

Intrinsic and Altruistic Motivation Among Worker Cooperative Participants: Text Mining Analysis Based on the Nishiawakura Village Reporting Project

Takuto Murai

Kagawa University

Email: takuto.murai@kagawa-u.ac.jp

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Abstract: *On October 1, 2022, the Worker Cooperative Act went into effect in Japan, tasking worker cooperatives with playing a leading role in solving population decline issues due to its aging society with a very low birth-rate. The research target of this study is the 'Worker Cooperative Children's Editing Club,' which was first established in Kobe city, where worker cooperative activities are common. Participating students participated in a reporting project in Nishiawakura Village. The participants were surveyed to evaluate if they experienced intrinsic and altruistic motivation through the worker cooperative extra-curricular activity. The results were analysed using text mining and confirm that participants were exposed to multiple opportunities to experience intrinsic and altruistic motivation.*

Keywords: worker cooperative, children's editorial club, Nishiawakura village, text mining, intrinsic motivation, altruistic motivation

INTRODUCTION

In recent years, the circumstances surrounding Japanese elementary and junior high schools has changed dramatically. The number of students enrolled in public elementary school was 11,925,000 in FY1956, the year of the second baby boom, but only 6,050,000 in FY2023, a decrease of 49.26%. Likewise, the number of students enrolled in public junior high schools was 6,106,000 in FY1986, but similarly decreased by 47.95% to nearly half with 3,178,000 by FY2023 (Ministry of Education, Culture, Sports, Science and Technology, 2023a). According to the Agency for Cultural Affairs (2022), although the number of club activities offered in elementary and junior high schools has remained consistent, not only has enrolment gradually declined, but so has the frequency of attendance.

The “2022 Survey of Teachers Working Conditions” (Ministry of Education, Culture, Sports, Science and Technology, 2023b) covered 1,200 elementary schools and 1,200 junior high schools. The survey found that the working hours of elementary school teachers on weekdays was 11 hours 15 minutes in FY2008 and 10 hours 45 minutes in FY2023, and their working hours on weekends were 1 hour 7 minutes in FY2008 and 36 minutes in FY2023. Junior high school teachers worked longer hours, their work hours at school on weekdays was 11 hours and 32 minutes in FY2008 and 11 hours and 1 minute in FY2023, while the time spent on weekends was 3 hours and 22 minutes in FY2008 and 2 hours and 18 minutes in FY2023. The reasons for these mild decreases are mainly due to the decrease in time spent on “school events” and “club activities.” However, it is acknowledged that the work hours are still excessive (Ministry of Education, Culture, Sports, Science and Technology, 2023b). As a result of these long working hours along with the difficulty of maintaining the variety of club activities with fewer faculty members due to the declining birth-rate, in order to reduce teacher workload, in August, 2022, the Agency for Cultural Affairs (2022) proposed a regional transition to offload cultural club activities on weekdays and weekends to community organizations.

There had been various governance frameworks of the potential host community organizations, with some using corporate status and others operating as non-corporate voluntary organizations. Each with advantages and disadvantages, such as not being able to receive investment, having for-profit rather than non-profit purposes, or holding property in the name of an individual. Under these circumstances, there was a call for the establishment of a new legal entity, and on October 1, 2022, the Worker Cooperative Act came into effect and addressed this issue in Japan (Ministry of Health, Labor and Welfare, 2024).

A review of previous studies, prior to the Worker Cooperative Act, discussing the above offloading of extra-curricular activities from schools shows they are mostly for athletic clubs. In addition, as of the date of publication, as the Worker Cooperative Act has only recently come into effect, there is currently a lack of information on worker cooperatives taking on cultural club activity responsibilities from local schools (Yoda et al., 1997; Watanabe, 2023; Kobayashi, 2022). This paper contributes to existing research by providing an investigation of a case of a worker cooperative taking on a cultural club activity.

As the Worker Cooperative Act comes into effect and worker cooperatives increasingly contribute to sustainable and vibrant local communities, there is a strong need to investigate currently active worker cooperative activities to analyse their influence on the participating students.

Previous studies examining the effects of athletic club activities on students have confirmed the acquisition of life skills as a positive effect (Ueno and Nakagomi, 1998). In addition, regardless of whether students participate in athletic or cultural clubs, it is

considered important to increase their positivity toward the activities to benefit from them (Fujiwara and Kawamura, 2016; Okada, 2009; Sumiya and Muto, 2001). As the reasons for actively participating in club activities vary from student to student, this paper focuses on the nature of their motivations to evaluate if and how they benefit from the activities in which they participate.

Specifically, this study determines whether students have intrinsic and altruistic motivation through a worker cooperative activity by surveying participating students followed by conducting a text-mining analysis of the verbatim transcripts.

