

ABSTRACT OF CAPSTONE

Misty D. Wilmoth

The Graduate School

Morehead State University

April 13, 2020

SOCIAL MEDIA USE AMONG 4-H EXTENSION AGENTS IN KENTUCKY

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Abstract of Capstone

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A capstone submitted in partial fulfillment of the  
Requirements for the degree of Doctor of Education in the  
Ernst and Sara Lane Volgenau College of Education  
At Morehead State University

By

Misty D. Wilmoth

Magnolia, Kentucky

Committee Chair: Dr. Jeannie Justice, Assistant Professor

Morehead, Kentucky

April 13, 2020

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## ABSTRACT OF CAPSTONE

## SOCIAL MEDIA USE AMONG 4-H EXTENSION AGENTS IN KENTUCKY

As the use of social media has expanded in society, its use has also become more prevalent in the Cooperative Extension Service. This mixed-methods study was developed to determine current social media usage for professional purposes among 4-H Extension Agents in Kentucky, as well as identify barriers to social media use for educational purposes. Interviews were conducted and helped shape the resulting questionnaire which was then administered to all 4-H Agents in Kentucky. The results indicate Facebook is the most used platform, followed by Zoom, then YouTube. Marketing and communications were noted as the two most prevalent uses of social media. All respondents reported an increase in social media use during the COVID-19 pandemic, with 58 percent reporting a drastic increase. Two important barriers of social media use for educational purposes were nonuse of social media platforms and limited access or reliable access to the Internet. Future research in social media use and its barriers would survey the audiences with which 4-H Agents work including members, parents, and volunteers.

**KEYWORDS:** 4-H, Cooperative Extension Service, social media, barriers to social media use.

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Candidate Signature

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Date

SOCIAL MEDIA USE AMONG 4-H EXTENSION AGENTS IN KENTUCKY

By

Misty D. Wilmoth

Approved by

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Charles Stamper  
Committee Member    Date

---

Daryl Privott  
Committee Member    Date

---

Shane Shope  
Committee Member    Date

---

Jeannie Justice  
Committee Chair        Date

---

Timothy Simpson  
Department Chair      Date

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## DEDICATION

This capstone is dedicated to my children, the two most important people in my life. Madison and Tommy are my world and the very reason I have persisted when it felt the odds were against me. When I began this degree, I told them it would not affect their daily lives and they have rightfully called me out on that statement. I chose to never miss a ballgame or school function due to my course work, which required lots of late nights and weekends to stay afloat. Although I was always around, I know my stress level was high at times and they had to deal with a stressed-out mom. Several times, Madison and I have been up together, plugging away on our laptops, as she works hard in her AP and dual-credit courses as a high school senior. I hope in the end, Madison and Tommy both know it was all for them. I wanted to better myself and show them that you can always continue to learn and grow. I am excited to watch as they choose their paths in life and continue to grow and learn on their journeys.



## ACKNOWLEDGEMENTS

There are many individuals and groups who have helped me on this journey. First I must thank my “Big” cohort. So many other students in this group have been helpful in my times of need. Many have gone out of their way to help if I had a question or issue. Others have been an ear when I needed to vent and encouragement when I needed a pep talk.

My parents have supported me throughout this process, but more importantly, they have always placed value on education. I was raised on a farm where hard work was not only necessary, but was also valued greatly, notions my parents fostered in me at an early age. I applied those same principles when I enrolled in college. In 2018, when I mentioned my desire to pursue a doctoral degree, they were very supportive and have always offered to help in any way they could.

My sister, Dr. Jessica Carter, has repeatedly shown me that hard work pays off. Often, she has listened to my struggles and offered to help in any way possible. She could easily relate to the stress of degree programs and higher education and consistently put things into perspective for me.

Additionally, I have several friends who help keep me sane. They are always there to lend an ear or offer advice. They encourage me when I am down and help me to laugh or cry when needed. Although they could not truly understand what I was going through, like my cohort could, my friends always knew how to pick me up and keep me going. I humbly offer special thanks to each of them.

I also want to thank the University of Kentucky Cooperative Extension Service for the value it places on continued education. My district director, associate director, and co-workers have been supportive and understanding in this process. Dr. Chuck Stamper encouraged me to apply for this program, from which he is a graduate, and then later became one of my committee members. I would also like to thank Dr. Ken Culp III for his continued support and advice concerning my research.

I want to thank my professors, especially my chair, Dr. Jeannie Justice, for pushing me to learn and grow in the process. Although I often felt pushed to the limit, I have enjoyed this process and am able to look back and see how much I have learned and grown from all the hard work this program has demanded. Now that the light is visible at the end of the proverbial tunnel, I can see the purpose of all the various assignments and am pleased with my accomplishment of them.

I want to thank my other committee members, Dr. Chuck Stamper, Dr. Daryl Privott and Dr. Shane Shope. I would also like to thank Dr. Sara Lindsey who is at Morehead State University in the Department of Middle Grades and Secondary Education and was willing to offer input and help with revisions. Dr. Chuck Stamper is a graduate of this Ed.D. program and the current Extension Special Projects Coordinator with the University of Kentucky Cooperative Extension Service. He encouraged me to give this a try when I indicated that the once-a-month weekend meeting format of other doctoral programs did not work for me. Chuck has been a colleague in 4-H and is always willing to help and support me.

## TABLE OF CONTENTS

	Page
Chapter 1: Introduction .....	17
A. Significance of the Study .....	19
B. Research Questions .....	19
C. Limitations of the Study.....	20
D. Definition of the Terms.....	20
Chapter 2: Review of Literature .....	23
A. History and types of Social Media.....	24
B. Potential Negatives of Social Media.....	25
C. Potential Social Media use by Extension Agents .....	27
D. Potential Barriers to use of Social Media .....	30
E. Theoretical Framework.....	32
Essential Elements for 4-H Youth Development Framework .....	32
Belonging.....	32
Mastery .....	33
Independence .....	33
Generosity.....	34
Diffusion of Innovation Theory .....	34
Relative advantage .....	35
Compatibility .....	36
Complexity.....	36

Trialability.....	37
Observability.....	37
F. Summary.....	38
Chapter 3: Methodology .....	39
A. Overview of Design .....	40
B. About the Researcher.....	40
C. Components and Methods of Qualitative .....	41
D. Data Analysis of Qualitative.....	42
E. Components and Methods of Quantitative .....	42
F. Data Analysis of Quantitative.....	43
G. Limitations/Threats to Validity.....	44
Chapter 4: Results .....	46
Overview.....	46
Components and Methods of Qualitative .....	46
Data Analysis of Qualitative.....	55
Components and Methods of Quantitative .....	56
Demographics .....	57
Questionnaire .....	60
Data Analysis of Quantitative.....	72
Summary.....	73
Chapter 5: Conclusions and Implications .....	74
Overview.....	74

Summary of the Study .....	74
Summary of the Findings.....	77
Ways Kentucky 4-H Extension Agents Use Social Media.....	77
Barriers to Social Media Use For Educational Purposes .....	79
Recommendations.....	81
4-H Agents .....	81
4-H Organization .....	81
Future Research .....	82
Conclusions.....	83
References.....	85
Appendices.....	91
Appendix A      Kentucky Cooperative Extension Service District Map .....	91
Appendix B      Letter to Interview Participants .....	92
Appendix C      Interview Questions.....	93
Appendix D      Interview Transcripts.....	94
Appendix E      Compiled Responses from Interviews .....	121
Appendix F      Questionnaire Template .....	127
Appendix G      Letter Sent With Questionnaire.....	130
Appendix H      Questionnaire Data.....	131
Appendix I      ANOVA of Social Media Tools Used .....	168
Appendix J      ANOVA of Barriers.....	169
Appendix K      t-Tests for Social Media Tools .....	170

Appendix L	t-Tests for Barriers to Social Media Use .....	172
Vita.....		174

## LIST OF TABLES

	Page
4.1 Make up of 4-H Agents interviewed.....	47
4.2 Interview Responses for Question #1 .....	48
4.3 Interview Responses for Question #2 .....	49
4.4 Interview Responses for Question #3 .....	50
4.5 Interview Responses for Question #4 .....	50
4.6 Interview Responses for Question #5 .....	51
4.7 Interview Responses for Question #6 .....	52
4.8 Interview Responses for Question #9 .....	54
4.9 Gender, Race, and Ethnicity of Questionnaire Respondents .....	57
4.10 Age of Questionnaire Respondents.....	58
4.11 Year of Service of Questionnaire Respondents .....	58
4.12 Kentucky Extension Region of Questionnaire Respondents .....	59
4.13 Kentucky Extension District of Questionnaire Respondents.....	59
4.14 Social Media Tools Currently Used In The 4-H Program .....	60
4.15 Ranking of Top 3 Social Media Tools Used .....	61
(Mean, Standard Deviation, and Variance)	
4.16 Ranking of Top 3 Social Media Tools Used (Ranks 1, 2, and 3) .....	63
4.17 Ways Using Social Media in Profession.....	63
4.18 Ranking of Top 3 Ways Social Media is Used .....	64
(Mean, Standard Deviation, and Variance)	

4.19	Ranking of Top 3 Ways Social Media is Used in 4-H Program .....	65
	(Ranks 1, 2, and 3)	
4.20	Hours Using Social Media For Work Purposes .....	66
4.21	Hours Using Social Media For Work Purposes, .....	66
	Before The Pandemic	
4.22	Barriers to Social Media Use For Work Purposes .....	67
4.23	Ranking Top 3 Barriers In Using Social Media .....	68
	(Mean, Standard Deviation, and Variance)	
4.24	Ranking Top 3 Barriers In Using Social Media (Ranks 1, 2, and 3) .....	70
4.25	Change In Social Media Use During The Pandemic .....	71
4.26	Opinion Of Social Media As It Relates To 4-H Programming .....	71



## **Chapter 1: Introduction**

Social media has an ever-increasing presence in our lives. While many may consider it a form of entertainment, or simply, a way to communicate, social media provides an excellent outlet to deliver educational content. Educators often look for more convenient ways to reach people. Most adults and youth can now be found on social media sites, thus providing a new and unique opportunity to provide them with educational materials. The Cooperative Extension Service's mission is to educate by bringing the research of the land grant university to the general public (Ramussen, 2002). The areas of emphasis for Extension include: agriculture and natural resources, family and consumer sciences, 4-H and youth development, and community and economic development. Gharis, Bardon, Evans, Hubbard, and Taylor (2014) support this expansion of connectivity between Extension professionals and their clients through the application of social media.

The use of social media has continued to increase over the past decade. Social media has become a way to communicate and market, as well as educate. As the general population has increased its use of social media, Extension Agents have utilized social media as a means of providing content to audiences. The global pandemic of the COVID-19 virus has further propelled social media usage. Social media has proved vital in the adherence restrictions caused by COVID-19 known as social distancing. Families, students, teachers, and professionals can maintain social distance primarily because of social media platforms that allow for remote

communication and connection. Further, with government restrictions to stay at home and the cancellation of all in-person meetings, Extension has been reaching out to educate through social media more now than ever before. While many are out of work due to the closing of non-essential businesses, Extension Agents are continuing to work, but are doing so from home. Likewise, children are staying home from school, and many are completing their assignments in an online format. Social media has also been used to help educate the public about the dangers of the COVID-19 virus, as well as how to slow its spread. In Kentucky, the governor has also encouraged the use of social media by highlighting positive stories of people following COVID-19 safety guidelines. Samples of such social media stories are shown every evening when the Governor provides a daily update of the number of new cases and deaths from COVID-19.

