

Social Network Use of Accounting Professionals in Accessing Professional Knowledge in Türkiye: The Case of Facebook

Türkiye'de Muhasebe Meslek Mensuplarının Mesleki Bilgiye Erişimde Sosyal Ağ Kullanımı: Facebook Örneği

İbrahim ÇİDEM

Asst. Prof. Dr. Tokat Gaziosmanpaşa University

ibrahim.cidem@gop.edu.tr

<https://orcid.org/0000-0001-8017-2870>

Received : 17.12.2023

Revised : 30.03.2024

Accepted : 30.03.2024

Type of Article : Research

Reşid ÇİĞDEM

Asst. Prof. Dr. Tokat Gaziosmanpaşa University,

resid.cigdem@gop.edu.tr

<https://orcid.org/0000-0002-5974-6267>

ABSTRACT

Keywords:

Certified Public
Accountant,

Social Networking,
Facebook,

Web Scraping

Jel Codes:

C33 M40 M41 M49

Social networks, defined as virtual environments where people interact with other users using the internet, were first created for a group of university students to communicate with their schoolmates. Later, these networks were used for many different purposes, such as entertainment, news, advertising, product marketing and sales, education, and access to information on various topics. Professionals also create groups on these networks, share information with their colleagues in their field, and quickly access the information they need about their profession. Many people practicing accounting are also members of such groups on social networks. This study aims to examine the use of social networks by accounting professionals to access professional information. For this purpose, the groups actively used by accounting professionals were investigated using various keywords in social networks widely used worldwide and in Türkiye. After that, it was determined that the group with the most participants was on Facebook. This group was selected in the context of case study, one of one of the qualitative research techniques, and all the posts in this page were accepted as data. The web scraping method obtained 1,328 posts made in a specific time interval. These data were analyzed by content analysis method. In conclusion, it was confirmed that social networks were used by members of the accounting profession in order to access professional knowledge rather than social interaction.

ÖZET

Anahtar Kelimeler:

Serbest Muhasebeci Mali
Müşavir,

Sosyal Ağ,

Facebook,

Web Kazıma

Jel Kodları:

C33 M40 M41 M49

İnsanların interneti kullanarak diğer kullanıcılarla etkileşime geçtiği sanal ortamlar olarak tanımlanan sosyal ağlar, ilk olarak bir grup üniversite öğrencisinin okul arkadaşlarıyla iletişim kurması için oluşturulmuştur. Daha sonra bu ağlar eğlence, haber, reklam, ürün pazarlama ve satışı, eğitim, çeşitli konularda bilgiye erişim gibi birçok farklı amaçla kullanılmaya başlanmıştır. Bazı meslek mensupları da bu ağlar üzerinde gruplar oluşturarak kendi alanlarındaki meslektaşları ile bilgi paylaşımında bulunmakta ve meslekleri ile ilgili ihtiyaç duydukları bilgilere hızlı bir şekilde ulaşabilmektedir. Muhasebe mesleğini icra eden birçok kişi de sosyal ağlardaki bu tür gruplara üyedir. Bu çalışma, muhasebe meslek mensuplarının mesleki bilgiye erişmek için sosyal ağları kullanımını incelemeyi amaçlamaktadır. Bu amaçla dünya genelinde ve Türkiye'de yaygın olarak kullanılan sosyal ağlarda çeşitli anahtar kelimeler kullanılarak muhasebe meslek mensuplarının aktif olarak kullandıkları gruplar araştırılmıştır. Bunun ardından en çok katılımcının olduğu grubun Facebook'ta olduğu belirlenmiştir. Nitel araştırma tekniklerinden biri olan durum çalışması kapsamında belirlenen bu grup sayfasındaki tüm paylaşımlar veri olarak kabul edilmiştir. Web kazıma yöntemi ile belirli bir zaman aralığında yapılan 1.328 paylaşım elde edilmiştir. Bu veriler içerik analizi yöntemi ile analiz edilmiştir. Sonuç olarak muhasebe meslek mensuplarının oluşturdukları gruplar aracılığıyla sosyal etkileşimden ziyade mesleki bilgiye erişmek için sosyal ağları kullandıkları tespit edilmiştir.