LITERATURE REVIEW

Intrinsic and Altruistic Motivation

Intrinsic Motivation

In psychology, motivation is a major research topic. Deci (1975) proposes classifying motivation into extrinsic and intrinsic motivation. Extrinsic motivation is driven by external rewards (Ryan and Deci, 2000). On the other hand, intrinsic motivation exists despite the absence of obvious rewards as it is driven by interest and enjoyment inherent in the activity itself. As the purpose lies in the activity itself, it is characterized as a form of self-expression (Amabile, 1993).

Deci (1975) divided subjects into an experimental group (with monetary rewards) and a control group (without monetary rewards) to measure the time spent on a three-dimensional puzzle to confirm the relationship between external rewards and intrinsic motivation. As a result, the group that received monetary rewards spent less time on the puzzle, while the group without monetary rewards spent more time. This indicated the effect of external rewards in reducing intrinsic motivation. This effect of reducing intrinsic motivation by external rewards has been repeatedly confirmed in subsequent studies (Deci, 1980; Usui, 1986). Extrinsic motivation replaced the previous intrinsic motivation, and when external rewards were no longer available, motivation for the activity decreased. This effect is known as the “over justification effect” or “undermining effect” (Deci, 1971). Experiments with 20-month-old infants and school-aged children have shown that those who received material rewards for altruistic acts were less likely to continue compared to those who did not receive rewards (Warneken and Tomasello, 2014; Fabes et al., 1989).

Altruistic Motivation

Actions based on altruistic motivation benefit others while incurring some cost to oneself (such as time, effort, or money). This is widely studied, especially in the field of social psychology. Altruistic motivation has been observed even in infancy, where infants help unfamiliar adults without expecting rewards, reciprocation, or reputation

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enhancement (Warneken and Tomasello, 2009). Infants also tend to comfort those who are suffering and respond to emotional needs (Zahn-Waxler et al., 1992).

Additionally, experiments observing young children have confirmed that they help parents and other adults with tasks such as tidying up messy sheets, scattered books and cards, paper scraps, and laundry. Observations in actual home settings have also revealed that young children assist parents and observers, clearly conveying their intention to help (Rheingold, 1982).

Intrinsic and Altruistic Motivation

Some prior research considers altruistic motivation as a subset of intrinsic motivation (Warneken and Tomasello, 2009; Tonin and Vlassopoulos, 2014). On the other hand, other prior research considers intrinsic and altruistic motivation as related but separate (Kifle Mekonen and Adarkwah, 2021; Friedman, 2016). This paper agrees with the latter as intrinsic motivation is not necessarily for the good of others. In fact, an intrinsically motivated behaviour may be solitary, and not involve another individual. Similarly, altruistic motivation need not involve any enjoyment in the activity.

An intrinsic motivation is for its own sake, while an altruistic motivation is for the sake of others. There may be overlap between the two concepts if an activity is motivated by both the benefit of another (altruistic) and for enjoyment inherent in the activity itself (intrinsic). Intrinsic and altruistic motivation are not mutually exclusive.

Worker Cooperative

Japan is an aging society with a very low birth-rate and a declining population. This is creating challenges in a wide range of areas, including nursing care, welfare for the disabled, childcare support, and community development. There is a diminishing workforce to take on these challenges. Those who wish to address these diverse needs had been using corporate entities such as NPOs and corporate associations, or working for voluntary organizations without corporate status, so that they could realize their lifestyle and work style goals.

The characteristics of a worker cooperative (Table 1) are as follows: (1) The purpose of a worker cooperative is conducting business that contributes to the realization of sustainable and vibrant local communities (Ministry of Health, Labour and Welfare of Japan, 2024); (2) The incorporation procedure is based on the quasi-legal principle, whereby a corporation is granted juridical personality as long as it meets the requirements set forth by law in advance; (3) Equal voting rights are granted, and opinions must be shared on an equal footing; (4) The main method of fundraising and dividends is for workers to contribute funds as members of the association and engage in business on their own.

Table 1. Summary of Legal Entities

Types of Legal Entity	Business Objective	Incorporation Procedure	Voting Rights	Main Financing Method	Dividends
Worker Cooperative	Business that contributes to the realization of sustainable and vibrant local communities (other than worker dispatch)	Normative system	1 per person	Investment by members	Fractional Dividends
Joint Enterprise Cooperatives	Securing workplaces for members, rationalization of management	Authorization principle	1 per person	Investment by members	Fractional Dividends Up to 20% of the annual dividend
Joint Stock Company	Pursuit of profit through the business listed in the Articles of Incorporation	Normative system	Depending on investment ratio	Investment by shareholders	Dividends on capital contribution
Limited Liability Company	Pursuit of profit through the business listed in the Articles of Incorporation	Normative system	1 per person	Investment by employees	Dividends of profit by the Articles of Incorporation
Non-profit Organization	Specified non-profit activities (20 fields)	Certification principle	1 per person in principle	Dues and donations	Not allowed
General Incorporated Association	No restrictions on purpose or business (public benefit, mutual benefit, and profit-making businesses are also acceptable)	Normative system	1 per person in principle	Dues and donations	Not allowed

