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Role of Social Media in Managing Knowledge of the Young Generation in the Sustainability Area

Arnold Pabian [1,*] and Barbara Pabian [2]

[1] Department of Management, Czestochowa University of Technology, 42-201 Czestochowa, Poland
[2] Department of Management, University of Economics in Katowice, 40-287 Katowice, Poland
* Correspondence: arnold.p@wp.pl

Abstract: Knowledge plays a significant role in the area of sustainability. It is indispensable for taking the right pro-environmental and pro-social action. One of its sources is social media. The young generation is the largest group of social media users. The aim of this article is to discover whether social media is properly fulfilling its role in managing the sustainability knowledge of the young generation, taking into account the acquisition, collection and development of knowledge, as well as its dissemination and use. To address this issue, the authors conducted a survey on a representative sample of 1100 persons aged 15–24. The survey was quantitative in nature. The research tool constituted a survey form. The CAWI (computer-assisted web interview) technique was used to collect information. The collected data was analysed using mainly exploratory data analysis. Column, bar and line charts were used to visualise the data. The study discovered that social media, although highly popular among young people, makes an insufficient contribution to the management of their knowledge in the area studied. A significant proportion of the young generation rarely or never encounter sustainability content in these media (48.1% on average). On average, 22.7% of young people find this content unattractive. The majority of young people (60% or more) do not read all sustainability messages in detail. Approximately 1/3 of the young generation does not gather or develop knowledge in this area. A significant proportion of young people do not share such knowledge and, even worse, it does not inspire them to take up environmental and pro-social activities. The conclusions of the study and the solutions proposed by the authors can contribute to a better use of social media in the management of the young generation's sustainability knowledge.

Keywords: sustainability; social media; knowledge; knowledge management; young generation

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1. Introduction

Knowledge plays a key role in the area of sustainability. It constitutes a source of information pertaining to environmental and social risks and inspires people to engage in sustainable development. This engagement is particularly important as the Earth is losing its resources. In the past 50 years, the impact of human enterprises and the increasing global population on the Earth has been devastating. We are living at a time of peak consumption and peak waste [1]. As D. Fogel points out, modern industrial society can collapse if resources are mismanaged and abused [2]. It is not only environmental threats that are a serious problem. Environmental problems are accompanied by social problems, examples of which include social disease, poverty, exploitation, unemployment and crime. All of these factors will have a negative impact on the existence of future generations.

The directions and pace of sustainability will be determined by the pro-environmental and pro-social attitudes of the younger generation. The younger generation is gradually taking over the management of organisations, replacing retiring employees. This generation will either accelerate sustainability by making determined attempts to eliminate environmental and social risks, or it will hold it back. An important factor influencing these courses of action is knowledge in the area of sustainability. It encompasses many different

types of issues and concerns, including general sustainability [3,4], strategies for action in this area [5], sustainable business [6–8], sustainable management [9–11], sustainable marketing [12,13], sustainable projects, production and work [14–16], among others.

One of the main sources of knowledge used by the younger generation is the Internet, and, in particular, social media. In January 2022, of the 7.91 billion people living on Earth, as many as 4.95 billion (69.5%) were using the Internet. The number of social media users reached 4.62 billion people, representing almost 94% of all Internet users worldwide. The largest number of social network users are young people aged 20–29 (32.2%) [17]. In addition, in Poland, the number of social network users is very high, reaching 27 million people. This group is also dominated by young people. People aged between 18 and 34 account for 48.8% [18].

Since the young generation makes such extensive use of social media, this should be used to a high degree to transfer the knowledge on sustainability. Therefore, the authors of this article formulate the following research question: does social media adequately fulfil its role in the sphere of managing the young generation's knowledge about sustainability, taking into account its key processes? The key processes of knowledge management include: the acquisition, collection and development of knowledge, as well as its dissemination and use. In relation to these processes, the following specific questions need to be clarified: do young people find content in social media that enriches their sustainability knowledge? Is the content attractive and does it attract their attention? Do young people read the content? Does the knowledge about sustainability acquired from social media inspire them to take pro-environmental and pro-social action? Do they collect this knowledge? Do they develop it? Do they share this knowledge with family, friends?

Thus, the research problem is to explain the role that social media plays in the management of the young generation's sustainability knowledge, taking into account the key processes of this management (acquisition, collection and development of knowledge, as well as its dissemination and use).

In a more detail, solving this research problem requires:

- determining the frequency with which the young generation encounters sustainability content in social media;
- assessing the appeal of this content to the young generation;
- assessing the young generation' depth of insight into the essence of this content;
- identifying the inspiring role of this content in terms of taking pro-environmental and pro-social action;
- assessing the involvement of young people in collecting, developing and sharing this content.

In order to address this research problem formulated above, a survey was carried out on a representative sample of respondents obtaining questionnaires from 1100 people aged 15–24. The article presents the results of this survey, draws conclusions and proposes solutions to improve the sphere under study. In the opinion of the authors of this article, it is important, in an era of increasing environmental and social risks, to make better use of the potential of social media in managing the knowledge on sustainability.

The links between sustainability knowledge and the role of social media in this sphere are particularly important for the younger generation, who use social media very extensively. Social media should provide young people with sustainability knowledge and, through it, shape their environmental and social attitudes. Such knowledge allows for a better understanding of the nature and extent of environmental and social risks and provides information on how to eliminate them. In addition, sustainability knowledge from social media can encourage the younger generation to take specific pro-environmental and pro-social actions. It is also important that it inspires the search for new, effective solutions that contribute to sustainable development.

The article makes a significant contribution to the development of sustainability science in the sphere of sustainable management and online communication.