Suggested Citation: Çidem, İ., & Çiğdem, R. (2024). Social network use of accounting professionals in accessing professional knowledge in Türkiye: The case of Facebook. *International Journal of Business and Economic Studies*, 6(1), 59-68, Doi: <https://doi.org/10.54821/uiiced.1406172>

1. INTRODUCTION

Social networks are virtual environments where people interact with other users using the Internet. It is estimated that the number of users of these platforms, which a group of university students first created to communicate with their schoolmates, has reached 5 billion worldwide. Initially developed only for participants to interact socially, social networks are now used for various purposes, such as entertainment, news, advertising, product marketing and sales, education, and information on various topics. Many professionals also create groups on these networks and share information with their colleagues in their field of work. At the same time, thanks to these groups, they can access the information they need about their profession quickly. It is known that many people practicing accounting are members of such groups on social networks for social and professional purposes. This study aims to examine the use of social networks by members of the accounting profession in sharing and accessing professional information. For this purpose, various keywords were used on Twitter, Facebook, and Instagram, which are widely used worldwide and in Türkiye, to determine the largest and most active group of accounting professionals. As a result of this research, a group with more than 112 thousand members on Facebook, where new posts are made daily, and there is intense interaction, was identified. The number of members is not the only reason for choosing the group on Facebook. In other social networks, group members are not authorized to post directly on the group page. However, Facebook groups allow all participants to post on the group page. The posts made in this selected group and the interactions they received were accepted as data. By web scraping method, 1328 posts made in a certain period were taken and subjected to content analysis. As a result, it has been determined that members of the accounting profession use social networks intensively to access the professional information they need.

2. SOCIAL NETWORKS

Social media, which has changed the way people communicate in modern society, has expanded rapidly since its emergence and is used by people of all ages all over the world (O'Day et al., 2021: 1). Social media can be defined as environments where users create an online identity, content, and relational networks (Magro, 2012: 149). They are platforms where users interact by sharing information and accessing others' posts through various media (Men et al., 2021: 324). Some social media environments include blogs, e-mail groups, forums, and social networks (Özdemir et al., 2014: 59).

Being social creatures, people want to share their feelings, desires, happiness, hobbies, and interests. In the twenty-first century, people want to connect with others with similar interests locally and globally, despite living in a time-constrained world. It can be stated that social networks are essential tools in meeting these needs (Kumar et al., 2021: 843). Removing physical and cultural barriers, social networks are seen as fundamental elements for interpersonal relationships in much of the world. With billions of active users worldwide, social networks are social structures consisting of people connected through various relationships or common interests (e.g., professional relationships, friendship, and kinship) (Camachoa et al., 2020: 88).

According to a study, some of the reasons why people use social networks include keeping up with what friends are doing, following news and current events, to spend leisure time, finding funny or entertaining content, sharing photos or videos with others, sharing ideas, shopping and meeting new people (GWI, 2022). In addition, it can be said that social networks are also used extensively for different purposes, such as sharing and accessing information, collaborating and coordinating with colleagues, and finding jobs and employees (Oksa et al., 2021: 2304).

According to a report published in July 2022, social media platforms, whose number of users is increasing daily, have 4.7 billion users worldwide. At the same time, Facebook is the social network with the most users, with 2.93 billion (Datareportal, 2022). According to a report published in February 2022, the number of social media users in Türkiye has reached 68.9 million. The number of users of social networks was determined as 52.15 million on Instagram, 34.4 million on Facebook, and 16.10 million on Twitter (Recro Digital Marketing, 2022).

3. THE ACCOUNTING PROFESSION IN TÜRKİYE

The accounting profession in Türkiye is regulated by Law No. 3568 on Certified Public Accountants and Sworn-in Certified Public Accountants. This law divides accounting professionals into "Certified Public Accountants" and "Sworn-in Certified Public Accountants." As can be seen in Figure 1, the duties of Certified Public Accountants can be listed as bookkeeping, preparing financial statements, preparing declarations and related documents, establishing and developing accounting systems, providing consultancy on accounting, finance, legal legislation, conducting

examinations and audits on all these transactions, preparing reports and opinions on all these transactions, and leading expert witnessing.



Figure 1. Duties of Certified Public Accountants in Türkiye

Sworn financial consultants can do all these works except bookkeeping, opening an accounting office, or becoming a partner. However, the most crucial authorization given to them is to carry out attestation works on various issues. The general and special conditions of being an accounting professional are also determined in this law.

Members of the accounting profession need some information from time to time while practicing their work. They obtain the information they need from various sources. One of these sources is social networks. Through the groups created on social networks, members of the accounting profession can access the professional information they need in a very short time.