Worker cooperatives, unlike consumer cooperatives such as agricultural cooperatives, are organized by workers, are relatively difficult to manage, and have experienced continuing decline in the UK after their peak in 1905 (Tomizawa and Sato, 1986). However, after World War II, the success of the Yugoslavian self-management movement and the Mondragon Corporation in the Basque Country, Spain, brought worker cooperatives back into the spotlight in Europe in the 1970s (Ishizawa, 2021). The report 'Cooperatives in the Year 2000' by Alexander Fraser Laidlaw at the 27th Congress of the International Cooperative Alliance in Moscow, 1980, was the subject of much discussion regarding the pros and cons of labour cooperatives (Ishizawa, 2021). Initially, the mainstream was sceptical about the establishment of worker cooperatives in Japan, but there was a movement to actively observe overseas examples such as the Mondragon Corporation, and Japan's first worker cooperative was established in 1982 with Seikatsu-Club Seikyoku as its parent organization (Ishizawa, 2021). A following Japanese worker cooperative movement was formed by the Koreisha Jigyodan and Chukorei Jigyodan, which created jobs for the unemployed, redefining its activities as worker cooperatives in 1986 (Ishizawa, 2021). The entry into the Long-Term Care Insurance System in 2000 and the Designated Administrator System in 2003 not only financially stabilized worker cooperatives, but also further strengthened their self-identification as labour cooperative entities responsible for social welfare (Ishizawa, 2021).

As the goal of the Japanese government is to have worker cooperatives take over some of the burden on school teachers, it is necessary for worker cooperatives to have the potential to fill this role. Fortunately, there is precedent for this. There are many cases of worker cooperatives contributing to sustainable and vibrant local communities, the following are some examples.

In India, the Self Employed Women's Association (SEWA) started the Sangini Child Care Workers' Cooperative (SCCWC) as a response to SEWA workers desiring quality childcare. The SCCWC child care centres are owned jointly by the care providers and the mothers of the children. Childcare workers are selected from the community and receive training before taking up their responsibilities with continued training every three months. As a result, childcare workers are seen as leaders within their communities given their knowledge of children's health, nutrition, social development, and early education. The centres also serve as a public service access point for vaccinations, primary health care, and nutritional advice for parents (International Labour Organization, 2018). This worker cooperative serves a similar role to the aim of the Japanese government to have Japanese worker cooperatives reduce the burden on the public system.

In Shinjuku, Tokyo, the Creators 440Hz Worker Cooperative is a business that produces videos, designs, websites, and distributes videos. It is a workplace created by young people who have experienced truancy and social withdrawal, and it is a place where they can work in a way that suits them and live a rich and fulfilling life (Creators 440Hz

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Worker Cooperative, 2024). This worker cooperative enables youth to be active in their community without imposing additional strain on the local government.

In Suzuka city, Mie prefecture, the Common Wave Worker Cooperative was established in October 2022. It operates a free school to create a place where children can feel safe and learn. In addition, they provide support for children with disabilities with “child development support” and “after-school day services”. A variety of therapeutic education programs are provided aiming at social independence (Common Wave Worker Cooperative, 2024). This worker cooperative provides a valuable service to its community that would otherwise fall on the local government.

In Yokkaichi city, Mie prefecture, the Camping Specialist Worker Cooperative was established as an NPO in 2021 and additionally a worker cooperative in October 2022. It is involved in developing and operating campgrounds, as well as social education activities and event management through outdoor activities (Camping Specialist Worker Cooperative, 2024). This worker cooperative provides activities for local people independently of the local government. As of April 16, 2024, 90 worker cooperatives have been established across Japan (Table 2), and their businesses include ‘Campsite Management’, ‘Elderly Care’, ‘Funeral Services’, ‘Adult Guardianship Support’, ‘Support for the Needy’, ‘General Freight Trucking’, ‘Childcare Support’, ‘Housekeeping’, ‘Welfare for the Disabled’, ‘Local Fresh Fish Sales’, ‘Making Lunch Boxes for School Lunches’, ‘Cleaning’, ‘Building Management’, ‘Media Production’, etc. (Ministry of Health, Labour and Welfare of Japan, 2024).

Table 2. Worker Cooperatives by Prefecture (as of April 16, 2024).