Social media is ever-evolving to meet the current needs of users. Extension Agents in Kentucky use social media for a variety of reasons and are continuing to determine how to best reach audiences with educational content. The purpose of this study is to determine current uses of social media and the barriers of its usage in general and for educational purposes. With 4-H programs in every county in the state, this study has an impact on Kentucky 4-H, Extension Agents, and 4-H members and their families.

**Significance of the Study**

The results of this study can help to determine how Kentucky 4-H Agents are using social media and identify barriers which could be addressed in further studies. By recognizing how social media is currently being used, the Extension Service can address any gaps of service or content that exist. Also, Agents can share success stories and failures they have encountered. In doing so, Extension Agents have the unique opportunity to identify areas of content and social media usage that need training expansion or even elimination. In an ever-changing society now heavily reliant upon social media, this study helps Kentucky 4-H to identify current uses and trends, as well as any barriers of such social media. 4-H Agents can learn what is working well and what is not and work to overcome current barriers. This study has the potential to lead to professional development trainings that are focused on any identified barriers.

**Research Questions**

Questions this research study is designed to answer:

1. What ways are the significant ways current Kentucky 4-H Agents are using social media in the 4-H program?
2. What are the significant barriers for Kentucky 4-H Agents to social media use for educational purposes?

**Limitations of the Study**

This study includes limitations rooted in the fact that the researcher is a Kentucky 4-H Extension Agent, the group with which the research is conducted. Consequently, this could result in an unintended bias. Also, the study uses self-reporting practices. Limitations may occur because of the respondent's personal interpretation of the study questions. Another limitation of this study is generalizability. This study is designed quite specifically for Kentucky 4-H Extension Agents. As such, it would only be generalizable to other similar state programs and would not be generalizable to different professions or organizations.

**Definition of Terms**

4-H – According to Kentucky 4-H (n.d.), 4-H is a youth development organization. The “H’s” stand for Head, Heart, Hands and Health. 4-H members across the world learn while completing educational projects in a wide range of content areas. While education takes place in 4-H, the main purpose is youth development. Youth learn life skills that will help them become competent, capable, and caring citizens.

4-H Agent – In the state of Kentucky, the paid staff person in each county who leads the 4-H program is known as the 4-H Agent or, more formally, the County Extension Agent for 4-H Youth Development (Kentucky 4-H, n.d.). In other states, they may be known as 4-H Educators or by similar titles. The 4-H Agent coordinates

the county program by recruiting and training volunteers in order to lead a variety of educational programming, with emphasis on youth development.

Cooperative Extension Service – According to Seevers, Graham, Gamon, & Conklin (1997), the Cooperative Extension Service was established by the Smith-Lever Act in 1914. The United States Department of Agriculture cooperated with the land-grant universities in order to provide research-based information related to agriculture to the people of each state. The “Cooperative” portion of the name refers to the funding which is provided from federal, state, and local levels.

Social media – According to Merriam-Webster (2020), the definition of social media is “forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos).” (Social media, 2020, para. 1). Social media includes a wide variety of online sites, applications, and platforms which allow users to interact. They are social in that users can share, as well as gather information.

Barrier – According to the Cambridge dictionary (2020), a barrier is “anything used or acting to block someone from going somewhere or doing something or to block something from happening.” (Barrier, 2020, para. 3). In this study, barriers are identified as what prevents 4-H Extension Agents from using social media.

Experiential learning – According to Kolb (2014) “a common usage of the term experiential learning defines it as a particular form of learning from life experience; often contrasted it with lecture and classroom learning” (p. xviii). 4-H utilizes the experiential learning model, or “hands-on” learning to educate members.

## **Chapter 2: Review of Literature**

“Educators continually search for more effective ways to engage their students during learning as well as to increase student learning outcomes.” (Krippel, McKee, & Moody, 2010, p. 2). The same holds true for 4-H Agents who are, essentially, educators in a non-formal setting. In 4-H’s non-formal setting, the educational focus is experiential learning (Borden, Perkins & Hawkey, 2014), as shown by the 4-H slogan which is “Learn by Doing.” In 4-H’s over one-hundred-year history, members have learned by participating in direct hands-on projects. In fact, 4-H started as corn clubs, which were a way to bring the research of the land-grant university to the people (Uricchio, Moore & Coley, 2013). Today, much of the focus of 4-H is still deeply rooted in project-based learning. Members select an area of interest and work to complete a project, which allows them to learn by doing. From sewing to photography to electricity to foods, 4-H members showcase their learning by completing hands-on projects.

One unique aspect of the Extension program is its research base and how it is dispensed to the people of the state through the Extension Service (SeEVERS, Graham, Gamon & Conklin, 1997). The Cooperative Extension Service was established through the Smith-Lever Act, which was enacted in 1914 (Olson, 2013; SeEVERS et al., 1997). The “Cooperative” portion of the name comes from the cooperative use of funding from the federal, state, and local levels. Programs expanded to include a wide range of educational content as shown by the Kentucky 4-H program. Kentucky

4-H now focuses on seven program areas including agriculture, natural resources, family and consumer sciences, health, leadership, communications, and science, engineering and technology. Of these seven, technology is one of the most evolving and advancing program areas.

Extension research has brought about the creation of many new technologies, even though the Cooperative Extension Service has not traditionally been known as a leader of new technology. Indeed, Extension endeavors to keep pace with today's technological progression rather than be a forerunner of technology trends. Gandhi, Khanna & Ramaswamy (2016) cite the industries of education and healthcare as having struggled to keep up with these innovative technological advances. Lack of training and time constraints have rendered it difficult for Extension Agents to stay abreast of the most current, cutting edge technology. While that is true, some Extension Agents have prevailed. There are many who enjoy trying new technologies and incorporating them into their programming. These Agents are leading the way and foraging a helpful path for the reluctant or uninformed Agent.

### **History and Types of Social Media**

Social media has expanded to include many different platform options. Each platform has unique features and attracts unique demographics of people. Facebook began in 2004 and is currently the most used social media platform with over two billion monthly active users (Kallas, 2019). According to Kallas, YouTube ranks as the second most popular social media platform with 1,900,000,000 monthly active



users. Instagram is third in popularity and recently reached one billion users. Twitter, established in 2006, is another popular platform now with over 336,000,000 active monthly users. Twitter limits the number of characters per post, also known as tweets. Some other platforms worth noting are Reddit, Pinterest, Tumblr, and LinkedIn. Of these four, LinkedIn was created first, having been founded in 2002. It is targeted more toward professionals and highlights career goals and accomplishments, while Pinterest exists as a visual platform wherein users browse ideas that other users have posted on a particular topic ranging from recipes to decorating to wedding planning.

Preceding the rise of Internet access and usage and certainly before the existence of today's multiple social media platforms, communication from Extension was primarily in the form of monthly mailed newsletters. Weekly news columns in the local newspaper supplemented this flow of information. If a client needed information quickly, a personal phone call was made to the local Extension Office. With increased Internet access in private homes, email became a more immediate and cost-effective means of communication. As the presence of social media has grown in society in the last decade, Extension Agents have begun using social media to reach people where they are.

### **Potential Negatives of Social Media**

As with any technology, there are always possible negative consequences from its use. There is a growing body of research regarding social media and mental

health. (Guinta & John, 2018; Glaser, Liu, Hakim, Vilar, & Zhang, 2018). Fathima, Priya, and Gayathri (2019) reveal a correlation between increased social media use and anxiety, as well as addictiveness to social media. In addition, Guinta and John (2018) list several risks of social media use specific to the adolescent population. These include “cyberbullying, educational and mental health consequences, sexting, and privacy concerns” (p. 196).

Studies also show an increase in both the use of social media sites, as well as the amount of time spent on social media. A study by Fathima, Priya and Gayathri (2019) found 46% of participants used more than three social media sites. This same study showed 47% of participants spent more than eight hours a day on social media. While this study focused on 17 to 25 year-olds, it speaks to the amount of time Agents would need in order to keep up with the latest social media trends so as to reach audiences on the varying sites. If 4-H Agents are trying to reach their members, many are simply too young to open social media accounts on some platforms. If the target is to reach parents, then Agents must determine which social media sites are most favored by the current parent audience. If the goal is a teenage audience, the Agent must still identify the popular sites for this cohort. Assessing these sites and identifying which platform would correspond best with a particular group would require substantial time and information updating on a regular basis. An Agent would need to adapt to quickly changing trends.

In a study by Charoensukmongkol (2018), a positive relationship exists between social media use and teenagers' tendencies to engage in social comparison and envy. With the ease of posting pictures, there is no longer a clear distinction between what is private and what is public. Viewing posted content can cause users to compare themselves to others, especially since this content typically consists of only the fun and exciting parts of user's lives. It is rare for a user to post negative or disparaging content about themselves. The life someone posts on social media alone may not be a very accurate portrayal of reality.

Social media does not necessarily provide research-based information. As an extension of the land grant university, the mission is to provide research-based information to the public. Although Extension Agents could use a platform to share research-based information, because of the unrestricted nature of social media, other users could add links, commentary or other content that is not research-based. For example, when an Agriculture Agent shares a best practice, a farmer or other community member could comment with his own opinion of the best way to perform the same task. To curtail this type of unauthorized or unofficial content, an Agent would have to monitor comments and posted links, which could become quite time consuming.

### **Potential Social Media Use by Extension Agents**

Extension Agents in Kentucky can learn from Agents in other states, but also from educators in general, in the area of social media use. Extension programming

varies not only from county to county, but also from state to state. Just as programming varies, so, too, does the use of social media. In a special innovation issue of the *Journal of Extension*, Wilson, Loble, and Kranich (2018) shared how the University of Maine Extension Service used social media to connect students with researchers from around the world. They utilized both synchronous interactions where in youth could speak directly with graduate students who were conducting the research, as well as asynchronous communication. This permitted the youth to direct questions to the graduate students at any time.

Additionally, a research project in Nebraska illustrated how the use of a social media toolkit helped Extension professionals improve their efforts of engaging audience members via social media. This study by Garcia, et al. (2018) used Facebook, Twitter, and Pinterest and highlighted how Extension professionals can use social media more purposefully. Nebraska Extension provided strategy planning and best practices in order to help different professionals connect with audiences.

Extension Agents in Kentucky can learn from unique social media uses by Extension in other states. Additionally, Agents can learn from social media use in other settings. A study of healthcare practitioners, by Pizzuti, et al. (2020) finds almost 85% of participants report they believe social media can serve as a tool for educational purposes. However, only 43% reported truly using social media for educational purposes, which indicates a gap in beliefs and practices concerning social media.

