Paying School Fees through Wastes: The Experiences of an Eco Scholar

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Abstract: This case study explores the experiences of an Eco Scholar as he pays his school fees from the sales of recyclables under the Eco Scholarship of a university. This special non-academic scholarship of a university in Central Visayas, Philippines covers the tuition fees and allowance of the scholar and gives hope to an aspiring Marine Engineering student to finish the program. As the scholar segregates bio-degradable and non-biodegradable wastes in the Materials Recovery Facility, the student reminisces his experiences as a child from a poor broken family, his financial constraints in college, and the challenges and joys of his present work. The narratives of this case also revealed the personality of the scholar, the qualities that an Echo scholar should possess, and the difficulties he encountered while at work. The scholar shares the values he learned from solid waste management, his day-to-day struggle to make ends meet, and his dreams and aspirations for the family.

Keywords: School Fees, Poverty, Eco Scholarship, Solid Waste Management, Materials Recovery Facility, Central Visayas, Philippines

1. Introduction

Republic Act 9003 otherwise known as the Ecological Solid Waste Management Act of 2000 is an act providing for an ecological solid waste management program, creating the necessary institutional mechanisms and incentives, declaring certain acts prohibited and penalties, appropriating funds therefor, and for other purposes (The Lawphil Project, 2001). The law was crafted in response to the looming garbage problems in the country. RA 9003 declares the policy of the state in adopting a systematic, comprehensive and ecological solid waste management program that ensures the protection of public health and the environment and the proper segregation, collection, transport, storage, treatment and disposal of solid waste through the formulation and adoption of best environmental practices. Moreover, it illustrates the potentials and benefits of recycling not only in addressing waste management problems but also in alleviating poverty (Aquino, Deriquito & Festejo, 2013).

On December 12, 2008, Republic Act No. 9512 otherwise known as the National Environmental Awareness and Education Act of 2008 was signed into law. This law recognizes the vital role of the youth in nation-building and the role of education in promoting environmental awareness (Department of Environment and Natural Resources, 2015).

Globally, RA 9512 is one of the Philippine's concrete expressions of support to the United Nations Decade of Education for Sustainable Development (2005-2014), and the ASEAN Environmental Education Action Plan (AEEAP), and was later updated to the AEEAP 2014-2018 (DENR, 2015).

R.A. 9512 aims to promote environmental education through an inter-agency and multi-sectoral approach, involving various agencies in the Philippines such as the Department of Environment and Natural Resources (DENR), Department of Education (DepEd), Technical Education and Skills Development Authority (TESDA), Commission on Higher Education (CHED), Department of Science and Technology (DOST), Department of Interior and Local Government (DILG), and Department of Social Welfare and Development (DSWD).

These laws have guided the University of Cebu Lapu-Lapu and Mandaue to implement a solid waste management program in the campus. A Materials Recovery Facility (MRF) was created in 2015 for waste segregation and to identify recyclables that can be sold to support the education of students who are rendering services in the MRF. In line with the creation of the MRF is the implementation of the Eco scholarship. The Eco Scholarship is a special, non-academic scholarship of the university. Sales from the recyclables which includes used paper, plastic bottled water and boxes was utilized to pay off the tuition fees, miscellaneous fees and daily allowance of the student. The scholar works four hours per day in the university's materials recovery facility and segregates bio-degradable and non-biodegradable wastes.

Inasmuch as the Eco scholars are segregating wastes, the researchers explored in this case study the experiences of an Eco Scholar as he pays off his school fees from the sales of recyclables. The narratives of this case also revealed the personality of the scholar, the qualities that an Eco scholar should possess, and the difficulties he encountered while at work. The scholar shares the values he learned from solid waste management, his day-to-day struggle to make ends meet, and his dreams and aspirations for the family.

2. Related Studies

Various studies have been conducted at the school level. One paper reports on institutional solid waste management in three Tanzanian institutions. It is noted that there are indeed advantages in managing solid waste at institutional level because of the institutions' unique characteristics that also influence their waste management needs. The paper outlines findings from a yearlong study on institutional solid waste management at three institutions: University of Dar es Salaam (UDSM), University College of Lands and Architectural Studies (UCLAS) and Water Resources Institute (WRI). The study has revealed, among other things, that per capita waste generation rates, W_G vary between staff and students within each institution as well as among the three institutions. The composition of the waste was found to be predominantly organic in nature, suggesting a strong resource recovery potential in terms of animal feed or production of biogas through anaerobic digestion. Additionally, the W_G was found to vary in line with changes in institutional activities like normal studies, examinations and holidays. The study has

shown that resource recovery could greatly enhance solid waste management at the case study institutions (Mbuligwe, 2002).