Hokkaido	7	Gifu	1	Hiroshima	1
Miyagi	1	Shizuoka	2	Yamaguchi	1
Yamagata	1	Aichi	3	Ehime	1
Gunma	1	Mie	5	Kochi	1
Saitama	8	Kyoto	1	Fukuoka	3
Chiba	2	Osaka	3	Saga	1
Tokyo	11	Hyogo	10	Kumamoto	2
Kanagawa	8	Nara	1	Kagoshima	1
Niigata	1	Shimane	2	Okinawa	1
Yamanashi	2	Tottori	2	31 areas	90
Nagano	4	Okayama	2		

Worker Cooperatives in Hyogo Prefecture

As of April 16, 2024, the prefecture with the largest number of established labour cooperatives was Tokyo with 11, followed by Hyogo with 10 (Table 2). While it is understandable for Tokyo to have a large number of labour cooperatives due to its population, the large number of labour cooperatives in Hyogo prefecture is due in part to the support system provided by the Hyogo Gyoseishoshi Lawyers Association and Hyogo prefecture itself.

The Hyogo Gyoseishoshi Lawyer's Association has established a consultation service for worker cooperatives and provides advice on establishment procedures and other matters (Gyoseishoshi Lawyer's Association of Hyogo, 2024). In addition, Hyogo prefecture has established a seamless support system for worker cooperatives, from establishment to operation, the 'Regional Work Support Centers' in six locations (Kobe, Hanshin, Harima, Tajima, Tanba, and Awaji) to support residents and local organizations in their efforts to solve regional issues using business methods (Hyogo Prefectural Government, 2024).

Seven of the ten worker cooperatives in Hyogo Prefecture were established with such support in the Kobe area. The activities of the worker cooperatives are 'Children's Media-making Experience,' 'Insurance Design Consulting,' 'Advertising, Production, and Editing,' 'Advertising, Production, Editing, Office Work, and Delivery Services,' 'Assistance at Day Services and Other Senior Citizen Facilities, Escort Services in Hospitals, and Daily Life Support,' 'Creating a Place for Multi-generational Exchange,' and 'Tree-planting Management'. It could be said that Kobe City is a leader in terms of worker cooperative activities in Japan.

The Worker Cooperative Children's Editing Club

This study focuses on the 'Children's Media Making Experience' initiative by the Worker Cooperative Children's Editing Club (hereafter, 'Children's Editing Club'), a watershed case of the first worker cooperative established in the Kobe City area. This project began in the spring of 2020, when photographer Tomomi Kanai wanted to create a place for students and started a reporting workshop taking place mainly at stores in the Shioya area of Kobe City. Soon after, a writer joined her, then in October of the same year, they were joined by a marketing planner, an interior designer, an illustrator, and an accounting firm employee, and later a web developer and a university faculty member joined the group. These are the current eight staff of the Children's Editing Club. In March, 2021, a management meeting was held, and in April, the first term of the Children's Editing Club started in earnest with six students, and the number of students has steadily increased to 11 in the second term, 36 in the third term, and 41 in the fourth term. The Children's Editing Club's core business is editorial activities. Whenever a request is brought to the club by a company or a public officer, the staff of the Children's Editing Club act as facilitators, and the request is incorporated into a project that reflects the opinions of the students. Figures 1 to 4 are the main projects of FY2023 (Worker Cooperative Children's Editing Club, 2024). In addition to the editorial club projects, the club has expanded to include career and alternative education projects, community club activities, creating a place for students and adults, and a community cafeteria (Worker Cooperative Children's Editing Club, 2024).

Although the Children's Editing Club changed its legal entity status to a worker cooperative in March, 2023, it was confirmed that it had been planning and executing projects and steadily increasing the number of students.

洗濯以外でも希釈して
スプレーすることで様々な掃除に
ご利用いただけます。

4倍希釈	
スポンジにシュッと	汚れの分解力が強いので少量でしっかり落ちます。泡切れがよく節水にもなります。
フライパンコンロ周り レンジフードなど べと油汚れにシュッと	汚れに直接スプレーし、ウェスや新聞紙で拭き取ってから、フライパンは水洗い、コンロ周りやレンジなどは拭きなどで仕上げます。
10倍希釈	
靴にシュッと	ブラシなどで擦ったら、水を張った洗面台やたらいでよくすすぎ、あとは干して乾燥します。
食器にシュッと	食後の食器についている油分にスプレーし、ウェスや新聞紙で拭き取ってから水洗いします。
20倍希釈	
家中にシュッと	ガラス、フローリング床、手すり、こどもの椅子など手や足が触れるところにご利用いただけます。

