah, S. M. (2008). Challenges with eradicating illegal mining in Ghana: A perspective from the grassroots. *Resources Policy*, 33(1), 29–38.
- Basu, N., Clarke, E., Green, A., & Calys-Tagoe, B. (2015). Integrated assessment of mercury exposure in gold mining communities. *Environmental Research*, 137, 74–82.
- Bebbington, A., Hinojosa, L., Bebbington, D. H., Burneo, M. L., & Warnars, X. (2008). Contention and ambiguity: Mining and the possibilities of development. *Development and Change*, 39(6), 887–914.
- Bridge, G. (2004). Contested terrain: Mining and the environment. *Annual Review of Environment and Resources*, 29, 205–259.
- Brisman, A., South, N., & White, R. (2016). Mining and environmental harm: Ecological justice perspectives. *Environmental Sociology*, 2(1), 4–16.
- Bury, J. (2005). Mining mountains: Neoliberalism, land tenure, and social impacts. *Latin American Perspectives*, 32(3), 220–239.
- Campbell, B. (2012). Corporate social responsibility and development in Africa: Mining communities. *Resources Policy*, 37(2), 217–224.
- Canavesio, R. (2018). Mining and schooling in rural communities. *International Journal of Educational Development*, 62, 45–53.
- Cernea, M. (2004). Impoverishment risks and reconstruction model for resettling displaced populations. *World Development*, 25(10), 1569–1587.
- Cust, J., & Poelhekke, S. (2015). The local economic impacts of natural resource extraction. *World Bank Research Observer*, 30(1), 1–23.
- Davis, G. A., & Tilton, J. E. (2005). The resource curse. *Natural Resources Forum*, 29(3), 233–242.
- De Leon. (2008). The 1987 Philippine Constitution. 84 P. Florentino St., Quezon City.
- Downing, T. E. (2002). Avoiding new poverty: Mining-induced displacement and resettlement. *Mining, Minerals and Sustainable Development Report*.
- Evans, G. W., & Kim, P. (2013). Childhood poverty, chronic stress, and environmental factors. *Psychological Science*, 24(6), 827–834.
- Franks, D. M., Davis, R., Bebbington, A., Ali, S. H., Kemp, D., & Scurrah, M. (2014). Conflict in mining development. *World Development*, 64, 778–789.
- Garcia, C., & Way, N. (2019). Mining environments and youth aspirations. *Journal of Youth Studies*, 22(5), 601–618.
- Hentschel, T., Hruschka, F., & Priester, M. (2002). Global report on artisanal and small-scale mining. IIED Mining Report.
- Hilson, G. (2002). Small-scale mining and its socio-economic impact. *Natural Resources Forum*, 26(1), 3–13.
- Hilson, G. (2010). Child labor in African small-scale mining communities. *World Development*, 38(3), 293–305.
- Hilson, G., & Garforth, C. (2013). “Everyone now is concentrating on the mining”: Mining and rural livelihoods. *Journal of Development Studies*, 49(8), 1156–1171.
- Hilson, G., & Van Bockstael, S. (2012). Poverty and artisanal mining in sub-Saharan Africa. *Resources Policy*, 37(3), 368–375.
- Hinton, J. J., Veiga, M. M., & Beinhoff, C. (2003). Women and artisanal mining. *Mining, Minerals and Sustainable Development*.
- Holden, W. N., & Jacobson, R. D. (2008). Mining, environmental conflict and development. *Journal of Latin American Geography*, 7(1), 83–106.
- Horowitz, L. S. (2018). Environmental conflict and mining impacts. *Global Environmental Politics*, 18(3), 1–22.
- ILO. (2019). *Child labour in mining communities: Global report*. International Labour Organization.
- Jenkins, H., & Obara, L. (2008). Corporate social responsibility in mining. *Journal of Business Ethics*, 84(3), 395–415.
- Jenkins, H., & Yakovleva, N. (2006). Corporate social responsibility in the mining industry. *Journal of Cleaner Production*, 14(3–4), 271–283.
- Kelly, J. (2018). Mining livelihoods and poverty cycles. *World Development*, 105, 62–74.

- Kitula, A. G. N. (2006). The environmental and socio-economic impacts of mining in Tanzania. *Resources Policy*, 31(3), 163–175.
- Loayza, N., & Rigolini, J. (2016). The local impact of mining on poverty and inequality. *World Bank Economic Review*, 30(1), 45–78.
- Maconachie, R. (2014). Youth livelihoods and mining in Sierra Leone. *Journal of Rural Studies*, 36, 140–150.
- Maconachie, R., & Hilson, G. (2011). Artisanal mining and rural development in Sierra Leone. *Journal of International Development*, 23(7), 1034–1055.
- Merriam-Webster. (2013). *Merriam-Webster dictionary* (10th ed.). Merriam-Webster Incorporated.
- Murdoch, J., Gouldson, A., & Bennett, J. (2000). Environmental impacts of mining. *Ecological Economics*, 33(1), 57–72.
- Munnik, V., et al. (2010). *Mining and social change*. South African Institute of International Affairs Report.
- Nudo, C. (2020). *Level of awareness of senior high school students to the cultural dance Pantomina in Castilla, Sorsogon* (Master's thesis, Major in Physical Education and Health). Bicol University Graduate School, Legazpi City.
- O'Faircheallaigh, C. (2010). Indigenous peoples and mining negotiations. *The Extractive Industries and Society*, 1(1), 1–10.
- Owen, J. R., & Kemp, D. (2013). Social conflict in mining. *Resources Policy*, 38(2), 160–168.
- Parsons, R., et al. (2020). Mining impacts on adolescent mental health. *Environmental Research*, 182, 109–118.
- Pegg, S. (2006). Mining and poverty reduction strategies. *World Development*, 34(4), 623–640.
- Sachs, J. D., & Warner, A. M. (2001). The curse of natural resources. *European Economic Review*, 45(4–6), 827–838.
- Scarlet Evans. (2019). *The future of small-scale gold mining in the Philippines*. Retrieved February 13, 2021, from <https://www.mining-technology.com/projects/cga-mining/>
- Schueler, V., Kuemmerle, T., & Schröder, H. (2011). Impacts of mining on land use. *Global Environmental Change*, 21(3), 769–779.
- Spiegel, S. J., & Veiga, M. M. (2010). Global mercury pollution from mining. *Ambio*, 39(3), 228–235.
- Steckling, N., et al. (2017). Mercury exposure and child development. *Environmental Health Perspectives*, 125(4), 1–9.
- Steckling, N., et al. (2018). Cognitive impacts of mercury exposure. *International Journal of Hygiene and Environmental Health*, 221(2), 200–210.
- Tschakert, P. (2009). Environmental degradation and livelihoods. *World Development*, 37(2), 458–470.
- Tschakert, P., & Singha, K. (2007). Mining and livelihood transformation. *Global Environmental Change*, 17(4), 385–400.
- UNDP. (2020). *Human development report: Mining communities*. United Nations Development Programme.
- UNICEF. (2018). *Children in mining communities report*. United Nations Children's Fund.
- Van der Ploeg, F. (2011). Natural resources: Curse or blessing? *Journal of Economic Literature*, 49(2), 366–420.
- Veiga, M. M., et al. (2014). Artisanal mining and sustainability. *Resources Policy*, 39, 81–89.
- WHO. (2021). *Environmental health risks in mining communities*. World Health Organization.