Social media use in higher education further illustrates how Extension Agents can incorporate social media for their own purposes. Chen and Bryer (2012) highlight their findings of instructors blending formal and informal learning using social media platforms, including the enabling of collaborative and constructive learning. Extension Agents can apply the same principles when imparting educational content to clients and community members. For example, when educational content is provided during in-person meetings, then social media can be used for additional educational content between meeting times. Informal learning can take place between meeting times when members can share and collaborate with one another at any time via social media.

Saini and Abraham (2015) list specific uses of social media in education. These include the “exchange of academic information, dialogue and discussion, sharing videos and pictures, reflective journal writing, and project-based learning” (Saini & Abraham, 2015, pp. 3-4). Extension Agents have the potential to use social media in these same ways with 4-H programming. The club format provides the perfect setting because groups are already formed. Many youths participate in 4-H by belonging to a particular club rather than just the organization in general. Extension Agents could benefit by using social media by mimicking the ways in which education incorporates social media.

**Potential Barriers to Use of Social Media**

Extension Agents face various barriers when it comes to utilizing social media. This study is designed to identify the most common barriers. Another study by Cain (2018) showed that technology integration by teachers is most impacted by the teachers' ability to use technology to engage student learning. The same would apply to Extension Agents. A case study conducted by the Oregon State University Extension Service reviewed Extension's readiness to adopt new technology to reach new audiences. The study found that time, funding, and training are the major barriers to adopting new technology. It also found that Extension personnel's apprehension of using new technology may alienate current clients (Diem, Hino, Martin, & Meisenbach, 2011). According to Rogers (1961) and his Diffusion of Innovation theory, those Agents who are reluctant to adopt technology for various reasons are going to fall into the late majority and laggard categories. Ellsworth (2000) defines the five areas from Rogers' theory which help to determine the rate of adoption of innovators. These include relative advantage, compatibility, complexity, trialability, and observability.

An additional potential barrier for Extension Agents using social media would involve their perceptions about social media. A study conducted at Cornell University by Newbury, Humphreys, & Fuess (2014) analyzed the barriers to adoption of social media by Wisconsin and New York Extension professionals. The study found key barriers in Agent perceptions of time and control. Half of those

interviewed in the study felt pressure to use social media professionally simply because it was a new way to reach an audience. Social media was seen as an opportunity to communicate with stakeholders but was also viewed as a risk because there was no plan.

Kentucky 4-H Agents face barriers to technology use, just as other Extension Agents do across the country. With the increase use of social media usage, the potential to reach audiences with educational programming is great. That potential is not currently actualized as Agents struggle with lack of both training and time. Bowen, Stephens, Childers, Avery, & Stripling (2013) stress the need for increased efforts in social media training for Extension Agents. Alotaibi, Swortzel, Denny, Peterson, & Seal (2018) cite organizational support as one of the variables that influence social media usage.

As social media has grown in use over the past years, 4-H Agents are using social media in various ways and for varying purposes. Gharis, et al. (2014) points out the usefulness of social media metrics which track engagement by likes, comments, and shares. Since Extension Agents are required to track contacts and document programming efforts, these social media metrics can be a useful tool for Agents. While social media can be used in a variety of ways for educational programming, many 4-H Extension Agents have not been properly trained on how to use social media for these purposes. Most Agents use social media primarily for communications and marketing objectives. According to Beattie, Lamm, Bunch, &

Lundy (2019), social media is used as a communication tool with stakeholders. With proper training, 4-H Agents can use social media as an excellent resource for educational programming.

### **Theoretical Framework**

The theoretical framework for this study is twofold. The Essential Elements for 4-H Youth Development framework as well as the Diffusion of Innovation Theory by Rogers are both engaged.

#### **Essential Elements for 4-H Youth Development Framework**

The Essential Elements framework includes four areas: belonging, independence, mastery, and generosity (Kress, 2003, 2014). According to Kress (2014) and Jackson (2014), the Four Essential Elements framework came from the book “Circle of Courage” by Bendtro, Brokenleg, and Van Bockern (1991). The following will relate each of the Four Essential Elements to social media use by Kentucky 4-H Extension Agents.

#### **Belonging**

The first of the Four Essential Elements is belonging and includes three of the more detailed eight critical elements. According to Kress (2014), these include having a relationship with caring adults, being in an inclusive and safe environment. 4-H Extension Agents become part of an inclusive environment when connecting with other Agents across the state and nation through social media platforms. Social



media provides an excellent platform with which to connect Agents and does so in a way to facilitate learning among participating Agents. Social media environments can be a safe and inclusive environment that fosters learning not only among professionals, but also between 4-H Agents and their members and families.

### **Mastery**

According to Kress (2014), mastery allows not only mastery for the learner, but also engagement in learning. A study by Meyer and Jones (2015) found the highest change in the element of mastery occurred during a 4-H gardening project which lasted four months. Social media platforms allow 4-H Agents to master the use of the platform, but also to engage in professional development, in addition to connecting with members and their families in their local program. Due to the advancing nature of social media, Agents continue to need to work toward mastery as audiences switch to new platforms. Engaging also takes a concerted effort with Agents taking the time to stay active on the social media platforms they find most beneficial for themselves or their 4-H families.

### **Independence**

“Independence includes opportunities to see oneself as an active participant in the future and the opportunity for self-determination” (Kress, 2014, p. 7). For 4-H Agents, the area of independence involves the control they have over the type of social media they use and the purposes for which it is used. Currently, there are no

state or national mandates concerning 4-H Agents' use of social media. Moreover, there is no official guidance regarding which platforms an Agent may choose to use. Such freedom allows Agents to customize their social media usage in order to best meet their personal needs for professional development. Agents can tailor platform use to meet the needs of their program and to reach participants.

### **Generosity**

The fourth of the Four Essential Elements is generosity (Kress, 2014). 4-H has strong connections to community service and helping others in need. Many clubs plan a minimum of one community service project per year. "Generosity consists of the opportunity to value and practice service for others" (Kress, 2014, p. 7). Social media has been often utilized as a vehicle to extend aid during disasters and emergencies, both natural and man-made. 4-H Agents can take advantage of these platforms to reach broader audiences when promoting projects, especially those teaching and promoting generosity. The wide reach allows 4-H to have a greater impact in communities.

### **Diffusion of Innovation Theory**

The educational change model known as Diffusion of Innovation was used as the framework for this study. This model was proposed by Everett Rogers in 1961 (Ellsworth, 2000). In the Diffusion of Innovation model Rogers identifies five attributes which help determine if an innovation will be likely to diffuse. These

attributes are relative advantage, compatibility, complexity, trialability, and observability (Ellsworth, 2000). Additionally, Rogers (1961) identifies five categories of adopters along with his Diffusion of Innovation theory. The five adopter categories are innovators, early adopters, early majority, late majority, and laggards (Rogers, 1961). In this case, the Extension Agents who are first to try new technologies are included in the innovator adoption category. Those who are most reluctant and hold out the longest before using new technologies would be in the laggard category.

### **Relative advantage**

When looking at relative advantage, 4-H Agents must feel that the use of social media for educational purposes eclipses the current, more traditional educational methods already in use. There must be advantages that make using social media more appealing. While this may be difficult to prove to some Agents, there are, however, some relative advantages. In Extension, often the goal is to meet people where they are. Statistical information indicating the percentage of the population that uses social media would help to convince Agents that it is a definite avenue to reach people where they are. Given the time constraints of not only Agents but also the general public, social media would be an excellent platform with which to engage others. Agents would be able to educate people on a platform in which they already participate. This ease in use and availability could prove key in keeping participants active, engaged, and involved.

### **Compatibility**

The compatibility of social media use for education among 4-H Agents would most likely be varied. Some Agents, known as early adopters, are likely already taking full advantage of social media use, both in their personal and professional lives. Others may be resistant to change and do not use social media in any realm. There may also be Agents who feel education should only occur in person and renounce distance or virtual learning entirely. While it is true that social media may not meet all educational needs, it can still be a distinctly useful and convenient tool in administering educational content to members.

### **Complexity**

Since the inception of social media, some platforms have grown exponentially in popularity, while others have languished and disappeared. There seems to be a definite emphasis on being the newest and most popular platform. Ease in use and unique features have both contributed to some social media sites' popularity. For example, Snapchat became popular in part due to its photo filters. For many users, social media sites are easy to use. The issue may be in the sheer number of platforms available for use. An Agent may have a difficult time choosing which ones to use. Another issue with complexity is the ability to use social media with all audiences for 4-H Agents. Many sites have age minimums, which may not correspond with 4-H membership. However, if the target audience are the parents of 4-H members, then age requirements are no longer an issue.

### **Trialability**

Using social media for educational purposes has definite trialability. 4-H Agents could try different strategies within a single platform without investing a substantial amount of time. They could even try multiple platforms in order to determine where to best reach their clientele. Since there is no cost associated with opening accounts, there would only be time expended. Agents could poll their parents and members to determine what social media sites to use. Since use can vary greatly according to age, gender, and even geographical region, multiple social media platforms may be needed to supply the needs for different groups. While this is more time consuming, it could prove advantageous in reaching more of the intended audience.

### **Observability**

4-H Agents could easily observe how other Agents are using social media for educational purposes. To do so would require time and attention, but such as task could be completed easily via professional development services. 4-H Agents who have discovered innovative ways to use social media for educational purposes could share with the other Agents in a professional development setting. New 4-H Agents are assigned a mentor, who could be instrumental in helping guide the new Agent as they navigate trends in social media and incorporate platforms into their educational programming.

**Summary**

Both the Essential Elements framework and the Diffusion of Innovation Theory provide sound theoretical framework with which to base this study. Extension Agents for 4-H Youth Development are accustomed to using the Essential Elements with their youth development programming. The same elements can be applied to the Agent's use of social media. The Diffusion of Innovation Theory is beneficial for this study because of the adoption of a new technology.

### **Chapter 3: Methodology**

4-H Extension Agents have the potential to reach larger and broader audiences through social media. Without guidance from the state level, some Agents have been using social media in miscellaneous ways and for varying purposes. This study is designed to determine what ways Kentucky 4-H Agents are currently using social media in the 4-H program. The study also focuses on the barriers to social media use for educational purposes among 4-H Extension Agents in Kentucky. The research questions this study is designed to answer are:

1. What are the significant ways current Kentucky 4-H Agents are using social media in the 4-H program?
2. What are the significant barriers for Kentucky 4-H Agents to social media use for educational purposes?

There is a 4-H Extension Agent in most counties in the state of Kentucky with several larger counties having multiple 4-H Agents. 4-H Extension Agents oversee the 4-H program in their county and serve as an educator, as well as a volunteer administrator. The goal of 4-H is positive youth development (Arnold, 2018). Agents and volunteers work together to provide clubs and educational programs for youth to help them develop five developmental outcomes that have become known as the five “Cs” of youth development: caring, character, connection, confidence, and competence. These lead to the sixth “C” which is contribution (Lerner, Dowling, & Anderson, 2003). Youth learn in a variety of program content areas and project clubs, with the overall goal of youth development.