※自然素材によっては染色する場合があります。
目立たないところでお試ししてからご利用ください。



BE KOBE
PROJECT



暮らしにやさしさが循環する
洗濯洗剤

やさしさの理由

- 衣類にやさしい**
皮脂や汚れを超微細に分解する技術により、少ない量で優れた洗浄力を発揮。中性だから衣類への負荷も最低限。これ一本で幅広い素材を洗えます。
- 家計にやさしい**
すすぎは一回でOK。水道代や電気代、時間も節約！ふんわり仕上がるので柔軟剤も不要。素材による洗剤の使い分けが要らず、洗濯回数も減らせます。
- みんなにやさしい**
植物由来成分だから赤ちゃんの衣類にも安心。お肌への安全性をクリアしたうえ、水質・生分解性試験でもお墨付きを得た、水辺の生態系・海との共存ができる洗剤です。

サステナブル

リサイクル効率の高いアルミボトル採用。ポンプは付け替えでリユースします。ボトルデザインは、地元の小中学生と一緒に作り上げました。収益の一部はこども食堂に寄付し、未来に、地元へつなぐを徹して持続可能な社会を目指します。

未来のために baton!

家庭からの排水を少しでもみんなの意識でキレイに。batonには以下の7つの成分が含まれていません。

- ①石油由来成分
- ②着色料
- ③人工香料
- ④蛍光剤
- ⑤漂白剤
- ⑥動物由来原料
- ⑦有害化学物質指定 (PRTR)

美しい海洋環境から気持ちのいい大気が生まれ、そして健やかな暮らしへ。次の世代へバトンを繋ぎます。



- 10年後 快適に暮らせるように
- みんなの水を守るために!
- 海に「優しい」はひとにも「優しい」
- ひとりが変わればみんなが変わる!
- batonで未来が変わるのだ!
- 大切なひとたちの健康を守りたい!

Figure 2.SDGs Kobe New Laundry Detergent Package Design.

Outline of the Nishiawakura Village Reporting Project

This study observed and conducted a survey with the participants of the Nishiawakura Village Reporting Project, which is conducted annually. An overview of the project is shown in Table 3 and Figure 4 (Worker Cooperative Children's Editing Club, 2024).

Table 3. Project Overview.

Dates	Saturday, March 23 and Sunday, March 24, 2024
Place of stay	Awakura Onsen Motoyu (2025 Kageishi, Nishiawakura-mura, Eida-gun, Okayama Prefecture)
Participants	30 students from grade 5 to 9, 10 staff and volunteers
Motto of the trip	Everyone plays the leading role!
Goals	<p>(i) Have fun: Discover the excitement and thrill that comes from within and make it interesting!</p> <p>(ii) Respect others: How do you choose your words and actions towards each other?</p> <p>(iii) Respect interview subjects: Cherish the time and feelings of the people who host and welcome us.</p> <p>(iv) Consider everyone's opinion: Value listening, treat this team as a family, no one will feel left out.</p> <p>(v) Take responsibility for your actions: Make sure all participants return home safely.</p>
Facility name: interview subjects	<p>(i) Mu-labo (co-working complex): 3D printer and laser cutter usage, etc.</p> <p>(ii) Awakura Kaikan (library and complex): Library, Hyakumori plaza, activities to accompany students with dogs stationed at the school</p> <p>(iii) Kageishidani Forest Bathing Plaza (conducted at Hyakumori Plaza due to rain): Survival game experience, relationship between the village and forest</p> <p>(iv) Roadside Station Awakura Land: Local specialty products</p> <p>(v) Awakura Onsen Motoyu: Guesthouse, natural hot spring, wood-chopping, bonfire, Gibier cuisine</p> <p>(vi) Pocket (children's place): Local ingredient recipes, yarn spinning, wood-chopping, bouldering, etc.</p> <p>(vii) Former Kageishi Elementary School (office and complex): Beekeeping, cypress dyeing, eel farming</p> <p>(viii) Nishiawakura Stn. and Awakura Onsen Stn.: Local train, station building, and walking around the area</p> <p>(ix) Base101% (strawberry house and complex): Strawberry production methods</p> <p>(x) Old private house cafe Aru no mori: Old private house, menu offered</p>

神戸市地域課題に取り組むNPO等補助金採択団体
子どもゆめ基金助成採択団体

岡山の 秘境

こども編集部
Kids Editors of Yamaguchi

西粟倉村
視察取材体験旅行

2024.3.23.SAT-24.SUN

恵まれた森林資源と、人と人とのつながりを生かして
アクティビティとクリエイションの拠点として拓かれつつある西粟倉村。
村の魅力的なスポットを「こども編集部」と一緒に取材したり
現地の子も達と交流しませんか？
村の魅力を自分が好きな発信方法（イラスト・文・写真・動画等）で
同世代に伝えることにも挑戦しよう！