4. LITERATURE REVIEW

There are many studies in the literature on investigation of intended use of Facebook groups for purposes other than social interaction. In this section, some of these studies will be discussed.

Cain & Policastri (2011) investigated whether students could gain practical knowledge about their field from non-university experts through Facebook groups. As a result, they found that students could access information about real-life applications through Facebook groups. Meishar-Tal et al. (2012) aimed to determine the alternativensness of Facebook groups to learning management systems. They found that a Facebook group could be used as a tutoring site and that students were satisfied with the use of Facebook groups for this purpose. Wang et al. (2012) aimed to measure the use of a Facebook group as a learning management system and students' perceptions of it. As a result, they found that although there were some limitations, Facebook groups could be used as a learning management system, and students were generally satisfied with Facebook facilities. Pi et al. (2013) examined the factors that encourage Facebook Groups members' willingness to share information. They concluded that reputation would influence information sharing attitude and sense of self-worth would affect this attitude directly and indirectly. Ekoç (2014) examined the use of Facebook groups as a tool in language learning and she found that Facebook groups could be used as a supportive and enhancing tool in language learning because of their benefits. Ping & Maniam, (2015) investigated the effect of Facebook groups on the writing skills of the newly learned language in their study. As a result of their research, they found that students who participated in Facebook groups performed better in writing. Miron & Ravid (2015) examined using Facebook groups as an alternative way to learning management systems as closed environments. They used Facebook groups to teach 12 courses. As a result, they found that both students' and educators' perspective on using Facebook groups in learning were positive. Abedin et al. (2017) examined the usability of Facebook groups in educating and informing patients with foot problems associated with diabetes. They determined the existence of active groups used by diabetic patients using various keywords on Facebook. They reported that doctors, nurses, and charitable organizations could inform these patients and their caregivers about foot care through these groups. Yıldırım (2019) investigated the support of teachers' professional development through the Facebook groups. In the group examined within the scope of the research, it was determined that teachers informed each other on many issues, such as field

knowledge, pedagogical knowledge, education and training processes, resource sharing, and personal rights, and supported their professional development. Yaşar & Arı (2023) examined Turkish teachers' use of Facebook groups for professional development. They used the case study technique, one of the qualitative research methods in the research. As a result of the analysis of the selected posts, they determined that Turkish teachers used Facebook groups to support professional development and to offer suggestions in this field.

5. METHODOLOGY AND FINDINGS

Social networks, which were established to provide various social interactions between users, are now used for many different purposes besides their purpose of existence. One of these purposes is to access professional information. Various professionals share professional knowledge with their colleagues through the groups they create on social networks. Accounting professionals also use social networks intensively for this purpose.

5.1. Aim of this Study

This study examined accounting professionals' social network usage level in accessing professional knowledge. At the same time, it aimed to determine the subjects on which the most experienced knowledge was desired.

5.2. Method and Scope of this Study

The groups actively used by members of the accounting profession were investigated using various keywords on Twitter, Facebook, and Instagram, which are widely used worldwide and in Türkiye. In this research, the keywords "accounting," "accountant," "accounting profession," "independent accountant," and "financial advisor" were used. Thus, it was tried to determine the group with the most participants and actively used. Depending on the keywords, many accounts and groups created for professional knowledge sharing for accounting professionals in social networks were identified. The statements and groups with the most members and the most actively used ones were identified for this study. As a result, the group on Facebook, which was established in 2009 by independent accountant financial advisors, where mostly accounting professionals are members, new posts are made daily, and there is constant interaction, was selected as a single case within the scope of the research. Another reason to choose a group from Facebook is that group members are not authorized to post directly to the group page on other social networks. Facebook groups, however, allow all participants to post on the group page. A case study is a qualitative research technique in which comprehensive data about the research topic are obtained through observation, interview, audio-visual materials, and documents about one or more situations in real life. The results are presented with themes and descriptions (Creswell, 2013: 99). In this study, the posts made in the group selected as a case study and the interactions these posts received were accepted as data. As of the moment the data set was taken, the group members were 111,911 (as of 20.09.2022 - 23:59). Not all group members are certified public accountants. Members include those practicing accounting under different titles, interns, students, and academics. Data from the relevant group were obtained by the Web scraping method.