As social media has become more prevalent in society, Extension has tried to incorporate it to reach audiences. In 4-H, Agents try to keep up with the latest social media trends to stay in touch with teen audiences. Since platforms are updated continually, keeping up with teen audiences can be a difficult task. Management of social media accounts can be time-consuming for Agents and support staff.

### **Overview of Design**

This study uses a mixed methods research design to incorporate both quantitative and qualitative data. According to Creswell (2014), the mixed methods approach can provide a better understanding of the problem. The study includes interviews for qualitative data collection and a questionnaire for quantitative data collection. Interview results were compiled and coded using thematic coding. Results from interview data were used to develop a questionnaire which served as the quantitative component of this study.

During interviews, individual 4-H Agents shared their perspectives related to how their usage of social media and the barriers to use. Information from the interviews was used to compile the questionnaire. Questions were formulated based on input from the interviews. The questionnaire was then reviewed by one 4-H Agent and one 4-H administrator for readability before being sent to all 4-H Extension Agents in Kentucky.

### **About the Researcher**

I have served as an Extension Agent for 4-H Youth Development the past 22 years in two different county offices. I have attended core training for Extension



Agents and have logged many hours of training annually for professional development. However, in all my years as an Extension Agent, I can recall attending only one training focused on social media, before the most recent global pandemic. The focus of that training was a marketing approach. Instructions were provided regarding how to reach more people with social media posts. The importance of sharing pictures and videos was stressed. Agents who experienced success with social media served on a panel to share ideas and accomplishments. I had never attended a training that focused specifically on educational ways to incorporate social media until the most recent events with the 2020 global COVID-19 pandemic. With the outbreak of COVID-19, Extension Agents have been required to work remotely. In-person meetings have not been allowed. During this time, more focus has been placed on training Agents to use social media platforms to reach audiences. Many Agents have worked on creating educational videos which have been shared on social media.

### **Components and Methods of Qualitative**

The interview is the main method used for qualitative data collection in this study and open response questions on the questionnaire also provided additional qualitative data. The interview questions were developed by the researcher based on the two research questions and were designed so that responses could be compiled and then offered as response options on the questionnaire. The interview phase provided responses to the first research question regarding the possible ways 4-H Extension Agents are currently using social media. The sampling of interviewed

Agents listed all the ways social media is used. Interviews also helped determine a list of possible barriers to social media use. The sampling included one randomly selected Agent per Extension District (See Appendix A for the Kentucky Extension District Map). The Agent for each district was selected using the Whosnext computer application which randomly selects from a provided list (Whosenext, n.d.). Current Extension districting resulted in seven interviews which were conducted using the Zoom online meeting platform. The interviews were recorded and later transcribed.

### **Data Analysis of Qualitative**

Qualitative data from interviews was analyzed using thematic coding. Interview transcripts determined groupings based on major themes that emerged within the responses. A compilation of interview responses in chart form helped to identify similar responses. These themes were used to develop questions and potential responses for the questionnaire. Data from open-ended questions were also compiled and ranked in order to discern the most frequent responses.

### **Components and Methods of Quantitative**

Upon completion of the interviews, the resulting social media options and possible barriers were listed on the questionnaire. Questionnaires were sent to all 4-H Extension Agents. Response options were included if they were listed by at least 25% of interviewees. To allow all possible answers, an “other” option was also included, enabling the Agent to write in any other barrier not listed. The questionnaire provided detailed information from the interviews with respect to specifically how Agents feel they are using social media. Descriptive data were also

collected by the respondents. Questionnaire inquiries are directly related to the research questions. For example, the 4-H Agents were asked to rank the three social media platforms they use most. Questions were formulated to aid in identifying how social media is being used by Kentucky 4-H Agents. By using an interview process first, with one Agent per district, the answer options were mostly already listed for 4-H Agents to select from on the questionnaire. The “other” option was provided for those having a response not already listed.

The questionnaire focused on social media use and barriers to social media use. The questionnaire was sent by electronic mail to all 4-H Extension Agents in Kentucky. They were given a three-week period to respond. Agents were assured of the confidentiality of responses in the study reporting and were encouraged to participate, but not required. The Assistant Director For 4-H Youth Development was asked to endorse the questionnaire by sending out a message asking Agents to please complete it. The researcher also sent additional reminders as the deadline to complete the questionnaire neared, which likely helped to increase the response rate to 82%.

### **Data Analysis of Quantitative**

Once the questionnaires were submitted, they were reviewed for completion. They were then analyzed. Descriptive statistics were used to organize the data and to describe the characteristics of the data. Data were analyzed by comparing percentage of responses for each option for each question. In data analysis of questions that were ranked, the mean, variance, and standard deviation were calculated. The

questionnaire included three ranking questions which ranked social media tools used, the purpose of social media use, and barriers to social media use. One-way analysis of variance (ANOVA) was calculated on the two ranking questions specific to the research questions. Paired t-Tests were also ran for the ranking of social media tools and barriers to social media use.

### **Limitations/Threats to Validity**

Upon completion of the interviews and the development of the questionnaire, a 4-H administrator and a 4-H Agent reviewed the questionnaire to increase the validity of questions. Based on the input from the reviewers, a few small adjustments were made in order to optimize the clarity of the questions.

Potential threats to validity in this study include the internal threat of experimenter effect, concurrent validity due to self-reporting, and generalizability. Since the researcher is a 4-H Agent herself, respondents could have altered how they answered the survey. Agents may have had a personal connection with the researcher and, therefore, wanted the research to succeed. This may have perhaps created an unintended bias in the interviewing process and possibly even in questionnaire responses. The self-reporting nature of the survey also adds to the potential for respondents to answer in a way they feel the researcher wanted them to answer. Further, this study is specific to 4-H Agents. It would not be generalizable to other types of educators, such as teachers. It may be generalizable to other comparable state 4-H programs. Generalizability would depend greatly on those states that have similar types of 4-H programs and staff. In order to reduce threats to validity,

communication with the survey participants emphasized the need for honest responses to provide accurate data. Names were not associated with the responses, so participants could answer truthfully, without worry of their identity being revealed.

## **Chapter 4: Results**

### **Overview**

The use of social media among 4-H Extension Agents in Kentucky varies. As social media platforms come and go, Extension Agents are left trying to determine how to best reach their intended audiences. This mixed methods study was designed to identify current uses of social media among 4-H Extension Agents in Kentucky, as well as barriers faced in that usage. The study included an interview with one 4-H Extension Agent per district in the Kentucky Cooperative Extension Service. This was followed by a questionnaire sent to all 4-H Extension Agents in Kentucky.

### **Components and Methods of Qualitative**

In order to identify one 4-H Agent per district to interview, the Whosnext computer application was used. An entry was made for each district which included all the counties in the district (See Appendix A for the Kentucky Extension District Map). The computer application then randomly selected one of the entries for each district. Out of the seven districts, three interviewees were found on the first try for Districts 2, 4, and 5. In District 1, the 4-H Agent in the first county selected had left his position in July, leaving a current vacancy. Likewise, the first random selection in District 3 was for a county whose Agent had also left the Extension Service. The next random draw in District 3 was a county in which the Agent was currently on leave. The third random selection for District 3 was used. In District 6, the first random selection opted not to participate in the interview. Subsequently, the second random selection was used. The District 7 first random selection was for a county

whose 4-H Agent had just began employment. The nature of the questions in the interview were about social media use in the profession, and, thus, not suitable for a brand-new employee. The next random county was drawn and used in order to maintain the integrity of the research.

Interview participants first received an email explaining the nature of the study and asking for their participation (See Appendix B). They were sent a consent form to complete and return if they wished to participate. The researcher then worked with them to schedule a date and time for the interview which was conducted via Zoom. A list of interview questions was used, but the interviewer asked follow-up questions depending on the responses (See Appendix C). Interviews were recorded and then transcribed. Of the seven individuals interviewed, six were female and one was male. The years of service as a 4-H Extension Agent ranged from 5 years to 28 years, with 15 being the median (See Table 4.1).

Table 4-1.

*Make Up of 4-H Agents Interviewed*

District	Gender	Years in Extension
1	Male	15
2	Female	6
3	Female	17
4	Female	28
5	Female	14

6	Female	5
7	Female	20

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Full interview transcripts are included (See Appendix D). Any references to the county were removed in order to keep the individual's identity confidential. References to identifying information were made general. The following are compiled responses for each of the interview questions (See Appendix E). Additional detail may be found in the transcripts.

Table 4-2 includes interview responses for interview question #1 which asked Agents to identify which social media tool they were currently using and to identify how they were being used in their program (See Table 4-2).

Table 4-2.

*Interview Responses for Question #1*

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Q1: What social media tools are you currently using and how are you using them in your program?

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District	Response
1	Facebook, YouTube, Instagram
2	Facebook
3	Facebook, Parent Portal through the school system
4	Instagram, Facebook, Twitter, Remind
5	Facebook, Remind, website, YouTube, Google Drive



- 6 Facebook, Mail Chimp, 4-H Online 2.0, Instagram
- 7 Website, Facebook, Instagram, Remind

Table 4.3 includes interview responses for questions #2 which asked Agents to describe how they were currently using social media for communication purposes in their program (See Table 4.3).

Table 4.3.

*Interview Responses for Question #2*

Q2: Are you currently using social media for communication purposes in your program? If so, please describe.	
District	Response
1	On Facebook, comments and messages with questions we respond to
2	Facebook groups used to message back and forth
3	Posting activities or events on Facebook
4	Posting daily to Facebook about programs and opportunities, posting newsletter to Facebook
5	Use Remind to communicate with active members, Facebook to communicate with general public
6	Newsletters sent through Mail Chimp or the 4-H Online broadcast
7	Posting on Facebook and directing to a Qualtrics link for sign ups

Table 4.4 includes the interview responses for question #3 which identify how Agents are using social media in their programs for marketing purposes (See Table. 4.4).

Table 4.4.

*Interview Responses for Question #3*

Q3: Are you currently using social media for marketing purposes in your program? If so, please describe.	
District	Response
1	Posting events and activities on Facebook
2	Posting flyers and promotional videos on Facebook
3	Posting project kits on Facebook, promoting community service projects
4	Purchasing Facebook advertising, YouTube videos of members talking about their projects, then shared on Facebook
5	Facebook is used for marketing the 4-H program
6	Facebook advertising to boost a post
7	Schools sharing posts to their sites, advertising virtual clubs

Table 4.5 includes the interview responses for question #4 which asks Agents about their use of social media for educational purposes (See Table 4.5).

Table 4.5.