Studies on the solid waste management in the Philippine setting have been conducted and published. In the study of Premakumara, Canete, Nagaishi, and Kurniawan (2014), the article highlights the successful experiences of Cebu, the second largest city in the Philippines, in reducing its Municipal Solid Waste generation by more than 30% in the past three years. This study also explores the implementation process, innovative actions taken by the Cebu City Government in implementing the national mandate at local level and identifies the factors that influence the policy implementation. The findings suggest that the impacts of the national mandate can be achieved if the local government units have the high degree of political commitment, planning and development of effective local strategies in a collaborative manner to meet with local conditions, partnership building with other stakeholders, capacity development, adequate financing and incentives, and in the close monitoring and evaluation of performance.

In another study by Macawile and SiaSu in 2009, inefficient waste management in the Philippines brings implications affecting environment and public health. The study examined local government officials' perceptions and attitudes towards their community's solid waste management and detect whether gender differences exist on the perceptions and attitudes of local government officials. Twenty-one randomly selected communities from the municipality of Dasmariñas, Cavite and local government officials purposively selected were surveyed. Generally men and women local government officials' perceptions and attitudes towards solid waste management are not significantly different from each other ($p>0.05$). Local government officials of Dasmariñas, Cavite recognized the importance of implementing a solid waste management program. Men and women have equal roles, responsibilities, perceptions and attitudes towards their community's solid waste management. Respondents recognized that attaining sustainable waste management is a joint responsibility of the government and its community members.

Bernardo (2008) on the other hand investigated on the experiences and practices of household waste management of people in a village of Manila, Philippines. Results showed that the households generated an average of 3.2 kg of solid waste per day, or 0.50 kg/capita/day. The types of wastes commonly generated are food/kitchen wastes, papers, PET bottles, metals, and cans, boxes/cartons, glass bottles, cellophane/plastics, and yard/garden wastes. The respondents segregate their wastes into PET bottles, glass bottles, and other waste (mixed wastes). No respondents perform composting. It is worth noting, however, that burning of waste is not done by the respondents. The households rely on garbage collection by the government. Collection is done twice daily, except Sundays, and household members bring their garbage when the garbage truck arrives. However, there are those who dump their garbage in non-designated pick-up points, usually in a corner of the street. Scavengers generally look for recyclable items in the dumped garbage. All of them said that it is their only source of income, which is generally not enough for their meals. They are also aware that their work affects their health. Most of the respondents said that garbage collection and disposal is the responsibility of the government. The results of the study showed that RA 9003, also known as the Ecological Solid Waste Management Act of 2000, is not fully implemented in Metro Manila.

Finally, Peralta & Fontanos in 2006 estimated the current and future quantity of e-waste in the Philippines, with a focus on televisions, refrigerators, air conditioners, washing machines, and radios.

Data from the National Statistics Office (NSO) serve as the input to a simple end-of-life model for each type of electronic device. Mathematical equations are derived incorporating other factors, such as the number of electronic devices in use, current end-of-life management practices, serviceable years of the product, and disposal behavior of consumers. An accurate estimation of e-waste generation would be useful in policy making as well as in designing an effective management scheme to avoid the potential threats of health impacts or environmental pollution. Preliminary estimates show that at the end of 2005, approximately 2.7 million units became obsolete and about 1.8 million units required landfilling. Over a 10-year period from 1995 to 2005, approximately 25 million units became obsolete. An additional 14 million units are projected to become obsolete in the next 5 years.

3. Methods

This case study interviewed an Eco Scholar from a university in Central Visayas, Philippines. This Eco scholar is a Marine Engineering student, male, 26 years of age and a resident of Sitio Panas, Sta. Rosa, Olango Island, Mactan, Philippines. For purposes of confidentiality, we shall refer to the Eco Scholar as Pedro. Pedro was interviewed for one hour throughout the period of one month. Participatory-observation was also utilized by the researchers. Consent was requested prior to the conduct of interviews and the informant was told that he can withdraw from the study anytime if he decides to do so.

4. Results and Discussion

Theme 1: Coming from a Broken Family

Pedro comes from a broken family. He has eight siblings with four brothers and four sisters. His mother left their home in Olango Island, Mactan when he was 5 years old. Presently, he lives in a boarding house together with his two brothers and is taking up a degree program on Marine Engineering. Although he is supported by his elder brother who pays for his school fees when he was in first year, the second year of schooling was a harder time for them. Aside from the boarding house expenses and school requirements, Pedro's family in Olango Island, Mactan relied on the salary of Juan.

> "I used to work as a sales clerk in one of the malls of Lapu-Lapu City and receives 227 Philippine pesos per day. I supported Juan until he finished an Electrical Engineering degree. My father is a quiet man and he is 60 years. He has concern for his children but he is torn between his first family and his new-found family. But, I don't hate him. With this situation, I will continue to work to support my education."

Theme 2: Waste Segregation at a Young Age

As early as 6 years old, Pedro would collect empty plastic bottles and other scraps which he and his siblings would sell to junk shops. The sales of waste segregation were a source to buy food and school supplies.