Web scraping is a technique for extracting unstructured data from websites. Thanks to this technique, this unstructured raw data can be stored in an organized manner and transformed into an analyzable format. Web scraping can be considered as one of the data preprocessing steps in the data mining process. It consists of the following three sequential steps (Thomas et al., 2019: 452):

- Obtaining raw HTML data from websites
- Implementation of Web scraping techniques on HTML data
- Storing the structured data in an understandable and analyzable file type.

As a result of these steps, extracting targeted information from website data is integral to decision-makers' effective decision-making processes.

This study obtained data from the group above on Facebook using Python programming language and an auxiliary web scraping program specially prepared for this research. A total of 1,328 posts shared between 20.08.2022 00:47:42 and 20.09.2022 23:11:36 were analyzed. The total interaction (likes and comments) was received by these posts is 28,458.

The data were subjected to content analysis and descriptive analysis. Content analysis is an analysis method in which the data are analyzed, and those with similar aspects are classified; codes to express these classifications, categories, and themes that these are connected to are created (Sönmez & Alacapınar, 2014: 98). Descriptive analysis is the presentation of statistical information about research results to summarize the data (Balçı, 2013:

229). In this study, themes and codes were created, and frequency distributions were presented based on the posts made by accounting professionals in the Facebook group within the scope of the research through content analysis.

5.3. Findings

As a result of the content analysis of the data, four categories and three themes related to these categories were formed. These themes are social posts, job postings, and professional knowledge posts. The results are presented in Figure 2. The themes show the type of posts made in the group, and the categories show the details. The frequencies next to the categories indicate the number of posts in each category.

Figure 2 shows that most of the posts are related to professional knowledge. Based on this theme, which corresponds to 84.4% (1,121 posts) of the total posts, two categories were formed: information and question.

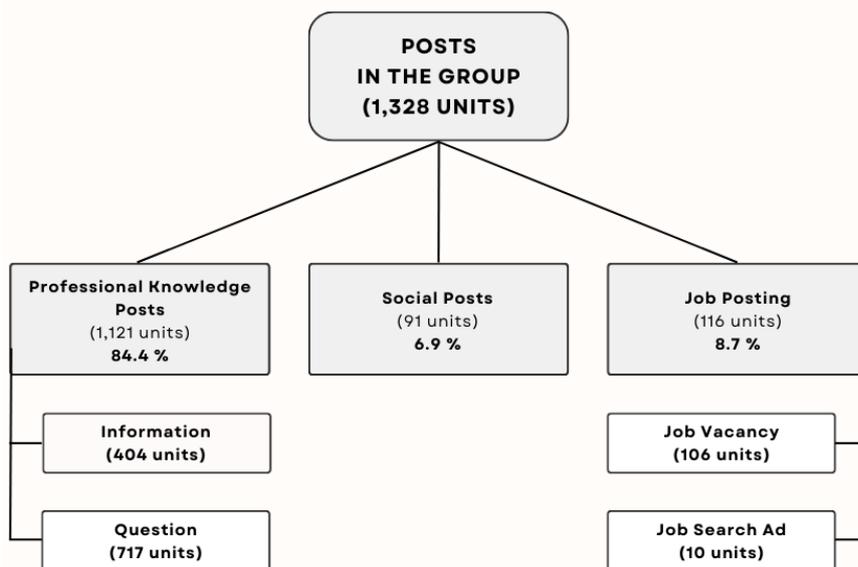


Figure 2. Themes and Categories Created with the Posts

The information category included posts by professional members on various topics, such as professional developments, practices, and new regulations. Conversely, the question consisted of posts to obtain information from colleagues on issues related to their profession that they could not solve, encounter for the first time, or are subject to new regulations. The other theme created in this research was social posts. This theme, which corresponded to 6.9% (91 posts) of the total posts, consisted of posts related to religious and national holiday celebrations, condolence wishes, fun content, and information about the group. The third theme created in the research is job postings. This theme, which corresponded to 8.7% (116 posts) of the total number of posts, had two categories: job vacancy postings and job search postings. The group had 106 job vacancy posts and 10 job search posts.

The posts received 28,458 interactions. Of these interactions, 17,863 were likes, and 10,595 were comments. The type, frequency, and percentage distribution of interactions by groups are shown in Figure 3.