*Interview Responses for Question #4*

Q4: Are you currently using social media for educational purposes in your program? If so, please describe.	
District	Response
1	Not really, more for marketing and promoting programs
2	Using Google Classroom to share virtual programming with teachers

- 3 On Facebook, promoting educational kits to pick up weekly, cooking kits with virtual lessons, virtual fishing tournament, videos and packets made for school club educational lessons to be posted on Google Classroom
- 4 Educational kits to pick up, how-to videos placed on YouTube with links posted on Facebook, volunteers recording lessons on videos, Facebook Lives on lessons that are posted for watching later, Club meetings held on Facebook Live, Zoom club meetings
- 5 Educational kits for pick up, Summer Discovery Series of virtual lessons on 7 areas of 4-H, used Facebook Live videos, later switched to recording videos then posted to Facebook and website
- 6 Educational kits to pick up, promoted on Facebook, Leader meeting through Zoom, recorded leader training and emailed out link to video, how-to videos made and link posted on Facebook and website
- 7 Video updates posted on Facebook, sharing state level offerings, virtual club meetings on Zoom, how-to videos posted on website

Table 4.6 includes responses for interview question #5 which asked Agents to describe any other ways they are using social media not mentioned in previous interview questions (See Table 4.6).

Table 4.6.

*Interview Responses for Question #5*

Q5: Are there other ways you are currently using social media in your program? If so, please describe.

District	Response
1	Zoom for meetings, Remind
2	No
3	No

- 4 No
- 5 Zoom for meetings
- 6 For recognition of members and volunteers
- 7 Creating an event in Facebook

Table 4.7 includes the interview responses from question #6 asking Agents to estimate the hours they spend per week using social media for work purposes (See Table 4.7).

Table 4.7.

*Interview Responses for Question #6*

Q6: How many hours per week do you estimate you spend on using social media for work purposes?

District	Response
1	2-3 hours per week
2	10 hours per week now, probably 1-2 before the pandemic
3	15-20 hours per week
4	7-8 hours per week, probably 5 hours a week before the pandemic
5	4 hours per week, probably 1 hour a week before the pandemic
6	2 hours per week, add 2 hours additional on weeks making videos
7	20 hours per week, at least

Interview question #7 asks what, if any, barriers are Agents finding in using social media for educational purposes. Five Agents interviewed described not

everyone using social media or having reliable Internet access as a barrier. Four Agents interviewed spoke about engagement being a barrier with use of social media for educational programming. They described 4-H as traditionally hands-on, but the virtual format hampers this kind of direction connection, making it difficult to engage youth and keep programming hands-on. Two Agents listed the current overload of virtual programming and screen time as a barrier. Due to the COVID-19 pandemic, many activities and programs are now virtual and, as a result, many Agents, parents and children are overwhelmed with technology use and screen time. Two 4-H Agents identified personal barriers, as well. These Agents were not enthusiastic supporters of social media and simply preferred face-to-face programming. They indicated a discomfort with recording videos of themselves teaching. Two Agents also discussed confusion as a barrier. They were unsure which platforms Agents are allowed to use and which platforms better suited a specific demographic of participants. One Agent identified the large number of grandparents raising grandchildren as a barrier, as older generations tend to lack technological aptitude, which may make them reluctant to participate in social media and virtual programming.

Next, interviewees were asked how Kentucky 4-H can address the identified barriers. Multiple Agents commented how well Kentucky 4-H has adapted in response to the COVID-19 pandemic. Kentucky 4-H quickly offered guidance and provided many virtual programming options at the state level, thereby connecting Agents with school districts for virtual programming. Other interviewees proposed

the inclusion of quick resource guides for Agents and volunteers on the platforms they are asked to use. It was also recommended that one individual at the state level should have the sole responsibility of focusing only on social media and marketing. Utilization of contact agents was also suggested to create programming and to determine what types of programming would best meet the needs at the county level.

Table 4.8 includes interview responses for question #9 which asks Agents if they saw a change in their use of social media during the COVID-19 global pandemic (See Table 4.8).

Table 4.8.

*Interview Responses for Question #9*

Q9: How did you see your use of social media change during the COVID-19 global pandemic beginning in March, 2020?	
District	Response
1	No change
2	Drastically increased
3	Has increased to take up a lot of my time now  Has drastically increased our postage costs due to mailing out materials with in-person meetings restricted, we are working to set up listservs and promoting electronic newsletters
4	Our views and followers definitely increased on our Facebook page, posts went from one a week to three or four a week
6	More interactions on Facebook posts than in the past, more Facebook messages with questions

7 Facebook daily reach and followers increased

The final interview question, Q#10, asked if there were other issues the 4-H Agent would like to share relating to the topics discussed. One prevailing theme was the preference for face-to-face programming and the need for instructional design to make programs more engaging, especially when they must be virtual. Another theme identified is the significant time consumption required to create virtual programming. Several Agents also discussed the proverbial silver lining that emerged as a result of the pandemic. New and broader audiences have become engaged in 4-H content as a direct result of virtual programming. Useful and unexpected connections have surfaced, as the youth population have assisted older groups with the use of new technology. Another Agent noted the collaborative efforts among all office staff and other community partners as they meet local needs together during the pandemic. Program areas roles and responsibilities have become more blurred, as all Agents have worked together on virtual programming, as well as educational kits to be picked up for programming for families to complete at home. One Agent discussed how generational differences impacted how a person responded to the need for virtual programming during the pandemic. The Agent noted the barriers to using social media and adapting to virtual programming vary by generation.

### **Data Analysis of Qualitative**

The seven interviews conducted with 4-H Extension Agents were recorded via Zoom. They were then completely transcribed. The transcriptions were used to

determine major themes emerging from each of the interview questions. A list was then compiled which outlined the responses to each of the interview questions. The compiled responses were used to determine possible answer selections for the questionnaire.

### **Components and Methods of Quantitative**

The compiled interview responses were used to finalize the questions and possible responses for the quantitative portion of the study. (See Appendix F for questionnaire template). The questionnaire was sent by email with a Qualtrics survey link to all the 4-H Extension Agents in Kentucky (See Appendix G). The email included a description of the study and the IRB contact information for Morehead State University. A deadline was set for completion of the survey. The first email was sent by Dr. Mark Mains, the Assistant Director for 4-H Youth Development. A week later, the researcher sent a follow-up email reminder. Two more reminders were sent the week of the deadline. The researcher also contacted the district interview representative in the three districts with the lowest response rate, asking that individual to reach out to the Agents in their district to encourage participation. A total of 93 responses were recorded, however, some of the last questions only had 88 responses. The questionnaire included 10 questions about social media use and barriers, followed by 7 demographic questions (See Appendix H for full questionnaire data). With 114 4-H Extension Agents employed in Kentucky at the time of the survey, the response rate was 82%. The following Table 4.9 contains the



demographics of questionnaire participants which were found in questions 11 through 17 (See Table 4.9).

### Demographics

Table 4.9.

#### *Gender, Race, and Ethnicity of Questionnaire Respondents*

Q11 Gender				
Male	Female	Total	%Male	%Female
15	74	89	17%	83%
Q12 Race				
Race		Total	%	
White		85	96%	
Black or African American		3	3%	
Other		1	1%	
Q13 Ethnicity			Total	%
Non-Hispanic			89	100%

Table 4.10 includes the age breakdown by category of the questionnaire respondents (See Table 4.10).

Table 4-10.

#### *Age of Questionnaire Respondents*

Q14 Age		
Age	Response	%
Under 25	5	6%
25-34	21	24%
35-44	26	29%
45-54	19	21%
55-64	14	16%
65 and over	4	4%

Table 4.11 includes the years of service with the Extension Service in five year increments for questionnaire respondents (See Table 4.11).

Table 4.11.

*Years of Service of Questionnaire Respondents*

Q15 Years of Service		
Years Working	Response	%
0-5	23	26%
6-10	8	9%
11-15	15	17%
16-20	13	15%
21-25	15	17%
26-30	6	7%
Over 30	8	9%

Table 4.12 includes the questionnaire respondents' regions in the Kentucky Extension program (See Table 4.12).

Table 4.12.

*Kentucky Extension Region of Questionnaire Respondents*

Q16 Region		
Region	Response	%
West	28	32%
Central	34	39%
East	26	29%

Table 4.13 shows the questionnaire respondents by Extension District (See Table 4.13).

Table 4.13.

*Kentucky Extension District of Questionnaire Respondents*

Q17 District		
District	Response	%
1	13	15%
2	6	7%
3	15	17%
4	12	14%
5	18	20%

6	11	12%
7	13	15%

### Questionnaire

Questions one through ten in the questionnaire looked at current social media use and barriers. Hours spent per week using social media for work purposes was also included. Questions two, four, and eight were ranking questions, where respondents were asked to rank the top three responses, from the options provided. An option for “other” was also provided and the respondent was asked to please list.

Table 4.14 includes responses for question #1 which asked Agents to indicate the social media tools they were currently using in their 4-H program (See Table 4.14).

Table 4.14.

*Social media tools currently used in the 4-H program.*

Q1 Social media tools currently used in the 4-H program.  
n = 93

Social Media Tool	Response	% of responses	% of respondents
Facebook	91	25%	98%
Zoom	86	24%	92%
YouTube	56	15%	60%
Remind	49	14%	53%
Instagram	31	9%	33%

Google Classroom/Drive	29	8%	31%
Twitter	11	3%	12%
Other	6	2%	6%

Other includes: Google forms, Qualtrics, One Call, LinkedIn, and Microsoft Teams.

Table 4.15 asked respondents to rank the top three social media tools used for work purposes. The mean, standard deviation, and variance are included for each (See Table 4.15).

Table 4.15.

*Ranking top 3 social media tools used.*

---

Q2 Please rank the top 3 social media tools you use.  
n=92 ANOVA P-value =2.07E-86\*

t-Test: Paired two sample for means

Facebook/Zoom P-value = 1.22E-16\*

Zoom/Instagram P-value = 0.012408\*

Instagram/YouTube P-value = 0.478058

YouTube/Remind P-value = 0.540136

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Social Media Tool	Mean	Std Deviation	Variance
Facebook	1.20	0.74	0.55
Instagram	4.01	1.63	2.66
Twitter	5.48	1.38	1.90
YouTube	4.17	1.18	1.38
Remind	4.34	1.90	3.59
Google Classroom/Drive	5.72	1.40	1.96

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Zoom	3.25	1.72	2.95
Other	7.84	0.76	0.57

\*= P values less than 0.05 indicating statistical significance

One-way analysis of variance was calculated using the Excel data analysis package. When all seven social media tools were included, the P-value was 2.07E-86, showing high statistical significance (See Appendix I). This would indicate the differences being highly unlikely due to chance. Further ANOVA calculations were made between the top five social media tools by mean. The P-value was 1.68E-45, again showing high statistical significance. When running an ANOVA with Zoom, Instagram, and YouTube, there was still statistical significance with a P-value of 0.000103. However, an ANOVA of only the social media tools with means in the four range, (Instagram, YouTube, and Remind) generates a P-value of 0.387994, meaning the result could happen 38% of the time by chance.

Paired t-Tests were ran also using the Excel data analysis package (See Appendix K). T-tests resulted in statistical significance when comparing the top two social media tools and when comparing the second and third most used social media tools. Facebook and Zoom were calculated resulting in a P-value of 1.22E-16 and Zoom and Instagram resulted in a P-value of 0.012408.

Table 4.16 is also derived from question #2 asking Agents to rank the top three social media tools used. The table shows the percentage selected for first, second, and third for each of the social media tools listed (See Table 4.16).