2. Literature Review

While conducting a review of the academic literature, our focus was on finding research-backed links between social media, knowledge management, sustainability and the younger generation. An extensive literature study revealed that there are papers in the academic literature that address only some of the issues in this knowledge area. Each of the terms, social media, knowledge management, and young generation, is narrowly associated with sustainability in the literature, as shown in the following section of this chapter. Many researchers are aware of the fact that social media can make a significant contribution to sustainable development, which is derived from its characteristics. According to Kasinathan Karmugilan and Murugaiyan Pachayappan, the accessibility to the direct opinion of an individual has made social media data more reliable. In this context, they consider that green management, green manufacturing, green logistics and green marketing represent the various dimensions of a green product [19]. The researchers also highlight another important feature of social media: their ability as new channels to improve stakeholder engagement. They analysed tweets that companies published on Twitter that also publish sustainability reports on Global Reporting Initiative. They found that tweet characteristics (content, hashtags, link, industry and country) affect stakeholder engagement [20].

As the literature shows, social media can contribute in various ways to sustainable development. The search for new solutions in this area based on external knowledge is particularly relevant. Ahsan Ali et al. argue that social media helps teams to explore and exploit external knowledge to innovate. According to them, a well-developed transactive memory system plays a role in supporting social media to enhance absorptive capacities [21].

Another example of the positive impact of social media on society is the shaping of sustainable consumption. One can agree with the statement of Abaid Ullah et al., that the growing adoption of social media has transformed consumption patterns. Unnecessary spending is one of the key drivers influencing climate change and excessive consumption is rooted in impulsive shopping [22]. In addition, it has been reported that social media usage and browsing has a significant impact on sustainable purchasing attitudes. Moreover, trust in social media and perceived environmental effectiveness significantly moderate the relationships pertaining to the browsing and drive for environmental responsibility [23].

The literature often considers social media and sustainability from the perspective of different industries and sectors. Here, we provide some examples. Xueqin Wang et al. analyse shipping industry's sustainability communications using Twitter data. They adopted sustainable development goals as the theoretical framework. They observe a trend of diversification in the sustainability communications and a trend of convergence in the public's response by way of retweeting [24]. E. Borowski et al. studied the impact of social media on the diffusion of sustainable mobility opinions. They concluded that the effect of social media on opinions and adoption of green travel alternatives depends on network structure. Random network structure is best for quick initial market growth [25]. Ming-Lang Tseng et al. contribute to the sustainable supply chain capabilities in textile industry. Social media is an important reference for decision-making in this scope [26].

The conducted literature review shows that the younger generation is also at the centre of interest for sustainability and social media researchers. An important role in the case of the young generation is played by education for sustainable development as it can generate changes in the mentality of people, enabling them to create a safer, healthier and wealthier world. Research shows that an educational process should be such that even the weakest students be educated in a manner that their actions, present or future, pose no danger to society or even to themselves [27]. Tomomi Yamane and Shinji Kaneko proved that the younger generation is pro Sustainable Development Goals (SDG). It is more willing to pay a higher price for sustainable goods, and to work for a pro-SDG company for a lower salary [28]. Muhammad Arif et al. found out that students leveraged social media technologies for knowledge sharing. The behaviour intention is driven by attitude, social norms and enjoyment of helping others [29].

Other knowledge management issues are also addressed in the literature, including its use to promote corporate sustainability performance. The obtained research results indicate that the relations, operation and economy aspects must align with the priority goal of achieving better corporate sustainability performance [30]. N. Gómez-Marín et al. propose a conceptual knowledge management model specific for the academics researchers and business stakeholders working in the innovation context. It arises from the need to adapt to the fast knowledge growth and changes as a result of Industry 4.0 [31].

The academic literature also addresses the issues of new technologies and innovation in knowledge acquisition and business development. B. Ilić and Z. Djurić draw attention to the importance of modern technologies in the area of sustainability. New technologies are a crucial component of modern living, they must be used to advance the green economy. New technologies including the Internet are very helpful in gaining/acquiring sustainability knowledge [32]. Using new technologies and enriching knowledge requires innovation. B. Ilic and M. Nikolic emphasize that it is essential is to learn and to innovate in the modern business environment and it cannot be only a privilege of management, but it must become and obligation and need of all employees [33]. An important role of innovations in the development of enterprises is also perceived by V.L. Vasilev, O.V. Sazanov, and O.N. Ustyuzhina. According to the authors, innovations are offered as a factor of strategic development of the firm. They analyze innovations as a process that includes several stages [34].

New techniques that include social media can also contribute to the dissemination of knowledge among Internet users. A. Gamoń argues that social media, among other things, "allows to serve and educate customers" [35]. Such sustainability education of the younger generation via social media is not sufficient. Social media is not fully exploited to transfer sustainability knowledge to the younger generation. This issue is not properly reflected in the scientific literature. That is why we address it in this article. At the same time, it must be remembered that the smartphone through which young people most often use social media "has become a personal medium that allows the user to be always available and connected both to other people and to businesses" [36].

As the literature review demonstrates, the research and analyses conducted to date only concern selected and narrow problems in the area, which can be encapsulated in the following framework: sustainability—social media—knowledge management—young generation. To date, researchers have mainly focused on the usefulness of social media in the sphere of sustainability (as well as from the perspective of different economic sectors), the shaping of sustainable consumption through these media, the attitude of the young generation towards sustainability, and knowledge management in general aspects.

The authors of this article have not found in the academic literature a full and comprehensive solution to the following problem: does social media adequately fulfil its role in the sphere of managing the young generation's knowledge about sustainability, taking into account its key processes? A full, holistic approach consists in considering in the research all the key processes of knowledge management: knowledge acquisition, knowledge accumulation, knowledge development, knowledge sharing, and knowledge use.

An extensive literature study, the more important excerpts of which have been presented above, has shown that the issue addressed by the authors of this article is not reflected in existing research. This indicates the presence of a gap in the literature, which the authors of this article intended to fill.

3. Research Method

The aim of the study was to determine the role of social media in the acquisition, collection, development, use and dissemination of sustainability knowledge by the younger generation. The activities mentioned constitute key knowledge management processes.