日程 ▶ 2024年3月23日（土）・24日（日）
宿泊場所 ▶ あわくら温泉元湯 岡山県英田郡西粟倉村影石2050
料金 ▶ ¥15000（1泊4食・保険付） 集合 ▶ 垂水漁港 水産会館前（神戸市垂水区平磯）にて貸切バスに乗りします
募集対象 ▶ 小学5年生～中学3年生（定員30名）
編集会議 ▶ 2/25・3/3の取材勉強会に無料でご参加頂けます
申込先 ▶ 労働者協同組合 こども編集部（神戸・垂水）
こども編集部公式LINE（<https://lin.ee/a3Yeisj>）まで、
①参加者氏名②年齢③保護者氏名④ご住所⑤電話番号を
ご記入の上、保護者の方がお申し込みください。

公式LINE Instagram

◆こども編集部西粟倉村視察取材旅行プロジェクト◆
【主催】労働者協同組合こども編集部 / 神戸市垂水区塩屋町4-10-11 〈問合せ先〉 kids.editor2020@gmail.com
【協力】一般社団法人西粟倉むらまると研究所、一般社団法人Nest
※この活動では、団体広報や子どもゆめ基金等への報告のために写真撮影を行います。撮影した写真や映像等は、広報用にHPやSNS、
刊行物等に掲載することがあります。

Figure 4. Project flyer

METHODOLOGY

A survey was conducted through an SNS messaging group consisting of 30 students from grade five to nine who participated in the Nishiwakura Village Reporting Project and their parents.

The survey included two questions. (1) 'Please describe a time in which you were able to think, act, and express yourself during the two days of your Nishiawakura Village visit' and (2) 'During the two days you were in Nishiawakura Village, please tell us about a time in which you did something for or received something from the people around you'. Note that for both questions there was no upper or lower limit to the length of the answer, and the answer could be blank if there was any uncertainty. Ethical considerations included explaining the purpose and objectives of the survey to all parents and students, stating that the survey would be completed only after obtaining parental consent, and explaining via the SNS group that the survey results would be anonymous so that individuals could not be identified.

A text mining analysis of the responses obtained from the students was conducted to identify word frequencies and word scores. The software used was AI Text Mining by User Local Inc. (User Local Inc., 2024). The score attributed to a word is a value that considers not only the number of occurrences but also the degree of importance. A word with a high score can be said to be a word that characterizes the text (User Local Inc. 2024).

FINDINGS

Of the 30 students from grade five to nine who participated in the project and were asked to complete the survey, 22 responded (a response rate of 73.3%). Looking back on the two-day project in Nishiawakura Village, 19 (86.4%) students described a time in which they took intrinsic action, and 3 (13.6%) students did not. In addition, 12 (54.5%) respondents experienced altruistic actions either taken by themselves or others, while 10 (45.5%) did not. Only data from the students themselves were utilized, excluding events related to the staff or villagers.

Students	Intrinsic Motivation – Question 1	Altruistic Motivation – Question 2
A	I was able to interview subjects I was interested in.	No event
B	If I tried, I could have fun doing photography in my own way. I thought of ingenious and creative ways. I could do photography of the moment when everyone was smiling. I did it so everyone could have as much fun as they could.	No event
C	When solving riddles, I couldn't figure out the answer to #7, "Let's draw a picture," and after I thought of my own solution, I drew a symbol on the white board and proudly showed it to the staff, who told me with a straight face that it was wrong. The other time was when	I gave myself the chance to actively talk to a younger girl who was on the same team as me, even though we had never met before.

	we went to interview the people at Awakura Kaikan ourselves to ask them questions about the building.	
D	Most of the time I spent at Motoyu was free, so I suppose I got better at managing my own time.	No event
E	During the second day of the interview.	Cleaned up after meals.
F	I don't always do a lot of writing on my own at school or other places, but in the editorial office I wrote naturally and it was a lot of fun!!!!	I gave my friend a hand with her luggage and helped carry it for her.
G	When I did interviews for Pocket, etc., I tried as much as I could to express my own gratitude such as 'Thank you very much.'	I tried to talk to and be with my new friends so that they would feel alone as little as possible.
H	I wanted to chop firewood, so I got it and chopped it myself.	No event
I	I worked with the other elementary school girls and made sure they didn't get in trouble. When I first joined the editorial office, an older girl told me what to do, so I treated her the same way. I supposed I would be happy if others had as much fun as possible during their interview trip to Nishiawakura Village.	I came late because of a school club practice, but everyone helped me and gave me a warm welcome. They informed me about the first day's coverage that helped me.
J	I am glad that I tried to talk actively to make more friends.	I guess it was nice that one kid kindly told another kid who couldn't finish their food, "You don't have to eat it all yourself," and the kid gave the rest of it to the other kid to eat.
K	My friends and I talked and thought about where to put the bouldering handholds. I suppose the degree of perfection was awesome.	<p>What I gave to those around me: I gave a quilt to a child who was up late at night and didn't have a quilt. I found and gave something to a friend who had lost it in the bathroom.</p> <p>What I received from those around me: When I was eating a meal, a boy helped me by refilling my water.</p> <p>Events that I guess were wonderful: There was a girl who couldn't eat all of her meal. One of the boys told her to eat her food without leaving any leftovers, but she couldn't eat it all,</p>