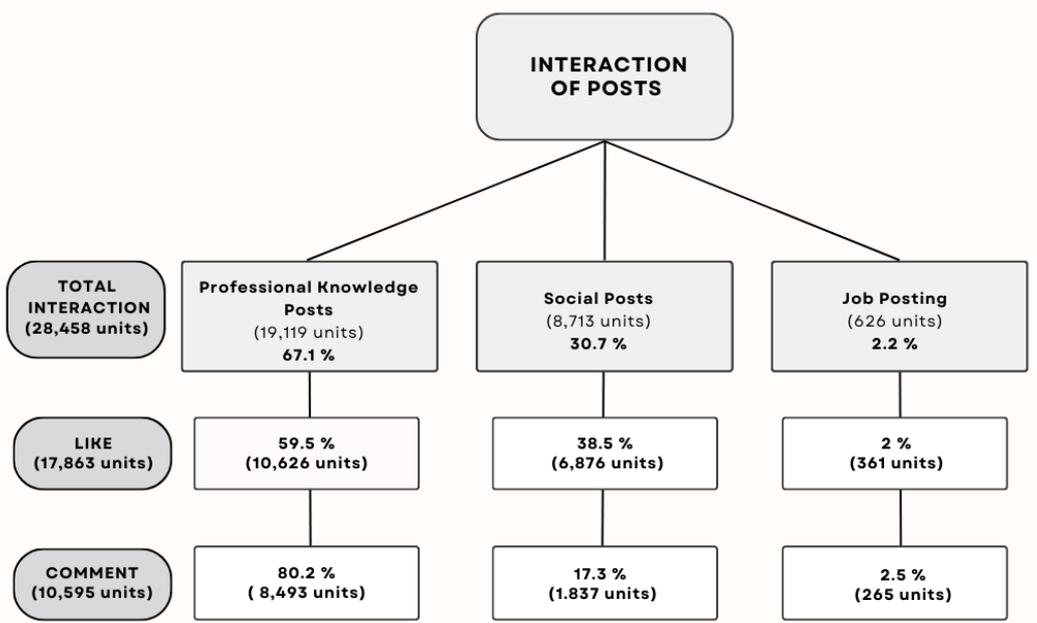


Figure 3. Distribution of Posts Interactions According to Themes and Codes

As shown in Figure 3, 67.1% (19,119) of the total interaction was received by professional knowledge posts, 30.7% (8,713) by social posts, and 2.2% (626) by job postings. When we looked at the distribution according to the types of interaction, the theme that received the most likes and comments was similarly professional knowledge posts.

The codes, frequency distributions, and percentages of the question category created based on the theme of professional knowledge posts to determine the topics the profession's members would most like to obtain information about, which is the study's second objective, are shown in Figure 4.