In order to achieve the set research objectives, a research tool in the form of a survey questionnaire was developed, a minimum sample size was set and the method of commu-

nicating with respondents was determined. Following the survey, the results were collated, analysed and the conclusions were drawn.

The survey questionnaire (see Supplementary Materials) was prepared in Polish (the survey was conducted in Poland on a representative sample of Polish respondents). The questionnaire is 4.5 pages long and consists of three parts: introduction, main part and metric (information concerning the person filling in the questionnaire). The introduction presents, among other things, the aim of the survey and defines the group of people to whom the survey is addressed (people aged 15–24 who use social networking sites). The core part of the survey that is supposed to solve the research problem consists of 25 questions. These are closed questions. They include 22 multiple-choice questions (questions with three or more possible answers) and 3 dichotomous questions (questions with two possible answers). The first four questions included in the survey (1–4) relate to respondents' use of social media sites. The remaining questions (5–25) are related to respondents' encountering/experiencing content on social media that pertains to environmental protection, social issues, sustainable development and responding to this content (acquiring, collecting, developing, disseminating and using it). The last part of the questionnaire (metric) contains three questions about the respondents, specifically their gender (female, male), age (15–18, 19–24) and place of residence (Northern Poland, Eastern Poland, Western Poland, Southern Poland, Central Poland). The provinces it covers are listed next to each region, e.g., Northern Poland (provinces: Western Pomeranian, Pomeranian, Warmian-Masurian).

The survey was conducted throughout Poland on a representative sample of young people aged 15–24. The starting point for determining the minimum sample size was the size of the population of 15–24-year-olds, which is 3,764,000 people according to the Central Statistical Office (subject area: population) [37]. The minimum sample size was 1067 persons with the following assumptions: confidence level of 95%, fraction size of 0.5, maximum error of 3%. It was finally decided to obtain fully completed questionnaires from 1100 respondents.

The survey was conducted with the use of the CAWI (computer-assisted web interview) technique. CAWI is a quantitative research method that uses a computer to collect information. Respondents were recruited through a social media post that included a link to the survey on the research platform. The second method of recruitment was the distribution of invitations through a message sent via email (email) and text message (SMS). Each message contained a link to the research platform where the survey was published. The CAWI technique was chosen for the survey due to its numerous advantages. It makes it possible to quickly reach respondents from different and distant geographical areas (the survey was conducted across Poland). Respondents can complete the survey questionnaire online at a time and place convenient to them. They devote as much time as they truly need to completing the survey, which is conducive to providing thoughtful and reliable responses. The researcher does not incur the costs associated with printing paper questionnaires. The results of the survey are entered into a database.

The subject of the survey were Internet users aged 15–24. First, the survey was piloted with a sample of 20 respondents. These responses were not counted in the sample. No irregularities were found in the pilot study. All questions were understandable to the respondents and did not require correction. The invitation to participate in the survey was displayed to 103,000 people, which means that the response rate was approximately 1%. A total of 1100 fully completed questionnaires were received.

The survey participants included 525 men and 575. Those aged 15–18 were represented by 570 respondents and those aged 19–24 by 530 respondents. Respondents came from all parts of Poland: northern Poland (207 people), southern Poland (240 people), eastern Poland (191 people), western Poland (216 people), and central Poland (246 people). In the metric included in the questionnaire, each of the above-mentioned parts of Poland (northern, southern, eastern, western, central) was assigned specific provinces according to the current administrative division of the country. As a result of this, the question on

indicating the region of Poland in which the respondent's place of residence was located was fully understandable to those taking part in the survey.

4. Results

The first part of the survey focused on obtaining information from respondents regarding their use of social media. The people surveyed most frequently use the following social networks: Facebook (79.0%), YouTube (57.7%), Instagram (51.0%), and TikTok (49.8%). Most young people spend 2–3 h (23.6%) or 3–4 h (22.7%) per day using social media. Almost a fifth of respondents (18.7%) use social networking sites for more than 5 h a day. Young people connect to social media at different times of the day (43.0%). Some respondents prefer specific times of the day. The most popular time is in the evening between 8 and 11 pm (24.8%) and in the afternoon between 1 and 8 pm (12.9%). Although the survey confirmed the long-standing trend of using smartphones to connect to social media (59.8%), a significant percentage of respondents also use tablets for this purpose (33.9%).

The frequency with which young people come across (encounter, find) sustainability content in social media is indicative of the greater or lesser presence of such content in these media. The authors of this article were particularly interested in encountering information on environmental protection, social problems and the use of the term sustainability in social media. The frequency of coming across sustainability content was divided into three categories: 1. often (every day and several times a week); 2. rarely (several times a month, several times a year); 3. never (I do not come across such content at all). According to the survey (Table 1), a significant proportion of respondents rarely come across environmental content on social media (41.2%), content on social issues (33.7%) and the use of the term sustainability (55.5%). Some respondents stated that they do not come across such content at all (5.1%, 3.9%, 4.8%, respectively). In the case of frequent encounters, content on social problems ranked first (62.4%), followed by content on environmental protection (53.7%) and in last is the use of the term sustainable development (39.7%).

Table 1. Young generation encountering content in social media about environmental protection, social issues and use of the term sustainability.

Frequency		Encountering Information on Environmental Protection		Encountering Information on Social Problems		Encountering the Use of the Term Sustainability	
Often	Every day	17.6%	53.7%	25.0%	62.4%	15.1%	39.7%
	Several times a week	36.1%		37.4%		24.6%	
Rarely	Several times a month	33.9%	41.2%	27.3%	33.7%	37.1%	55.5%
	Several times a year	7.3%		6.4%		18.4%	
Never (I do not come across such content at all)		5.1%		3.9%		4.8%	

Source: own study.

The majority of people surveyed believe that the content posted in social media pertaining to environmental protection (66.3%) and on solving social problems (68.1%) is very attractive and appealing (the content attracts attention, is interesting, makes people read the whole message) (Figure 1). Not all young people share these opinions. The attractiveness of content on environmental protection is assessed negatively by 17.6% of respondents, and content on solving social problems by as much as 31.9% of respondents.