		so he told the girl that it was too good to not eat and she gave the rest of the meal to him to eat. I was impressed by the kindness he gave her when I saw that.
L	I tried talking to a girl I met for the first time and we became friends. It was good to talk to her!	No event
M	I went to various places around the station that interested me.	I guess everyone was having fun making the trip enjoyable.
N	I was in charge of photography. I did photography of various landscapes. I did photography of people. I actively asked questions during the interviews.	I assisted people who didn't have their bags ready when it was time to leave the lodge. When I left my bag open, I received help from someone who informed me it was open.
O	I put my stuff away by myself, even though I don't usually put things away.	I made sure owners received their lost items that were on the desk. I woke everyone up and informed them when to leave, etc.
P	I drew my own picture on a tree with a laser.	I received my lost item.
Q	No answer	No answer
R	I asked a lot of questions about the survival game and other things.	I received instruction. I was informed how to write an interview summary sheet.
S	We had a lot of problems with the room, but we could solve them ourselves and reflect on them.	No event
T	No event	No event
U	No event	No event
V	Not to bother the locals because we are a group	No event

Table 4. Summary List of Intrinsically and Altruistically Motivated Events.**Text Mining of Intrinsically and Altruistically Motivated Events**

Note that although the questions and answers were both in Japanese, an effort was made when translating such that the answers above maintain the frequency of occurrence of the words appearing below.

Table 5 lists the text mining results from Question 1 of words with a high frequency and/or score. 'Interview' was the only noun with a high score and high frequency, 'Photography,' 'Question,' and 'Friend' were the nouns with a high frequency, and 'Nishiawakura Village' and 'Pocket (a place for children)' were the nouns with high scores. 'Could,' 'Thought,' and 'Suppose' were the verbs with a high frequency. 'Fun' was the adjective with the highest frequency.

Table 5. List of Word Frequencies for Intrinsically Motivated Events.

Noun	Score	Frequency of Appearance	Verb	Score	Frequency of Appearance
Interview	4.69	6	Could	0.03	5
Photography	0.14	5	Thought	0.03	3
Question	0.27	3	Suppose	0.01	3
Friend	0.05	3	Adjective	Score	Frequency of Appearance
Nishiawakura Village	7.65	1	Fun	0.04	4
Pocket	7.65	1			

Table 6 lists the text mining results from Question 2 of words with a high frequency and/or score. 'Meal,' 'Lost,' and 'Friend' were the nouns with the highest frequency of occurrence. 'Gave,' 'Eat,' 'Receive,' 'Informed,' 'Helped,' and 'Guess' were the verbs with the highest frequency of occurrence.

Table 6. List of Word Frequencies for Altruistically Motivated Events.

Noun	Score	Frequency of Appearance	Verb	Score	Frequency of Appearance
Meal	0.15	4	Gave	0.3	8
Lost	1.53	3	Eat	0.11	8
Friend	0.05	3	Received	0.08	5
			Informed	0.1	4
			Helped	0.02	4
			Guess	0.01	3

DISCUSSION OF SURVEY AND ANALYSIS RESULTS

Consideration of Intrinsically Motivated Events

As previously mentioned, 86.4% of the students who responded to the survey confirmed they experienced intrinsically motivated events through their participation in the Nishiawakura Village Reporting Project. Text mining of the intrinsic action events revealed the words 'Nishiawakura Village,' 'Pocket,' 'Interview,' 'Photography,' 'Question,' 'Friend,' 'Can,' 'Think,' 'Suppose,' and 'Fun' as the words with a high

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frequency or a high score. By reviewing the answers from the survey containing these words, we were able to confirm the following:

- (i) 'Nishiawakura Village' and 'Pocket' were characteristic words as they were reporting sites.
- (ii) 'Interview,' 'Photography,' 'Question,' and 'Friend' were found to be in the context of intrinsically motivated events: 'interview subjects I was interested in,' 'doing photography in my own way,' 'in charge of photography,' 'I actively asked questions,' 'my friends and I talked and thought,' and 'we became friends'.
- (iii) Phrases such as 'I could' and 'I thought' were identified to be in the context of intrinsically motivated events such as 'If I tried, I could,' 'I tried as much as I could,' and 'I thought of ingenious and creative ways'.
- (iv) 'Suppose' and 'fun' were confirmed as having a context of intrinsic actions and were connected to altruistic actions, such as 'I supposed I would be happy if others had as much fun as possible' and 'I did it so everyone could have as much fun as they could'.