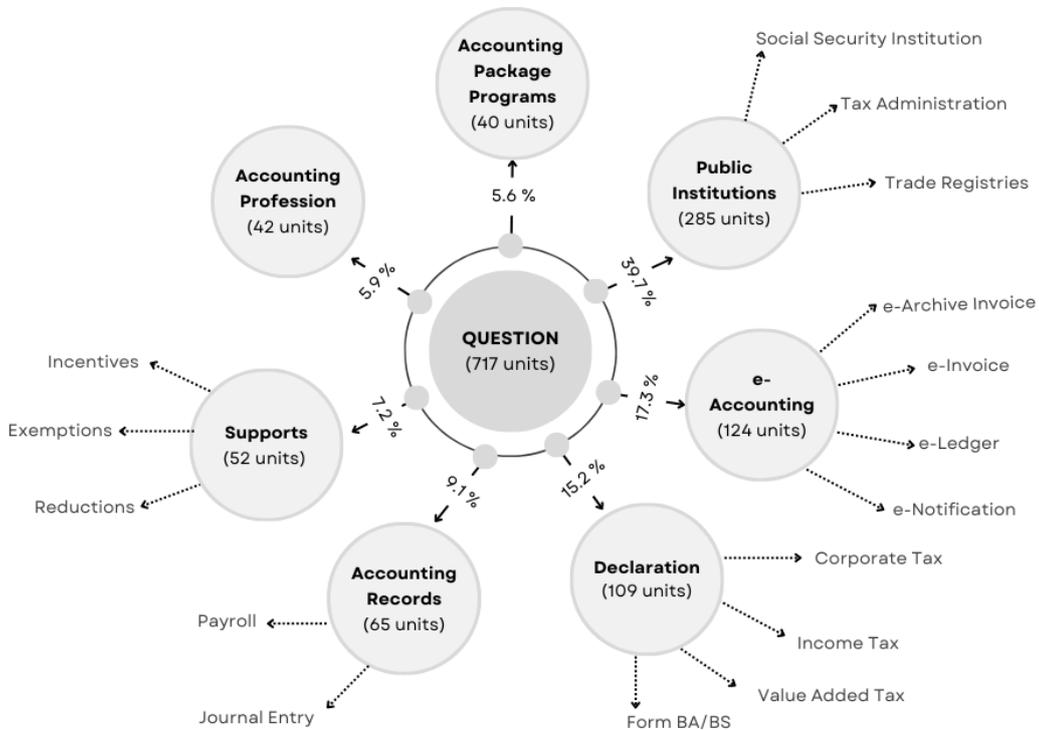


Figure 4. Topics on which Professionals Would Like to Obtain Information

When Figure 4 is analyzed, it was seen that the questions asked by the members of the accounting profession to obtain information from their colleagues through their posts were mostly related to public institutions. In this study, 285 (39.7%) of the 717 posts grouped under the "question" code are related to public institutions, such as social security institutions, tax administration, and trade registries. This code was followed by the e-accounting code with 124 posts (17.3%). The number of posts related to the regulations under the category of asking questions

was as follows: declaration 109 (15.2%), accounting records 65 (9.1%), supports 52 (7.2%), accounting profession 42 (5.9%) and accounting package programs 40 (5.6%).

The findings showed that 288 (22%) of the total 1328 posts in the group did not receive any interaction. In the question category, where 717 posts were included, 73 posts (10%) received no interaction.

All posts made in the group were labeled with the name "post," and in the order of date and time they were made. Depending on the code titles, posts related to the codes that made up the question category would be presented.

Some of the posts related to the public institution's code were as follows:

"The employee retired. Then we hired him. Will his annual leave be 14 days. Or will it continue for 26 days?" (Post 145, Date: 23.08.2022, Time: 22:12:13, 21 Likes, 55 Comments)

"Good day friends, the retired employee has entered the work with the wrong code, his pension has been cut, how should we proceed?" (Post 160, Date: 24.08.2022, Time: 11:13:05, 24 Likes, 28 Comments)

"We omitted to notify the Social Security Institution of a worker's termination of employment. He left his job on XX.XX.2022. Foreign worker and resigned. Should we make his exit to XX.XX.2022 and show the time in between as unpaid leave, or how do you recommend me to follow a path? How many penalties will we be subjected to if we check out late." (Post 260, Date: 26.08.2022, Time: 00:07:20, 26 Likes, 43 Comments)

Some of the posts regarding the e-accounting code were as follows:

"The taxpayer, who has an e-invoice, passed pos 50.000 TL from July but forgot to cut the invoice. What can we do in this case?" (Post 100, Date: 22.08.2022, Time: 19:23:16, 35 Likes, 47 Comments)

"If we delete and re-upload the sixth-month e-ledger, how can we delete the second copy we sent" (Post 480, Date: 31.08.2022, Time: 01:43:31, 24 Likes, 18 Comments)

"Friends, a net 2000 lira invoice will be issued; I wonder if the e-archive is mandatory" (Post 745, Date: 6.09.2022, Time: 19:05:51, 37 Likes, 54 Comments)

Some of the posts regarding the declaration code were as follows:

"I am an income taxpayer. We bought the land four years ago and built a 3-story villa on the land in 2021. Now we are selling it. The municipality's market value is 620.000 TL. We are selling it for 3.000.000 TL. Will we declare an increase in value?" (Post 155, Date: 24.08.2022, Time: 09:32:04, 10 Likes, 16 Comments)

"Hello, we just realized that the form BA/BS for June 2022 has not been submitted. Does it make sense to approve it on this date or not to approve it at all" (Post 273, Date: 26.08.2022, Time: 10:18:16, 16 Likes, 35 Comments)

Some of the posts related to the accounting records code were as follows:

"My pharmacy taxpayer deducted a turnover premium to the pharmaceutical warehouse. Can I assign it to normal sales in account no? 600 and exit account no. 320?" (Post 219, Date: 25.08.2022, Time: 10:31:52, 16 Likes, 39 Comments)

"On XX.XX.2022, I received a salary attachment letter of 2000 TL for the personnel I entered on XX.XX.2022. What should I do?" (Post 1264, Date: 19.09.2022, Time: 12:15:06, 13 Likes, 85 Comments)