Certainly, the attractiveness of sustainability messages posted in social media influences detailed reading. The more attractive the message is in terms of content and visuals, the more likely the recipient is to read the message in detail. Detailed reading means that the recipient not only reads the headline and the first few sentences of the message, but reads the entire text, watches the entire video, and listens to the opinions expressed from beginning to end. The survey showed that most respondents read some,

but not all, of the messages in their entirety (environmental content—49.2%; social problem-solving content—48.7%) (Figure 2). A significant proportion of the respondents do not read sustainability content in its entirety at all (environmental protection content—13.2%; social problem-solving content—11.3%). Less than half of the surveyed group of respondents read each message in its entirety (37.6%—environmental protection; 40.0%—social problem-solving content).

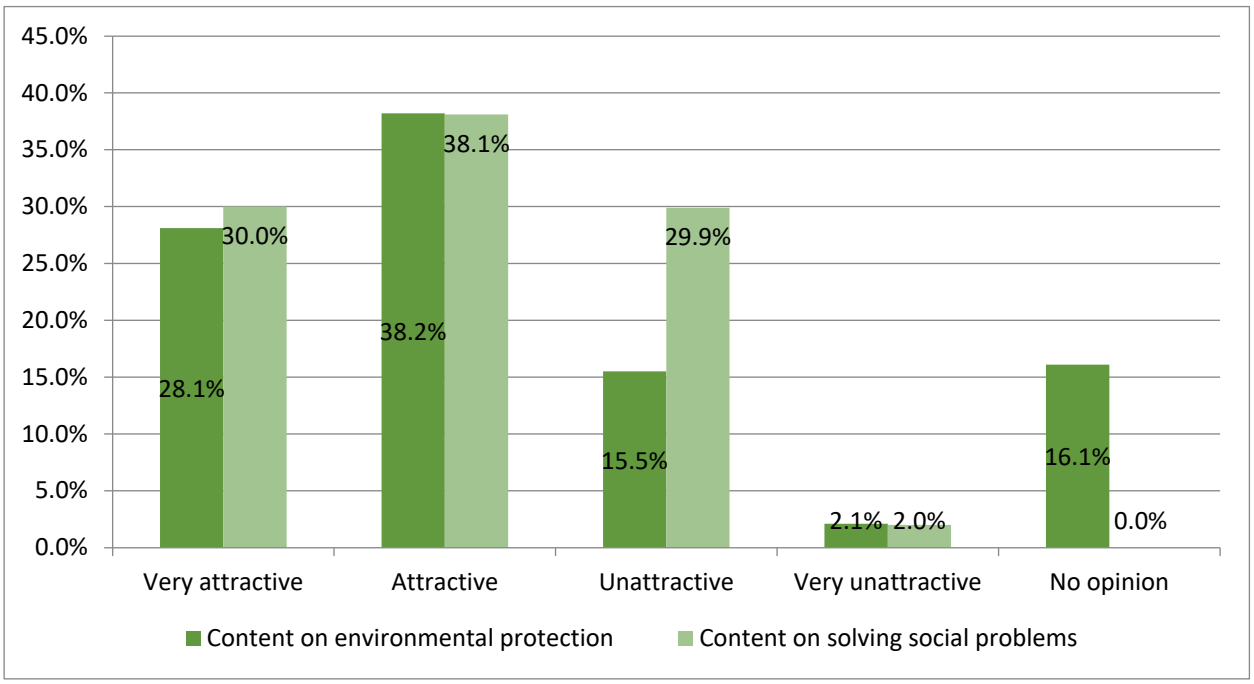

Figure 1. Attractiveness of environmental and social problem-solving information contained in social media. Source: own study.

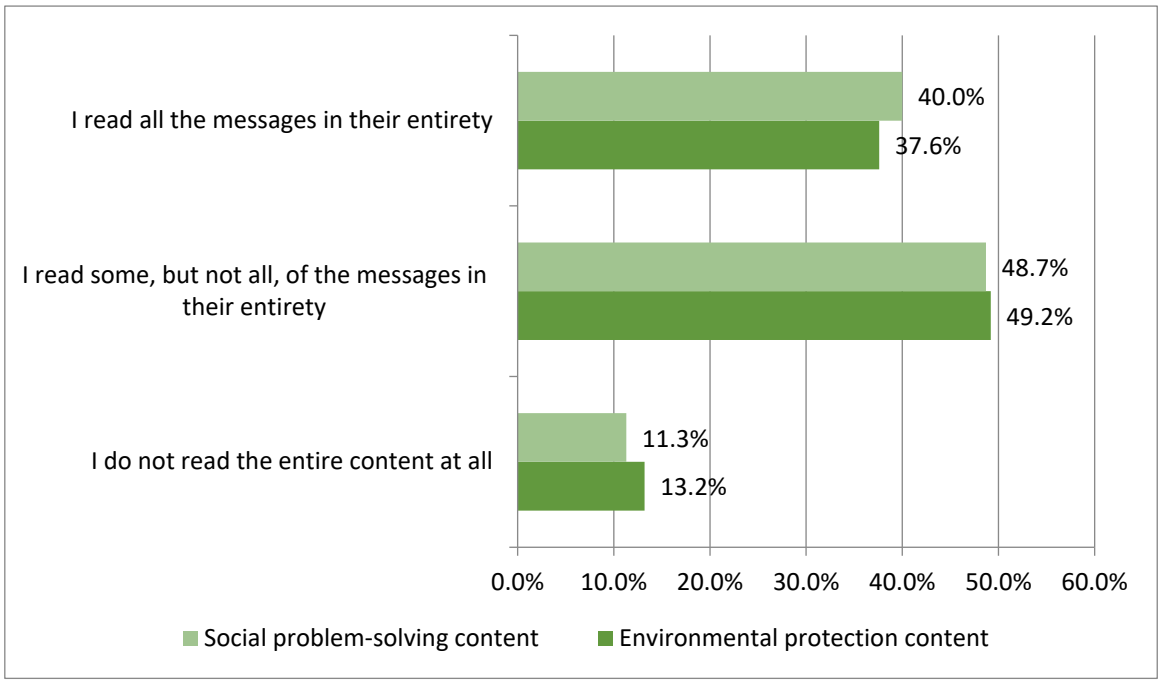

Figure 2. Detailed reading of environmental protection and social problem-solving content obtained from social networks. Source: own study.