Table 4.16.

*Ranking top 3 social media tools used.*

Q2 Please rank the top 3 social media tools you use.			
Social Media Tool	Rank 1	Rank 2	Rank 3
Facebook	89.13%	6.52%	3.26%
Instagram	1.09%	22.83%	15.22%
Twitter	1.09%	2.17%	4.35%
YouTube	0.00%	6.52%	22.83%
Remind	3.26%	23.91%	13.04%
Google Classroom/Drive	0.00%	2.17%	7.61%
Zoom	5.43%	35.87%	32.61%
Other	0.00%	0.00%	1.09%

Table 4.17 includes the responses from question #3 which asked Agents to check all the ways they use social media in their profession (See Table 4.17).

Table 4-17.

*Ways using social media in profession.*

Q3 Please check all the ways you currently use social media in your profession. n=93			
Use	Response	% of responses	% of respondents
Marketing	90	17%	97%
Communications	89	17%	96%

Education	84	16%	90%
Recruitment	81	15%	87%
Recognition	77	15%	83%
Fundraising	53	10%	57%
Professional Development	47	9%	51%
Other	1	0.19%	1%

Other includes: service projects

Table 4.18 includes the ranking of ways Agents use social media from question #4.

Agents were asked to rank the top three ways. Table 4.18 includes the mean, standard deviation, and variance for each (See Table 4.18).

Table 4.18.

*Ranking top 3 ways social media is used in profession.*

Q4 Please rank the top 3 ways you use social media in your 4-H program. n=91			
Social Media Use	Mean	Std Deviation	Variance
Communications	1.85	1.12	1.25
Marketing	2.01	0.97	0.93
Education	3.43	1.33	1.76
Recognition	4.21	1.11	1.24
Recruitment	4.33	1.42	2.02
Fundraising	5.91	0.90	0.81
Professional Development	6.32	1.43	2.04



Other	7.95	0.52	0.27
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Table 4.19 is also from question #4 but includes the percentage for ranking first, second, and third for each of the social media tools (See Table 4.19).

Table 4.19.

*Ranking top 3 ways social media is used in profession.*

Q4 Please rank the top 3 ways social media is used in your 4-H program.			
Social Media Use	Rank 1	Rank 2	Rank 3
Communications	52.75%	23.08%	15.38%
Marketing	32.97%	45.05%	10.99%
Education	7.69%	14.29%	34.07%
Recognition	1.10%	5.49%	15.38%
Recruitment	3.30%	12.09%	12.09%
Fundraising	0.00%	0.00%	3.30%
Professional Development	2.20%	0.00%	7.69%
Other	0.00%	0.00%	1.10%

Table 4.20 includes the responses for question #5 which asked Agents to estimate hours using social media for work purposes (See Table 4.20).

Table 4-20.

*Hours using social media for work purposes.*

Q5 How many hours per week do you estimate that you are currently using social media for work purposes.

n=91

Hours	Response	%
0-5 hours	21	23%
6-10 hours	30	33%
11-15 hours	25	27%
16-20 hours	9	10%
Over 20 hours per week	6	7%

Table 4.21 includes responses from question #6 asking Agents to estimate time spent using social media before the global pandemic beginning in March, 2020 (See Table 4.21).

Table 4-21.

*Hours using social media for work purposes before the global pandemic.*

Q6 Before March 2020, when the global pandemic required programs to be conducted virtually, how many hours per week do you estimate you were spending using social media for work purposes?

n=91

Hours	Response	%
0-5 hours	68	75%
6-10 hours	19	21%
11-15 hours	4	4%
16-20 hours	0	0%
Over 20 hours per week	0	0%

Table 4.22 includes barriers to social media use for work purposes which was question #7. Agents were asked to check any and all barriers that applied (See Table 4.22).

Table 4.22.

*Barriers to social media use for work purposes.*

Q7 Please check any and all barriers you feel you face in using social media in your work. n=91			
Barrier	Response	% of responses	% of respondents
Not everyone uses social media	77	15%	85%
Limited access to Internet or reliable internet	68	13%	75%
Struggle with which platform To use for intended audience	42	8%	46%
Personal preference of face-to-face contact	49	10%	54%
Time consuming	33	7%	36%
Grandparents who many not Be tech savvy raising their grandchildren	51	10%	56%
Not comfortable on video	32	6%	35%
Lack of knowledge of how to use	32	6%	35%
Difficult to engage audience In virtual formal	58	11%	65%
Increased screen time required	68	13%	75%

During pandemic making it less appealing

other 5 1% 5%

Other includes: unless you use a “group” there is no guarantee your intended audience see Facebook, everyone using different formats including our own 4-H specialists who are creating additional stress by using so many different formats for agent information, lack of clear policy on how we use social media, technology issues.

Table 4.23 includes responses from question #8 which asked respondents to rank the top three barriers to social media use. Mean, standard deviation, and variance are included for each barrier (See Table 4.23).

Table 4.23.

*Ranking top 3 barriers in using social media.*

Q8 Please rank the top 3 barriers you face in using social media in your work.  
n=89 ANOVA P-value =1.23485E-60\*

t-Test: Paired two sample for means

Not everyone uses social media/limited access P-value = 0.010401\*

Limited access/personal preference of face-to-face P-value = 6.27E-06\*

Personal preference of face-to-face/struggle with platform P-value = 0.082434

Barrier	Mean	Std Deviation	Variance
Not everyone uses social media	2.55	1.81	3.28
Limited access to Internet or reliability	3.26	1.94	3.76
Struggle with which platform to use For intended audience	5.20	2.07	4.30
Personal preference of face-to-face contact	4.71	1.87	3.51
Time consuming	6.07	2.02	4.06

Grandparents who may not be tech savvy raising grandchildren	6.48	2.05	4.18
Not comfortable on video	7.34	2.17	4.72
Lack of knowledge of how to use	7.61	2.59	6.73
Difficult to engage audience	6.29	3.09	9.56
Increased screen time during pandemic Making it less appealing	5.49	3.77	14.23
Other	11.00	0.00	0.00

\*= P values less than 0.05 indicating statistical significance

The one-way analysis of variance was calculated using all ten social media barriers provided, in order to compare the means (See Appendix J). A P-value of 1.23485E-60 was obtained, showing high statistical significance. Additional ANOVAs were ran using various combinations of barriers. The top three barriers generated a P-value of 1.49E-12, again showing the difference in means being highly statistically significant. The two groupings that did not show statistical significance were the ANOVAs using only the three barriers with means in the six range and also the three barriers with means between 4.7 and 5.5. These had P-values of 0.526937 and 0.152535 respectively.

Paired t-Tests were ran using the Excel data analysis package with the top ranked barriers to social media use (See Appendix L). P-values under 0.05 indicated statistical significance. The t-Tests results are listed in Table 4.23.

Table 4.24 also includes responses from question #8 and includes the percentages for each ranking of first, second, or third for each barrier (See Table 4.24).

Table 4.24.

*Ranking top 3 barriers in using social media.*

Q8 Please rank the top 3 barriers in using social media in your work.			
Barrier	Rank 1	Rank 2	Rank 3
Not everyone uses social media	35.96%	25.84%	11.24%
Struggle with which platform to use For intended audience	3.37%	5.62%	11.24%
Personal preference of face-to-face contact	6.74%	5.62%	12.36%
Time consuming	4.49%	2.25%	5.62%
Limited access to Internet or reliability	20.22%	24.72%	11.24%
Not comfortable on video	0.00%	3.37%	10.11%
Lack of knowledge of how to use	3.37%	3.37%	6.74%
Difficult to engage audience	4.49%	12.36%	11.24%
Increased screen time during pandemic Making it less appealing	20.22%	13.48%	10.11%
Grandparents who many not be tech Savvy raising their grandchildren	1.12%	3.37%	10.11%
Other	0.00%	0.00%	0.00%

Table 4.25 includes the responses for question #9 which asked respondents how their use of social media changed during the Covid-19 global pandemic (See Table 4.25).

Table 4.25.

*Change in social media use during pandemic.*

Q9 How did your use of social media change during the Covid-19 global pandemic beginning in March, 2020?  
n=90

	Response	%
Drastically increased	52	58%
Increased somewhat	33	37%
Increased a little	5	5%
Stayed the same	0	0%
Decreased a little	0	0%
Decreased somewhat	0	0%
Drastically decreased	0	0%

Table 4.26 includes responses from question #10 which asked Agents to check opinion statements related to social media that matched their personal opinions (See Table 4.26).

Table 4.26.

*Opinion of social media as it relates to 4-H programming.*

Q10 Please check the statement or multiple statements that fit your current opinion of social media as it relates to 4-H programming.

	Response	%
Social media allows me to reach new audiences.	77	23%
Social media helps me recruit 4-H members or volunteers.	55	17%

Social media helps me fundraise for my program.	28	8%
Social media has allowed me to continue my program during the pandemic.	76	23%
I only use social media in my program because I feel it is required.	11	3%
I do not see the benefit of using social media in my program.	0	0%
Social media loses the personal touch and engagement.	38	11%
I do not want social media to become our primary form of delivery.	48	14%
Other	1	1%
Other: very little impact from social media, it is passive, not long term skill building		
334 total responses.		

### **Data Analysis of Quantitative**

A link for the questionnaire was sent for 4-H Agents to complete through Qualtrics. Qualtrics generated a report for each question including the number of respondents and selections, rankings, or responses written in under “other”. For the questions in which Agents were asked to rank, calculations included: the mean, standard deviation and variance. For the two research questions, one-way analysis of variance was calculated using the Excel data analysis package. The P-values for both social media use and barriers to use were well below 0.05 which indicates statistical significance indicating strong evidence against the null hypothesis. For other questions, the response rate and percentage were calculated. Descriptive statistics were used to organize the data and describe characteristics of the data.



**Summary**

The first research question in this study examines the ways Kentucky 4-H Agents are currently using social media in the 4-H program. Both the qualitative and quantitative portions of the study found Facebook to be the most used social media platform, followed by Zoom, then YouTube, and Remind. Marketing was the highest ranked use for social media in 4-H programs, followed by communication, education, and recruitment. The second research question in this study addressed barriers to social media use for educational purposes among 4-H Extension Agents in Kentucky. The questionnaire identified the main barrier to be that not everyone uses social media. Limited access to Internet or reliable Internet and increased screen time resulting from the COVID-19 pandemic tied for the second most prevalent barrier. The next barrier this study identified was the difficulty in engaging audiences in a virtual format.

## **Chapter 5: Conclusions and Implications**

### **Overview**

With the increasing presence of social media in society, Extension has begun to use social media to reach existing and new audiences. Extension Agents are using social media in various ways and for multiple purposes. The objective of this study was to identify ways social media is being used by 4-H Extension Agents in Kentucky. The study also looked at the intentions of that use and barriers to social media usage in the profession. The questions this research is designed to answer are:

1. What are the significant ways current Kentucky 4-H Agents are using social media in the 4-H program?
2. What are the significant barriers for Kentucky 4-H Agents to social media use for educational purposes?