Some of the posts related to the supports code were as follows:

"I received an error notification in incentive 27103 due to the average number of workers. How should I edit this, what should I do?" (Post 5, Date: 20.08.2022, Time: 06:18:29, 18 Likes, 22 Comments)

"Is there a problem if an incentivized worker is dismissed from the employer at the end of the incentive period and receives unemployment benefits?" (Post 666, Date: 5.09.2022, Time: 00:00:36, 20 Likes, 22 Comments)

Some of the posts related to the accounting profession code were as follows:

"Hello, we will make a contract with the taxpayer we have agreed with, but another financial advisor's contract is in e-union. He cannot be reached. What do you think should be done in this case? (Post 11, Date: 20.08.2022, Time: 10:31:41, 5 Likes, 22 Comments)

"Hello masters, can a professional working as an insured person keep books? (Post 1245, Date: 18.09.2022, Time: 22:16:29, 13 Likes, 46 Comments)

Some of the posts related to the accounting package programs code were as follows:

"Hello friends, I want to create a quick receipt in LUCA (accounting package program). I couldn't. If you have sample receipts, could you share your quick receipt definitions?" (Post 124, Date: 23.08.2022, Time: 13:40:29, 8 Likes, 7 Comments)

"Hello, chocolate production company uses ZIRVE (accounting package program) and wants to switch to another program because it cannot get support from ZIRVE. What would be your program recommendation?" (Post 845, Date: 09.09.2022, Time: 01:04:34, 25 Likes, 130 Comments)

6. CONCLUSION

Social media tools, first used for social communication, now serve many purposes. One of these purposes is to obtain information. This study aims to determine for which purpose the groups in social networks are used intensively by the members of the accounting profession and what subjects they want to obtain professional information most. For this purpose, the group with the most members on social networks was determined, and the group members' posts were accepted as data. The 1,328 posts made in the group with approximately 112 thousand members on Facebook were analyzed. As a result of this analysis, it was determined that members of the accounting profession used this group mostly for sharing professional knowledge posts (84.4% - information and questions). However, there were also job postings (8.7%) and social posts (6.9%) during the research period. Members of the accounting profession can obtain the professional information they need while practicing their work from many sources. Examples of these sources include legal regulations, academic publications, publications of professional chambers, and obtaining information from colleagues through classical methods (such as telephone or face-to-face interviews). However, it can be time-consuming to research and access information on a specific topic from these sources. Compared to these sources, social networks are essential tools for accessing professional information because they allow quick access to multiple colleagues simultaneously. The results of this study also confirm this feature of social networks.

This study also aimed to determine the topics on which accounting professionals would most like to obtain professional information. As a result of the analysis performed for this purpose, it was determined that they mostly want to receive information by asking questions about public institution transactions. The prominent institutions are the social security institution, tax administration, and trade registries—the second most common questions related to electronic accounting applications like e-invoice and e-ledger. Thirdly, there are questions regarding the organization of declarations in the posts shared by the profession's members. When the 717 posts included in the question-asking code were analyzed, it was seen that the questions were generally answered. 90% of these questions received interaction can be considered an indicator of this.

This study analyzes accounting professionals' use of social networks to access professional knowledge through a single example. As a result, it was determined that they used social networks intensively both in sharing professional knowledge and in accessing data by asking their colleagues about situations they did not know about or had encountered for the first time. Using social networks for this purpose can be considered an innovative and essential professional approach. The fact that the research was conducted on a single sample can be expressed as a limitation of the investigation. In further studies, more than one sample can be examined simultaneously, and the results can be compared. In addition, using social networks to access professional information can be measured directly by accounting professionals with qualitative or quantitative methods.

ACKNOWLEDGEMENTS

This study is the extended full-text version of the abstract (titled "A Study on the Use of Social Networks by Accounting Professionals in Sharing Professional Information") presented at the 9th International Congress of Accounting and Finance Research (ICAFR'22) between September 29 - October 01 in Tokat, Türkiye.

AUTHORS' DECLARATION

This paper complies with Research and Publication Ethics, has no conflict of interest to declare, and has received no financial support.

AUTHORS' CONTRIBUTIONS

Conceptualization, writing-original draft, editing – **IC and RC**, data collection, methodology, formal analysis – **IC and RC**, Final Approval and Accountability – **IC and RC**.