The gathering of sustainability knowledge obtained from social media (copying into folders, copying into notes, collecting printouts) reflects positively on young people. It means that they are interested in this type of issues and are likely to use the information they have gathered about protecting the environment and solving social problems on a number of occasions. In addition, this may inspire them to undertake pro-environmental and pro-social research. The study uncovered whether young people collect sustainability knowledge gained from social media and with what frequency they do so. The frequency of knowledge-gathering was divided into three categories: 1. often (every day and several times a week); 2. rarely (several times a month, several times a year); 3. never (I do not come encounter such content at all). The survey showed that as many as 68.9% of respondents rarely or never collect environmental protection knowledge and 64.6% collect social problem-solving knowledge (Table 2). It is worrying that a significant percentage of the total respondents (32.4% and 28.2%) never gather this type of knowledge. Sustainability knowledge is often collected according to the division indicated in Table 2 by 31.1% and 35.4% of respondents, respectively.

Table 2. Gathering sustainability knowledge obtained by the younger generation from social media.

Frequency		Gathering Environmental Protection Knowledge		Gathering Social Problem-Solving Knowledge	
Often	Every day	11.7%	31.1%	13.4%	35.4%
	Several times a week	19.4%		22.0%	
Rarely	Several times a month	19.9%	36.5%	19.9%	36.4%
	Several times a year	16.6%		16.5%	
Never (I do not gather content of this type)		32.4%		28.2%	

Source: own research.

Respondents were also asked whether sustainability content found in social media encourages them to expand/develop their sustainability knowledge. This involves deeper insight into sustainability issues, searching for additional information on the subject on the Internet, in books and magazines, enrolling in training/courses. As the survey showed, environmental messages mobilise 40.8% of young people to expand their knowledge dedicated to these issues either poorly or not at all (Figure 3). In the case of content on solving social problems, this applies to 38.7% of those surveyed. Only about one third of the respondents (31.5%—environmental protection; 33.2%—solving social problems) stated that the messages encountered in social media strongly mobilise them to expand/develop their knowledge in these sustainability areas.

Young people's sharing of sustainability-related information, obtained from social media, with family, colleagues, friends, contributes to the dissemination of knowledge about sustainability in the community. The frequency of knowledge sharing was divided into three categories: (1) often (every day and several times a week); (2) rarely (several times a month, several times a year); (3) never (not shared at all). As the survey showed, environmental protection knowledge is rarely shared by 62.5% of young people (Table 3). In the case of solving social problems, such people account for 35.0%. On the other hand, knowledge in the areas indicated above is often shared by 37.5% and 65.0% of respondents, respectively. It is worth emphasising that there are no people in the surveyed group who are completely passive in this sphere (they never share sustainability knowledge).

Does the sustainability content posted in social media inspire young people to take action, and therefore drive them to protect the environment and solve social problems? This is another important issue addressed in the survey conducted. A significant proportion of the respondents are not sufficiently inspired by social media to take action in this area. In the case of environmental protection content, such people are 34.3%, and in the case of content on solving social problems, this figure rises to 44.0% (Figure 4). However, there are

some people who are inspired to take action by all such content (28.7%—environmental protection; 25.8%—social problem solving).

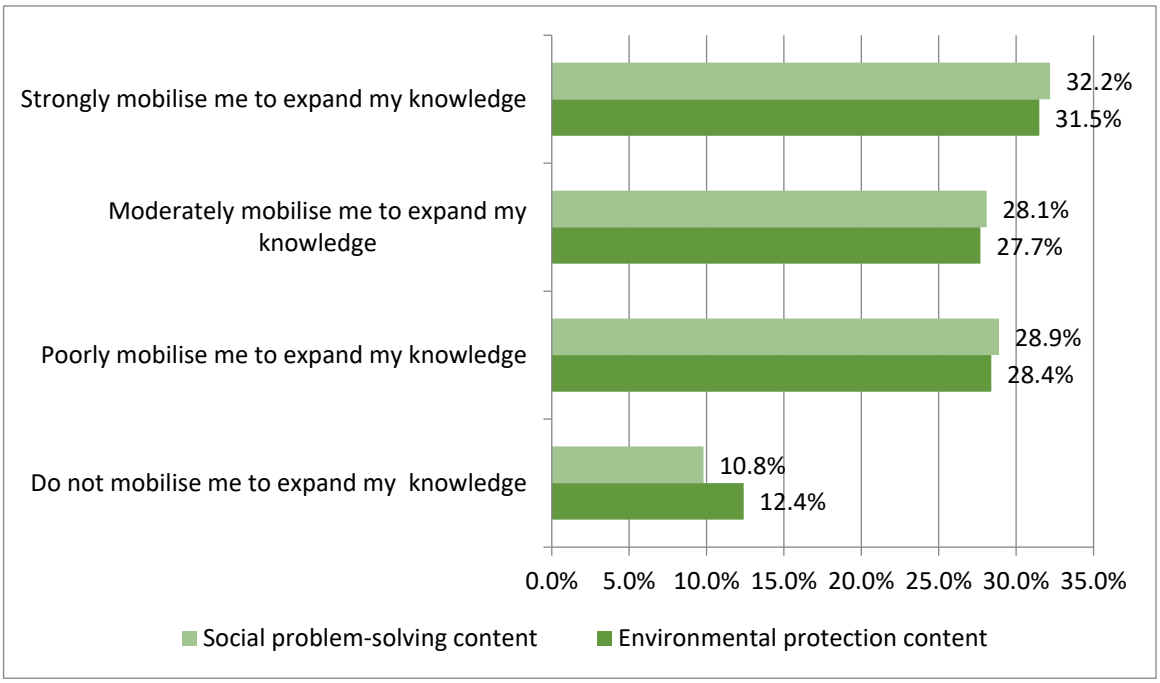

Figure 3. Expanding/developing sustainability knowledge gained by the younger generation from social media. Source: own study.