### **Summary of the Study**

According to Wilson (2013), social media can be a valuable educational tool. With the increased presence of social media in all other aspects of society, Extension Agents are using social media to reach participants, as well as the community at large. Initially, social media was a means of reaching people while also saving money on the postage for previously mailed communication. The COVID-19 pandemic began in the spring of 2020 and created a need to educate in a virtual format. In-person learning was simply not possible due to government restrictions. Nevertheless, Extension Agents continued to provide educational content to their communities.

This study was already in the planning stages long before news of the pandemic broke. The timeliness of this topic is uniquely important. It has permitted a comparison of 4-H Agents' time spent on social media professionally, both before and during the pandemic. The COVID-19 pandemic has emphasized the usefulness and significance of social media as a tool for educational purposes.

Research by Fathima, Priya and Gayathri (2019) indicates social media use to be time consuming. However, Kentucky 4-H Extension Agents ranked this barrier as eighth out of eleven barriers provided. There was, however, a noted escalation in use of social media after the start of the 2020 pandemic, with 100% of respondents reporting an increase. "Drastically increased" was reported by 58% of respondents, while "increased somewhat" was reported by 37% of participants. Five percent of this study's subjects reported only a small increase.

According to the Diem, Hino, Martin, & Meisenbach (2011) study of the Oregon State University Extension Agents, other noted barriers include funding and training. In this study, however, funding was not identified as a barrier to social media use for educational purposes. Training, though, would be linked to the barrier listed as "lack of knowledge of how to use." Thirty-two respondents selected this barrier, ranking it as ninth out of the 11 barrier options, tying with "not comfortable on video". When ranking barriers, a total of 12 out of 89 respondents ranked "lack of knowledge of how to use" as one of their top three barriers.

The study by Cain (2018) noted that technology integration was dependent upon the educator's ability to engage the learner. During the qualitative portion of

this study, many of the interviewed Agents specified their concerns with engaging youth and conducting educational programming using social media. Thirty-eight respondents selected the opinion that social media loses the personal touch and engagement aspect of learning. While the 4-H program has always had a hands-on approach to programming, Agents have been forced to adapt during the pandemic and offer programs in non-traditional ways.

Extension Agents are discovering new ways to use social media from others in their profession. This often happens informally in the office setting, but also occurs in a more structured form of educational opportunities, such as webinars or presentations at professional development conferences. Indeed, Agents have been provided with more opportunities to learn how to use social media as a tool to continue to reach intended audiences, especially with the advent of the global COVID-19 pandemic.

Extension Agents use social media for varying purposes. Research by Chen and Bryer (2012) reveals the application of social media platforms in both formal and informal learning environments. Kentucky 4-H Extension Agents reported using social media more for communication and marketing. Using social media with educational intent registered as the third highest use. This may be due to many factors. In this study's questionnaire, the uses of social media were not defined, nor were examples provided. This may have left some room for participant interpretation between communication, marketing, and education. For example, if an Agent makes a social media post about an educational program, would that be considered a

communication, marketing, or an educational use? The same post may be interpreted in different ways, depending on the perspective of the Agent.

The first purpose of this study was to identify current social media usage among 4-H Extension Agents in Kentucky. A secondary aim of the study was to recognize barriers to social media use for educational purposes. Information about current use and barriers allows Kentucky 4-H to determine how Agents can best utilize social media tools, as well as identify future focus for training for 4-H Agents.

### **Summary of Findings**

The summary of findings will be divided based on the two research questions for this study. The first focuses on current ways 4-H Extension Agents in Kentucky use social media in their programs. The second identifies barriers Agents face when using social media for educational purposes.

#### **Ways Kentucky 4-H Extension Agents Use Social Media**

This mixed methods study not only identified which social media tools Agents were using, but also the purposes for the use of those platforms. The questionnaire identified Facebook and Zoom as the two most utilized tools. Facebook was ranked highest with 89% of respondents indicating it as their most used social media tool. Marketing is the highest reported reason of use of social media, followed closely by communication and education. In a ranking question regarding the ways social media is used, communication was ranked highest. However, when combining the first and second place rankings, marketing had a slightly higher response than communications.

One other area of social media use worth noting is community service or service projects through 4-H. This response was listed by a participant as a use for social media under the “other” option. Community service projects via social media were also spoken about extensively by one of the interview participants. This Agent shared how social media had permitted numerous project clubs to complete extensive service projects in their communities. The projects were promoted using social media platforms. According to the Agent, social media allowed the projects to yield a greater reach and larger impact. Generosity is one of the four areas in the Essential Elements for 4-H Youth Development Framework (Kress, 2003, 2014). Planning and conducting community service projects is a major way 4-H members learn and demonstrate generosity to others by identifying a need in their community and working to meet that need.

Relative advantage is the first of five attributes in Everett Rogers’ Diffusion of Innovation theory (Ellsworth, 2000). In this instance, relative advantage refers to Agents believing that using social media is in some way better than other educational methods. The COVID-19 global pandemic brought forth an increase in relative advantage for social media, as in-person educational options were not available for some time. Social media became more of a necessity to continue to deliver programming to members and communities during the pandemic.

Observability is another of the five attributes in Everett Rogers’ Diffusion of Innovation Theory (Ellsworth, 2000). During this study, 4-H Agents in Kentucky were able to observe how other Agents in Kentucky and around the United States

were using social media for programming at a time when the pandemic did not allow in-person programming. By sharing ideas and content through social media, Agents were encouraged to adopt or expand upon novel educational content. Early in the pandemic, a Facebook group was created for Kentucky 4-H Agents to share ideas. Many Agents began making educational kits that could be picked up by members and families and completed at home. Ideas were shared within the Facebook group regarding topics and content for these educational kits. A national professional development Facebook page also utilized shared ideas for virtual programming from Agents across the United States. Professionals exchanging their ideas for educational content allowed other Agents the benefit of observability.

Participating in social media can be time consuming. Nearly 33% of Agents reported spending 6 to 10 hours on various social media platforms, while 27% indicated spending 11 to 15 hours per week. This is a massive increase among participants, 75% of which admit to spending 5 hours or less on social media sites pre-pandemic. The entire sampling of respondents reported an increase in social media use since the beginning of the pandemic, with 58% reporting a “drastic increase”.

### **Barriers to Social Media Use for Educational Purposes**

Agent interviews identified common barriers to social media use for educational purposes. Those barriers were then included in the questionnaire such that a respondent could choose any or all barriers that applied to them. This was followed by a ranking question where Agents ranked the top three barriers they faced.

Out of the 11 provided options, Agents checked an average of six barriers per person. The most reported barrier was usage; not everyone uses social media. The next barriers identified were tied in rank. The same number of participants noted that limited access to the Internet and/or Internet reliability was as much a hurdle as the pandemic induced surge in screen time, rendering social media less appealing. Over half the respondents felt it was difficult to engage audiences in a virtual format and noted they have a personal preference for face-to-face contact. ANOVA calculations demonstrated high statistical significance when comparing the means from each of the barriers and also when computed using only the top three barriers. This indicates the differences in means between the groups is unlikely due to chance.

Research by Alotaibi, Swortzel, Denny, & Seal (2018) maintains organizational support is a variable influencing social media use. In the qualitative portion of this study, several interviewed Agents conveyed how supportive Kentucky 4-H has been since the inception of the COVID-19 pandemic. While many resources have been made available to Agents, some concern was noted regarding social media platforms. There are not current state or federal directives indicating which platforms are permitted or encouraged for use. One Agent stressed the need for a specialist whose only job is the coordination of social media at the state level for Kentucky 4-H. Such an addition would be greatly beneficial, lending even more organizational support throughout this profession.



## **Recommendations**

### **4-H Agents**

The large majority of participants in this study found social media to be a useful way to reach new audiences. Most also found social media allowed them to continue providing educational content, even during a global pandemic. With the dominance of social media use in society, the Extension Service is using it as a tool to reach people for various reasons. Perhaps the most under-utilized purpose is for professional development. Only 9% of responses included current use of social media for professional development purposes. Professional development is critical when looking at the number of hours spent on social media per Agent per week. On average, Kentucky 4-H Agents spend between 6 and 10 hours per week using social media for work purposes. Although adding professional development can be time consuming, it may also help to decrease the amount of time needed to complete certain tasks related to social media. Also, professional development is important to keep 4-H Agents up-to-date and relevant educators in a changing society.

### **4-H Organization**

The uncertainty of which social media platforms are encouraged or acceptable for use was noted as a frustration for several Agents in this study. In the interviewing stage, several Agents spoke about the confusion of which platforms should be used in their programming. Another issue Agents face is determining which platforms are best for their intended audience. This is an on-going struggle as different platforms gain popularity. Several Agents found the teen audience to be the most difficult to

track since they often add or change platforms based on popularity. 4-H, as an organization, should keep abreast of these changes in order to inform educators of new and changing ways to reach intended audiences. Focus groups with teens across the country would be useful to stay updated on current trends.

Social media has proven to be a useful tool for fundraising. However, only 10% of responses in this study noted currently using social media for fundraising in their 4-H program. The opportunity warrants further study. Successful fundraising efforts for 4-H through social media on the local level should be shared with other 4-H Agents. Sharing success stories will allow other county programs the opportunity to try to duplicate fundraising successes.

### **Future Research**

This study provided a broad illustration of social media usage and barriers among 4-H Extension Agents in Kentucky. Future research could be conducted among the other program area groups, including agriculture and family and consumer sciences. Such research could highlight social media use among different program area Agents within the same state. Going further, a nationwide study of 4-H Extension Agents, while large in scale, could indicate if differences in social media usage exist among 4-H Agents in different areas of the United States.

One of the topics borne of this study is youth engagement with programming delivered via social media. Fifty-eight respondents of the questionnaire felt it is difficult to engage your audience when using a virtual format. This struggle was also

mentioned in the interviewing stage of the study. This research study indicates future research and professional development regarding how to best engage youth in virtual formats would be beneficial to not only Extension Agents, but to all educators.

A logical next step for this research would be to extend it to 4-H audiences. It could be useful to survey 4-H members, parents, and volunteers to determine how best to reach them via social media. Future research could compare these two studies to discover if the barriers listed by 4-H Agents correspond with those listed by 4-H families. Surveying 4-H audiences would establish what social media tools they are already using, making it easier for Agents to connect with them. Awareness of social media platforms 4-H audiences are using allows Agents to reach them where they are already engaged, thus extending the reach of county programs. Agents may also be able to reach entirely new audiences not previously engaged with 4-H programming.