REFERENCES

- Abedin, T., Al Mamun, M., Lasker, M. A., Ahmed, S. W., Shommu, N., Rumana, N., & Turin, T. C. (2017). Social media as a platform for information about diabetes foot care: a study of Facebook groups. *Canadian Journal of Diabetes*, 41(1), 97-101.
- Balcı, A. (2013). *Sosyal bilimlerde araştırma: yöntem, teknik ve ilkeler* (Vol. 10). Pegem Akademi Yayınları.
- Cain, J., & Policastri, A. (2011). Using Facebook as an informal learning environment. *American Journal of Pharmaceutical Education*, 75(10), 207, 1-8.
- Camacho, D., Panizo-Lledot, Á., Bello-Organ, G., Gonzalez-Pardo, A., & Cambria, E. (2020). The four dimensions of social network analysis: an overview of research methods, applications, and software tools. *Information Fusion*, 63, 88-120.
- Creswell, J. W. (2013). *Nitel araştırma yöntemleri*. Trans. Eds., M. Bütün and SB Demir. Siyasal Kitabevi.
- Datareportal., Digital 2022: July global statshot report. Access Address: <https://datareportal.com/reports/digital-2022-july-global-statshot>, Accessed on: 01.12.2023.
- Ekoç, A. (2014). Facebook groups as a supporting tool for language classrooms. *Turkish Online Journal of Distance Education*, 15(3), 18-26.
- GWİ., Access Address: <https://blog.gwi.com/chart-of-the-day/social-media/>, Accessed on: 01.12.2023.
- Kumar, C., Bharati, T. S., & Prakash, S. (2021). Online social network security: a comparative review using machine learning and deep learning. *Neural Processing Letters*, 53(1), 843-861.
- Magro, M. J. (2012). A review of social media use in e-government. *Administrative Sciences*, 2(2), 148-161.
- Meishar-Tal, H., Kurtz, G., & Pieterse, E. (2012). Facebook groups as LMS: A case study. *International Review of Research in Open and Distributed Learning*, 13(4), 33-48.
- Men, M., Fung, S. S., & Tsui, E. (2021). What's Trending: a review of social media in ophthalmology. *Current Opinion in Ophthalmology*, 32(4), 324-330.
- Miron, E., & Ravid, G. (2015). Facebook groups as an academic teaching aid: Case study and recommendations for educators. *Journal of Educational Technology & Society*, 18(4), 371-384.
- O'Day, E. B., & Heimberg, R. G. (2021). Social media use, social anxiety, and loneliness: A systematic review. *Computers in Human Behavior Reports*, 3, 100070.
- Özdemir, S. S., Özdemir, M., Polat, E., & Aksoy, R. (2014). Sosyal medya kavramı ve sosyal ağ sitelerinde yer alan online reklam uygulamalarının incelenmesi. *Electronic Journal of Vocational Colleges(Ejovoc)*, 4 (4), 58-64.
- Pi, S. M., Chou, C. H., & Liao, H. L. (2013). A study of facebook groups members' knowledge sharing. *Computers in Human Behavior*, 29(5), 1971-1979.

- Ping, N. S., & Maniam, M. (2015). The effectiveness of Facebook group discussions on writing performance: a study in Matriculation College. *International Journal of Evaluation and Research in Education*, 4(1), 30-37.
- Recro Digital Marketing., Dijital 2022 küresel genel bakış raporu. Access Address: <https://recrodigital.com/dunyada-ve-Turkiyede-internet-sosyal-medya-kullanimi-2022/>, Accessed on: 01.12.2023.
- Sönmez, V., & Alacapınar, G. F. (2014). *Örneklendirilmiş bilimsel araştırma yöntemleri*. Anı Yayıncılık.
- Thomas, D. M., & Mathur, S. (2019, June, 12-14). *Data analysis by web scraping using python*. 3rd International conference on Electronics, Communication and Aerospace Technology (ICECA), Coimbatore, India.
- Wang, Q., Woo, H. L., Quek, C. L., Yang, Y., & Liu, M. (2012). Using the facebook group as a learning management system: An exploratory study. *British Journal of Educational Technology*, 43(3), 428-438.
- Yasar, M. S., & Ari, G. (2023). Analysis of Turkish language teachers' posts in facebook groups in terms of professional development: A case study. *Shanlax International Journal of Education*, 11, 159-168.
- Yıldırım, İ. (2019) Using Facebook groups to support teachers' professional development. *Technology, Pedagogy and Education*, 28:5, 589-609.