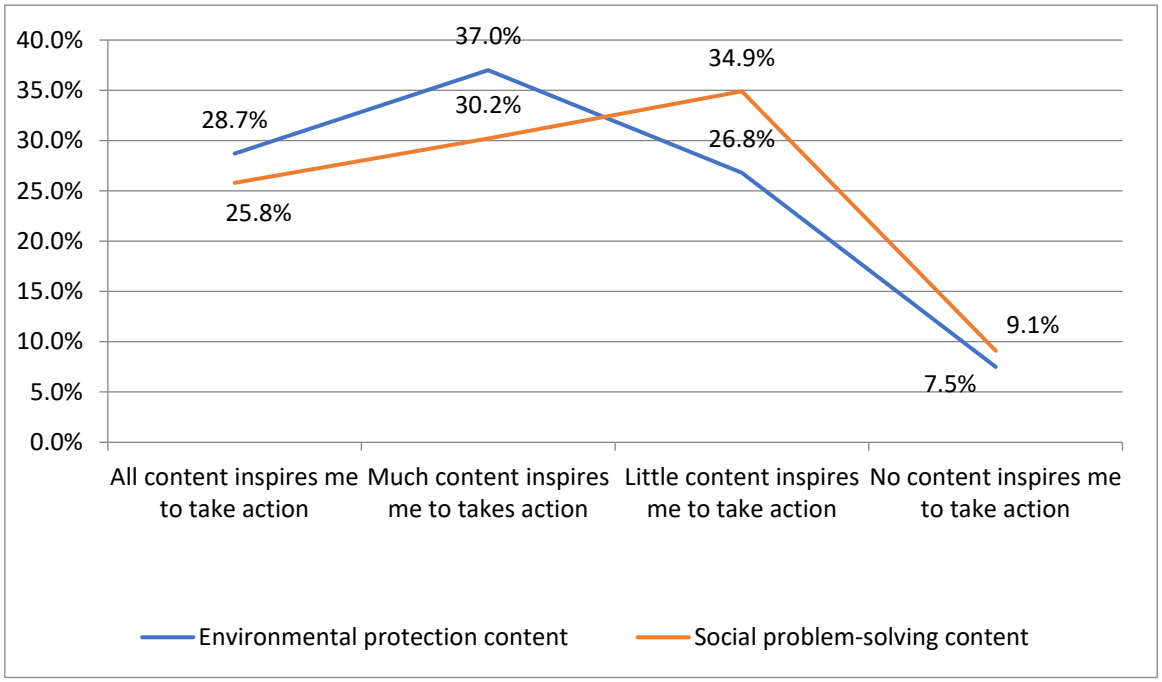

Figure 4. Utilisation of sustainability knowledge obtained by the younger generation from social media. Source: own study.

Table 3. Sharing sustainability knowledge obtained by the younger generation through social media.

Frequency		Environmental Protection Knowledge		Social Problem-Solving Knowledge	
Often	Every day	18.0%	37.5%	20.5%	65.0%
	Several times a week	19.5%		44.5%	
Rarely	Several times a month	43.7%	62.5%	20.0%	35.0%
	Several times a year	18.8%		15.0%	
Never (I do not share the knowledge of this type at all)		0%		0%	

Source: own study.

The survey also addressed the issue of the usefulness of social media in spreading sustainability knowledge. According to 76.7% of young people, social media is useful and very useful in spreading environmental knowledge (Figure 5). Regarding knowledge on solving social problems and sustainability, the percentages are, respectively, 76.5% and 70.5%.

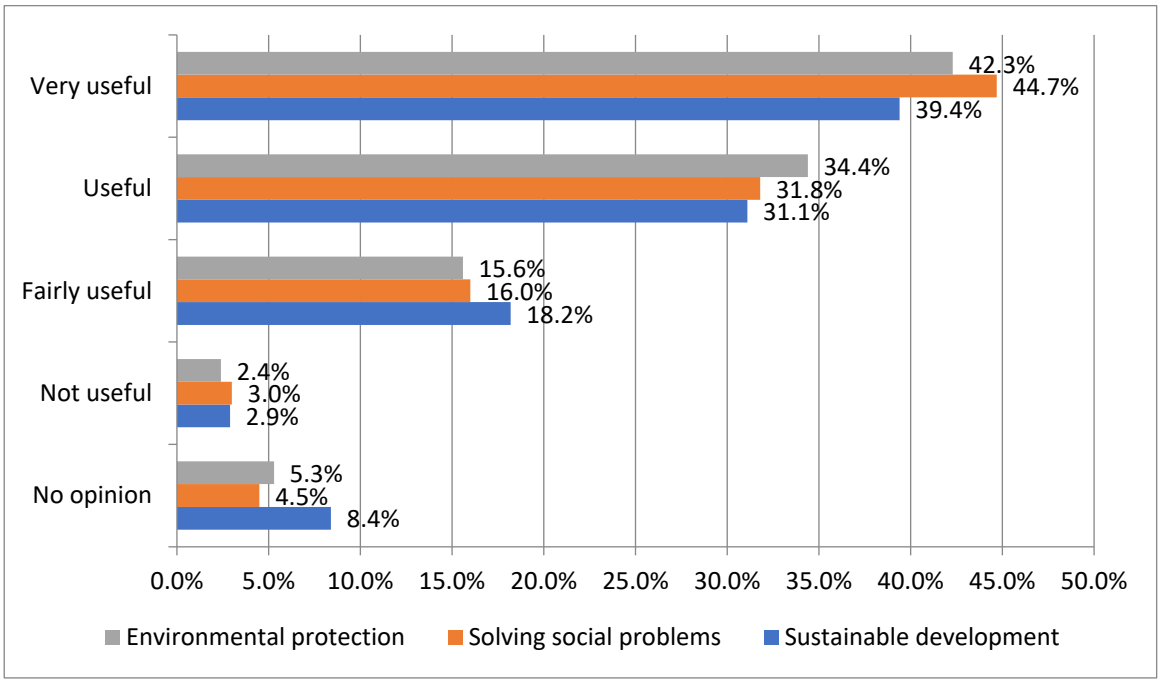

Figure 5. Usefulness of social media in disseminating knowledge on environmental protection, solving social problems and sustainable development. Source: own study.