Pedro recalled, "Olango Island, Mactan is a relatively poor community. When I was a kid, we would ride the public motorcycle or 'habal-habal' to go to school. But if we don't have money, we walk 1 kilometer from home to school. We go home at 12 noon to take our lunch. Sometimes we do it so that my

classmates would think that I took my lunch. But there is no food at home. That's 4 kilometers walk in a day."

Pedro further relates that being absent in school during his elementary and high school days was common. "If we do not collect the empty bottles in trash cans, we won't have money. And money is essential for us to go to school."

Theme 3: The Eco Scholarship

Pedro read from the university's bulletin board that the Community Extension Department was looking for an Eco Scholar.

"At first, I was hesitant to apply for the scholarship. Knowing that I will segregate wastes would bring back memories of how hard life was when we were kids. But I was convinced by my elder brother to grab this opportunity."

The announcement on the bulletin board requires a male applicant who will be assigned in the Materials Recovery Facility (MRF) of the university. "I felt down during that time. I was always thinking of what my classmates would say about my scholarship. I was thinking of how they will ridicule me. Yet I was ready to tell them that I want to finish school, that's why I'm grabbing the opportunity. I will also help Mother Earth when I do recycling."

Pedro dreamed of becoming a ship captain someday. But during the enrollment process, Pedro saw the long line of Marine Transportation applicants. "I realized that with the long line of applicants, it would also mean more graduates in the program. That's when I decided to take up Marine Engineering. Few graduates means better chances of landing a job."

Theme 4: Paying School Fees through wastes

Weekly sales of Pedro at the MRF ranged from P200.00 to P1,000.00. Sales were deposited to the school's cashier. "With the little cash, it motivated me to work harder. More sales means I will be able to pay my school fees. The more cash was deposited to the cashier, the more I segregated wastes."

Pedro was a picture of hard work in the university. Not to mention the odor in the MRF, pests like cockroaches, rats and worms were a typical sight. "I would bring scratch paper and bottles from offices and the canteen to the MRF. People would look at me. But I wouldn't mind."

Pedro became closer to the janitors. They would bring recycled papers and plastic bottles to the MRF. It was observed that the scholar would usually walk the hallways with head bowed down. Pedro states, "I was asked by one of my classmates, 'are you a janitor?' I felt ashamed during that time but I told myself, I have to go on. I am used to the job physically. But not emotionally."

He also has to bring trash cans to the MRF. "How I wish students are more mindful of segregating at source. Just imagine food items are thrown with paper and plastics."

Theme 5: Learnings from the Eco Scholarship

"I have realized that there is money in waste segregation. It was able to cover my tuition fees and miscellaneous fees for one year. It's amazing."

Pedro recalls that the first month was the most difficult since the total sales was less than P5,000.00. "I was wondering if I would be able to reach P30,000.00 which was the semestral school fees. But when students learned that the recycled papers and bottles would fund my tuition fees, that's when they started to donate their old manuals, books and notebooks."

Now on his 3rd semester as an Eco Scholar, Pedro is one of the candidates for graduation. "I am thankful that I have reached this far and the Eco scholarship has supported me in my education."

Pedro relates that this scholarship requires recipients who are assertive and focused. "They should not mind what their classmates would say. Your classmates will not be able to help you pay the tuition fees. But your hard work will. And the scholar should be able to dig in the different items found inside the trash can."

Indeed a little sacrifice goes a long way. Pedro reveals that he would budget P50.00 to P100.00 to cover for 3 meals in a day.

Theme 6: Plans for the Future

In the future, Pedro plans to establish a recycling business. He dreams of a land-based job in marine engineering. Pedro said, "I would like to see my siblings working in the business that I will establish. I have been doing this since I was a kid and I believe this will be a great business to be in someday. There's money in wastes. And I have experienced that."

Pedro, during the interviews cries as he relates his plans for the family. "I want my family to have a comfortable life. They are the primary reason why I am working hard. My relatives told me when I was young that I will marry early, that I will be a drug addict, and I will never succeed because we are poor. But I will prove them wrong because I will finish the program."

Pedro relates how he questions God about his situation and the poverty he experienced. "I seldom go to church. But when I pray, I cry. And I always ask God why I am experiencing all of this. Yet I thank Him for I am alive. I am hopeful that one day my hardships will end."

5. Conclusion

Since its implementation in 2015, the Eco Scholarship has funded the tuition fee of one marine engineering student. Segregating wastes in the university and selling the recyclables has given hope to a poor but deserving student to continue his studies. Aligned with the 3rd statement of the university's vision, "Give hope and transform lives," this community extension program teaches the faculty and students that solid waste management in the campus can be a source of profit and inspiration. As we continue to manage our solid waste in the university, this case study recognizes that the school system is a vital part of our basic learning system and a powerful vehicle for change. It also reminds the university that environmental awareness and protection is beneficial to the school and the society.

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