Consideration of Altruistic Action Events

As previously mentioned, 54.5% of the students who responded to the survey experienced altruistically motivated events through their participation in the Nishiawakura Village Reporting Project. Text mining of the altruistically motivated events revealed the words 'Meal,' 'Lost,' 'Friend,' 'Gave,' 'Eat,' 'Received,' 'Informed,' 'Helped,' and 'Guess' as the words with a high frequency or high score. By reviewing the answers from the survey containing these words, we were able to confirm the following:

- (i) 'Lost,' 'Friend,' and 'Gave' were confirmed to be connected to altruistic actions and had the context of altruistic actions such as 'I made sure owners received their lost items,' 'I gave my friend a hand,' 'she gave the rest of the meal to him,' and 'everyone helped me and gave me a warm welcome.'
- (ii) Words such as 'Meal,' 'Eat,' 'Received,' 'Informed,' and 'Helped' confirmed the context of the experience of receiving altruistic acts such as 'Cleaned up after meals,' 'There was a girl who couldn't eat all of her meal,' 'I received help from someone,' 'owners received their lost items,' 'I received my lost item,' 'informed me about the first day's coverage,' 'helped carry it for her,' 'everyone helped me and gave me a warm welcome,' 'I was informed how to write,' and 'a boy helped me by refilling my water.'
- (iii) 'Guess' was extracted as a generic word.

Based on the above intrinsically and altruistically motivated events, we confirmed that the majority of the students were active participants in the Nishiawakura Village Reporting Project and that the majority of the students experienced intrinsic and altruistic motivation. Furthermore, the observed events based on intrinsic motivation (5.1 iv) and the altruistic motivation (5.2 i) suggest a relationship between the motivations.

Implication to Research and Practice

In an effort to ease the excessive working hours of school teachers in Japan, as published in the “2022 Survey of Teachers Working Conditions” (Ministry of Education, Culture, Sports, Science and Technology, 2023b), the Agency for Cultural Affairs (2022) proposed to shift the club activity workload of school teachers to the community. Soon after, on October 1, 2022, the Ministry of Health, Labor and Welfare passed the Worker Cooperative Act.

This paper investigates one such case, the Worker Cooperative Children’s Editing Club. Specifically, one event in which school children participated in an event named the Nishiawakura Village Reporting Project. The findings show that the objective put forth by the Ministry of Health, Labor and Welfare has the potential to be successful.

Worker cooperatives throughout Japan could look to the Worker Cooperative Children’s Editing Club as an example of how to put into practice aims of the Worker Cooperative Act.

CONCLUSION

In order to alleviate the excessive workload on teachers, local communities in Japan are increasingly being tasked by the government with the responsibility of taking in students after school hours. One example of this initiative is the activities of the Worker Cooperative Children’s Editing Club. As part of these activities, students participated in a field trip to Nishiawakura Village to complete a reporting project. This paper evaluates the students who participated in this project. Through a survey of the students, it was confirmed that the activities of the Worker Cooperative Children’s Editing Club were successful, as the students experienced intrinsic and altruistic motivation. Furthermore, as shown in Figures 1, 2, and 3 and Table 3, a key strength of the Worker Cooperative Children’s Editing Club is its role in connecting students with society. In practice, companies bring in assignments, and the students conduct interviews and provide articles to the clients. This entire process serves as an important vocational experience for the students.

Future Research

Limitations

This study was unable to identify if non-respondents did or did not have intrinsic or altruistic motivation. Furthermore, there is a possibility that the text data analysis of the survey could have been interpreted differently. Therefore, it would be beneficial to include all participants when conducting such an interview survey. Additional discoveries may be made using statistical analysis to investigate and analyse the relationship between intrinsic and altruistic motivation.

Future Research Opportunities

In addition to projects such as the Nishiawakura Village Reporting Project, the Children's Editorial Club has several activities that could be used as a subject for future research, including 'Career and Alternative Education Projects,' 'Community Club Activities,' 'Creating a Place for Students and Adults,' and 'A Community Cafeteria.' With the Agency for Cultural Affairs (2022) calling for the transition of cultural club activities to local communities due to the declining birth-rate and increasing workload of teachers, there is still room for further investigation into the significance and effectiveness of worker cooperative activities in terms of their potential to facilitate this transition.

It would be valuable to evaluate how this shift in responsibility from school club activities to the local community affects the participants as members of society. The participants may remain more involved in local community activities after entering the workforce.

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