5. Discussion

The discussion of the issue addressed in this article is important because the academic literature lacks a broad, holistic approach to the problem of managing the sustainability knowledge of the younger generation acquired from social media. This broad and holistic approach consists of the consideration by the authors of this article of all the key processes that make up knowledge management, which include knowledge acquisition, knowledge collection and development, knowledge sharing, and knowledge use in practice.

The existing research gap in the scientific literature that concerns the above problem results from a simple reason, which is put by D. Kaznowski in the following way: "Social media constitute one of the greatest innovations in communication that have taken place at the beginning of the 21st century [. . .] Unfortunately, due to the lack of necessary practice of actions with the use of social media, many organisations still approach their presence in this channel in an unplanned manner and without a broader vision of how to use the opportunities it offers" [38]. This means that the potential of social media is still not fully

exploited. This also applies to the dissemination of sustainability knowledge among the younger generation via social media. We therefore believe that the problem addressed in this article is important, and its solution can contribute to sustainable development.

We agree with the researchers' view that social media content is more credible due to access to the direct opinions of different people. As a result, the sustainability knowledge acquired from these media by the younger generation can be more willingly absorbed, collected and disseminated by them. In our view, this will have a positive effect if much of it is scientific rather than colloquial knowledge. Scientific knowledge is created in the process of scientific cognition. Currently, there is a considerable amount of colloquial knowledge in social media, with questionable cognitive and educational value. It is worth adding that interactivity plays a very important role in the case of content posted in social media. It allows people to actively react to the messages posted in it, comment on them, and have discussions.

However, the following condition should always be met: "the recipient must understand why he or she is being shown the content, and also understand the message that the content carries" [39]. Meeting this condition will make sustainability communication effective and understandable for the young social media user.

Lampa Iulianaă, Anca Greculescu, Liliana-Luminița Todorescu emphasise the significant role of education for sustainable development, which can generate changes in people's mentality, enabling them to create a safer, healthier and more prosperous world. In our opinion, traditional education is not enough to achieve this goal. It is necessary to look for modern, additional ways of educational influence on the young generation adapted to their needs and requirements. Such rich instruments for influencing young people are offered by social media, which the young generation uses on a mass scale.

The impact of social media on consumption patterns and consequently on sustainable purchasing attitudes is undeniable. However, in our opinion, social media has the potential to change not only the consumption patterns of the younger generation, but also other areas of their unsustainable activity. As a result, it can become a stimulus to change an unsustainable lifestyle into its sustainable counterpart.

Ahsan Ali et al. [21] state that social media enables teams to discover and use external knowledge to innovate. We relate this statement not only to teams, but to all social media users. Any user, including any young person, can find innovative sustainability solutions on social media, eligible for application in their professional and private lives. Whether they will want to use them remains an open question.

Certainly, research on the individual processes that make up knowledge management, especially those focused on knowledge sharing, has made an important contribution to science. While such narrow approaches are very valuable, we advocate a broader view of the issue through the lens of all key knowledge management processes. It takes into account, in addition to the acquisition and sharing of sustainability knowledge, its collection, development and use in practice. This approach allows for a holistic view of the problem. In this way, it is possible to discover whether and to what extent young people are engaging in the above activities, what disparities exist in this sphere, how to improve not a fragment, but the whole system of managing knowledge acquired from social media. It is this type of approach that we present in this article.

While conducting the discussion, it is worth noting certain limitations of the survey conducted by the authors of this article. The survey was conducted in Poland via the Internet using the CAWI technique. In order to take part in such a survey, the respondent must have an Internet connection. Thus, people without an Internet connection could not take part in the survey. The survey was conducted in Poland and therefore this limitation was of little importance, because as much as 92.4% of Polish households have access to the Internet [40]. This limitation may be a serious problem in countries where access to the Internet is limited or too expensive for owners of computer equipment. Another limitation in the case of the survey conducted was the lack of an interviewer as a guide

for the respondents. The authors of the study tried to minimise this limitation by carefully preparing the survey form and subjecting it to a pilot study.

It is desirable to continue the study, the results of which are presented in this article. D. Scott notes: "the number of people using the Internet has grown from a few million to billions of users. Yet many organisations are still not communicating with them online in real time. Over the next few decades we will see the continuation of this revolution" [41]. The constant increase in the number of Internet users and the under-utilisation of the potential of social media by organisations indicates not only the timeliness and importance of the issue addressed in this article, but also the need to continue research in this area.

The authors of this article suggest that each of the key processes of managing the young generation's sustainability knowledge gained from social media should be investigated more broadly and in more detail. Separate broad studies can be performed on issues such as the acquisition, collection and development of such knowledge, as well as its dissemination and use. We suggest using not only quantitative research but also qualitative research for this purpose.

The study conducted focused on young people aged 15–24. Another proposed direction for the research is to include other age groups, including older and middle-aged people.

These studies could be carried out on an international scale, covering several or more countries. They will show whether and to what extent the communities in these countries participate in processes concerning sustainability knowledge gained from social media.

It is also worth taking a deeper insight into the young generation's perception of sustainability content from various sources. Research could, for example, look at what opinion leaders. R. Lieb and J. Szymanski write, such as "analysts, bloggers, celebrities, expert practitioners and commentators are just examples of representatives of this influential group of consumers with a multitude of engaged fans and followers" [42]. In the context of future research, the following research problem can therefore be formulated: what influence do opinion leaders have on the sustainability knowledge management of the younger generation?

Another important sustainability issue concerning content contained in social media is greenwashing and astroturfing. Their essence is well-explained by A. Pabian in the article "Greenwashing and astroturfing. Green disinformation in promotional activities" [43]. Therefore, it is necessary to investigate the severity of these negative phenomena in social media. This is a serious problem, which P. Kotler, H. Kartajaya and I. Setiawan describe as follows: "the emergence of the so-called post-truth world, in which it is difficult to distinguish between fact and lie, is worrying. Disinformation is everywhere, ranging from mere spoof to seriously fabricated mystification. With the use of artificial intelligence, it is easier to create a fake audio or video recording that appears real." [44].

6. Conclusions

Social media is a modern and very important communication channel. A. Andrzejczyk puts it this way: "Social media provides an opportunity to develop relationships and deepen them, starting with casual acquaintances and ending with friend status [. . .] Social media are tools that significantly increase the effectiveness of communication activities" [45]. The advantages and potential of social media are still not fully exploited to communicate sustainability knowledge to the younger generation. This became the rationale for the research, the results of which are presented in this article.

Young people are the largest group of social media users in Poland and worldwide. They devote a great deal of time to its use. According to the study, more than half of them (52.5%) use it for 3 or more hours a day. The survey shows that social media, so widely used by young people, is not fully used to manage their sustainability knowledge.

According to the study, there is still too little sustainability content in social media. Therefore, a significant proportion of the younger generation encounter sustainability content there either rarely or not at all (48.1% on average). The attractiveness of this content is still insufficient. On average, 22.7% of young people find it unattractive and 2.05% find it

very unattractive. A high amount of sustainability content does not attract the attention of the audience, is not very interesting and does not make them read the whole message.

Enriching the knowledge on sustainability requires not just a superficial reading of related content, but going into detail about the message (reading the whole text, watching the whole video, listening to all the opinions expressed, etc.). Unfortunately, as many as 62.4% of the respondents do not familiarise themselves in detail with all environmental content, and 60.0% with content on solving social problems. The knowledge gained from a superficial view of such content is limited and insufficient to engage in sustainable development.

Nevertheless, it is important for young people to accumulate sustainability knowledge. Such knowledge can stimulate them to take action to protect the environment and solve social problems. However, only about one third of the people surveyed often gather knowledge in these areas (31.1% and 35.4%). A similar proportion of respondents never do so (32.4% and 28.2%). The problem is not only the accumulation, but also the expansion/development of this knowledge. A significant proportion of young people are not willing to gain a deeper insight into environmental issues (40.8%) and solving social problems (38.7%).

Sustainability information acquired from social media should make young people much more inclined to disseminate it to family, colleagues, friends. The survey found that only 37.5% of respondents share environmental knowledge. This figure rises to 65.0% in relation to solving social problems.

It is important that the sustainability content found in social media inspires young people to be highly active in this area. This is very important because knowledge alone will not improve the environment or solve social problems. The knowledge provided by social media does not fully inspire young people to take action in the area of sustainability. This is the case for 34.3% for environmental content and 44.0% for content focusing on solving social problems.

The majority of young people express the opinion that social media is useful and very useful in dissemination of knowledge about environmental protection (76.7%), solving social problems (76.5%) and sustainability (70.5%).

The study carried out discovered that social media, although so popular among the young generation, makes an insufficient contribution to the management of their sustainability knowledge considering: the acquisition, collection and development of knowledge and its dissemination and use. The authors of this article believe that taking the actions indicated below could improve this sphere.

A vital issue is to increase the saturation of social media with sustainability content and increase the appeal of this content. Introducing significant amounts of this type of content is difficult because social media is a social means of transferring messages; therefore, it is a type of media created by consumers rather than institutions. However, there is an opportunity for pro-environmental and pro-social organisations, as well as their employees, to create various types of platforms concerning these issues. Examples of these include organisations setting up blogs (text blogs, video blogs, photoblogs, audio blogs), creating their own video channels on YouTube, setting up Facebook profiles. Such activities also include the creation of specialised social media sites that deal with sustainability issues.

The above-mentioned activities should be accompanied by the continuous posting of valuable sustainability-related content in social media in the form of comments and opinions. It is important here not only to take part in discussions in this area, but also to initiate them, encourage pro-environmental and pro-social activities, and use professional argumentation.

The attractiveness of social media content in the area of sustainability should be improved. Important factors include the attractiveness of the subject matter, the attractiveness of the texts, videos and photos that are posted on the Internet by environmental and social organisations and experts in the field. Many valuable tips for creating good texts, films and photos can be found in publications on integrated marketing communication [46–49].

The substantive and visual appeal of sustainability content introduced to social media has a significant impact on whether the recipient: (1) will be interested in the message; (2) will read the content in its entirety; (3) will share the knowledge contained in the message with their family, colleagues, friends.

The attractiveness of sustainability content also motivates audiences to gather and develop knowledge on sustainability issues. Young people's activeness in these areas can be further developed not only through social media, but also through other measures. An example of these is the primary, secondary and tertiary education system, which can stimulate the younger generation to gather and develop sustainability knowledge to a greater extent than before. This will happen if more sustainability subjects are included in the curricula, the number of hours devoted to sustainability subjects is increased, and more projects, studies and other types of work are required in the subjects.

It is important that the messages posted in social media encourage young people to take pro-environmental and pro-social actions. To achieve this, the effectiveness of these messages needs to be improved. They need to include more practical information that contributes to protecting the environment and solving social problems, and present the concrete benefits that a young person can gain from taking the resulting actions.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/su15076008/s1, Survey form.

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