## **Conclusions**

The Cooperative Extension Service has a broad reach, serving every county in the Commonwealth of Kentucky. In a rapidly changing society, 4-H Agents are working to determine the best ways to reach people with educational content. Social media use is, of course, growing exponentially and 4-H Extension Agents labor to determine how best to reach intended and newer audiences within its scope. This study provides an overall picture of social media use among 4-H Extension Agents, including which platforms are most used and the purposes for social media use. This study has also helped to identify barriers 4-H Agents face while using social media

for educational purposes. COVID-19 has granted the comparison of social media use before and during this global pandemic. Approximately 85% of participants in this research felt social media allowed them to continue their programming during the pandemic and also allowed them to reach new audiences. Agents quantified the hours they spend per week on social media for professional purposes, with all respondents reporting an increase in social media use. The timeliness of this study cannot be overstated. With no end of the COVID-19 pandemic in the foreseeable future, this type of research could prove vital by providing much needed educational content to 4-H members. More than that, it can introduce 4-H and other Extension areas of programming to new, underserved audiences. Social media platforms can be more than a means of delivery of educational content. Extension Agents continue to determine how to best utilize social media tools to deliver programming in innovative ways, while still engaging youth in the traditionally “hands-on” 4-H program.

## References

- Alotaibi, J., Swortzel, K., Denny, M., Peterson, D., & Seal, S. (2018). *An investigation of the barriers that influence extension employees' attitudes toward social media use at Mississippi State University*, ProQuest Dissertations and Theses.
- Arnold, M. E. (2018). From context to outcomes: A thriving model for 4-H youth development programs. *Journal of Human Sciences and Extension*, 6(1).
- Barrier. (2020). In Cambridge Dictionary. Retrieved May 10, 2020, from <https://dictionary.cambridge.org/us/dictionary/english/barrier>
- Beattie, P., Lamm, A., Bunch, J., & Lundy, L. (2019). Communicating with 4-H stakeholders: Examining social media use in rural and urban programs. *Journal of Agricultural Education*, 60(1), 202-223.
- Brendtro, L. K., Brokenleg, M., Van Bockern, S., & Bird, G. B. (1991). The circle of courage. *Beyond Behavior*, 2(2), 5-12.
- Borden, L. M., Perkins, D. F., & Hawkey, K. (2014). 4-H youth development: The past, the present, and the future. *Journal of Extension*, 52(4), 6.
- Bowen, R., Stephens, C., Childers, C., Avery, E., & Stripling, C. (2013). Diffusion of social media among county 4-H programs in Tennessee. *Journal of Agricultural Education*, 54(3), 84-99.

- Cain, T. (2018). *A case study on best practices of technology integration within instruction* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (Order No. 10836980)
- Charoensukmongkol, P. (2018). The impact of social media on social comparison and envy in teenagers: The moderating role of the parent comparing children and in-group competition among friends. *Journal of Child & Family Studies*. 27(1), 69-79. DOI: 10.1007/s10826-017-0872-8.
- Chen, B., & Bryer, T. (2012). Investigating instructional strategies for using social media in formal and informal learning. *The International Review of Research in Open and Distributed Learning*, 13(1), 87-104.
- Creswell, J. (2014). Research design: Qualitative, quantitative, and mixed methods approaches. (4th Ed.). Sage. ISBN: 978-45222610-1.
- Diem, K. G., Hino, J., Martin, D., & Meisenbach, T. (2011). Is Extension ready to adopt technology for delivering programs and reaching new audiences? *Journal of Extension*, 49(6), 7.
- Ellsworth, J. (2000). *Surviving change: A survey of educational change models*. Syracuse, NY: Clearinghouse on Information & Technology.
- Fathima, F., Priya, V., & Gayathri, R. (2019). Social media and anxiety, a survey. *Drug Invention Today*. 12(9), 1841-1844.

- Gandhi, P., Khanna, D., & Ramaswamy, S. (2016). Which industries are the most digital (and why?). Retrieved from <https://hbr.org/2016/04/a-chart-that-shows-which-industries-are-the-most-digital-and-why>.GoogleScholar
- Garcia, A., Dev, D., McGinnis, C., Thomas, T., & The Learning Child Team. (2018). Impact of an extension social media tool kit on audience engagement. *The Journal of Extension*. [Online], 56(2) Article #v56-2rb1. Retrieved from <https://joe.org/joe/2018april/rb1.php>
- Gharis, L., Bardon, R., Evans, J., Hubbard, W., & Taylor, E. (2014). Expanding the reach of extension through social media. *The Journal of Extension*. [Online], 52(3) Article #v52-3a3. Retrieved from <https://joe.org/joe/2014june/a3.php>
- Glaser, P., Liu, J., Hakim, M., Vilar, R., & Zhang, R. (2018). Is social media use for networking positive or negative? Offline social capital and internet addiction as mediators for the relationship between social media use and mental health. *New Zealand Journal of Psychology*. 47(3), 12-18.
- Guinta, M. & John, R. (2018). Social media and adolescent health. *Pediatric Nursing*. 44(4), 196-201.
- Jackson, W. (2014). The socialization of youth in the 21<sup>st</sup> century: The circle of courage. *Reclaiming Children and Youth*, 23(3), 16-20.

- Kallas, P. (2019, September 2). Top 15 most popular social networking sites and apps [Online news story]. Retrieved from [dreamgrow.com/top-15-most-popular-social-networking-sites/](http://dreamgrow.com/top-15-most-popular-social-networking-sites/)
- Kentucky 4-H. (n.d.). What is 4-H? 4-H Youth Development. Retrieved May 10, 2020, from [4-h.ca.uky.edu/what-is-4H](http://4-h.ca.uky.edu/what-is-4H)
- Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development*. FT press.
- Kress, C. (2003). The circle of courage in practice: The 4-H club study. *Reclaiming Children and Youth*, 12(1), 27.
- Kress, C. (2014). Transformational education: The 4-H legacy. *Reclaiming Children and Youth*, 23(3), 5-9.
- Krippel, G., McKee, A.J., & Moody, J. (2010). Multimedia use in higher education: Promises and pitfalls. *Journal of Instructional Pedagogies*, 2.
- Lerner, R. M., Dowling, E.M., & Anderson, P.M. (2003). Positive youth development: Thriving as the basis of personhood and civil society. *Applied Developmental Science*, 7(3), 172-180.
- Meyer, S., & Jones, K. (2015). Promoting the essential elements of 4-H youth development through an experiential learning model. *The Journal of*

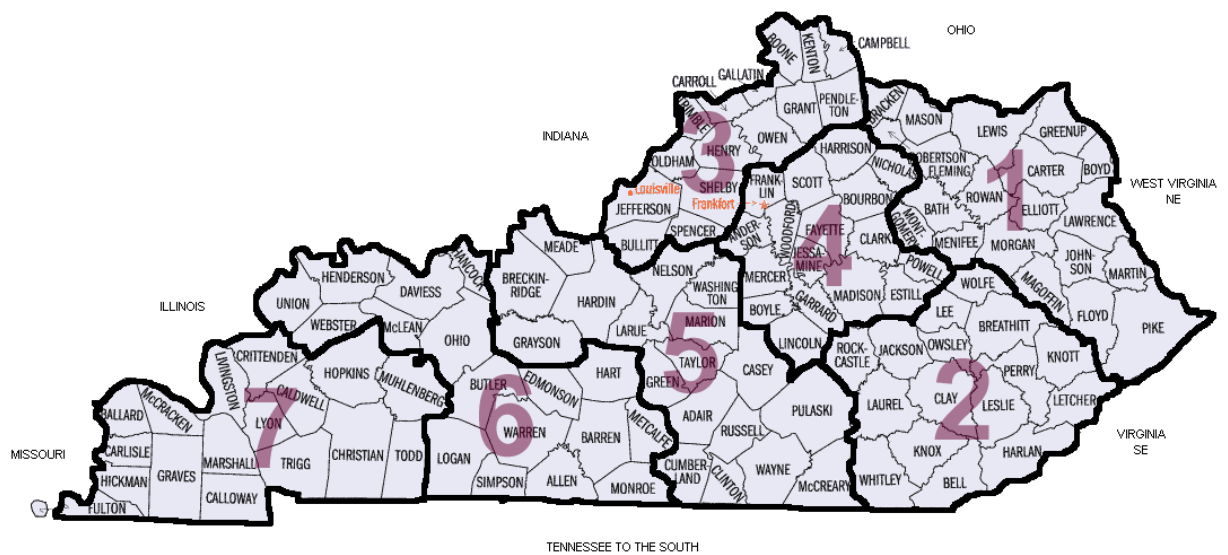


- Extension*. [Online], 53(5) Article #5IAW4. Retrieved from <https://joe.org/joe/2015october/iw4.php>
- Newbury, E., Humphreys, L., & Fuess, L. (2014). Over the hurdles: Barriers to social media use in extension offices. *The Journal of Extension*. [Online], 52(5) Article #v52-5a1. Retrieved from <https://joe.org/joe/2014october/a1.php>
- Olson, K. A. (2013). Smith-lever extension celebrates its centennial. *Journal of Family and Consumer Sciences*, 105(4), 7-7,16.
- Pizzuti, A. G., Patel, K. H., McCreary, E. K., Heil, E., Bland, C. M., Chinaeke, E., Love, B. L., Bookstaver, P. B., (2020) Healthcare practitioners' views of social media as an educational resource. *PLoS ONE*. 15(2). doi: 10.1371/journal.pone.0228372
- Ramussen, W. D. (2002). *Taking the university to the people: Seventy-five years of cooperative extension*. Purdue University Press.
- Rogers, E. M. (1961). Characteristics of agricultural innovators and other adopter categories.
- Saini, C., & Abraham, J. (2015). Using Social media for educational purposes: Approaches and Challenges. In *International Education Conference 2015 on Learning Technologies in Education*.

- Seevers, B., Graham, D., Gamon, J., & Conklin, N. (1997). *Education through Cooperative Extension*. Albany, NY: Delmar Publishers.
- Social media. (2020). In *Merriam-Webster.com*. Retrieved May 14, 2020, from <https://www.merriam-webster.com/dictionary/social%20media>
- Uricchio, C., Moore, G., & Coley, M. (2013). Corn clubs: Building the foundation for agricultural and extension education. *Journal of Agricultural Education*, 54(3), 224-237.
- Whosnext. (n.d.). Retrieved March 10, 2021, from <http://www.appsonic.fr/en/products/whosnext/>
- Wilson, C. D. (2013). Making Connections: Higher education meets social media. *Change: The magazine of higher learning*, 45(4), 51-57.
- Wilson, L., Loble, J., & Kranich, G. (2018). Follow a researcher: Using innovative technology to connect youths and scientists. *The Journal of Extension*. [Online], 56(5) Article #v56-5tt3. Retrieved from <https://joe.org/joe/2018september/tt3.php>

# APPENDIX A

## Kentucky Cooperative Extension District System



## APPENDIX B

## Letter to Interview Participants

Dear 4-H Extension Agent,

I am the Extension Agent For 4-H Youth Development in LaRue County and am currently working on a research project on social media use among 4-H Agents as a part of my doctoral studies through Morehead State University in the Educational Technology Leadership program. This mixed methods research project includes interviews which will be followed by a questionnaire sent to all 4-H Agents in Kentucky. You have been randomly selected from your district to participate in the interview phase. If you choose to participate, your identity will be kept confidential. Interviews will take place virtually and will be recorded for the purposes of transcribing. You may choose to decline to answer any question or questions during the interview.

Participating in this research does not involve any anticipated risks. There is no compensation or direct benefit to you individually as a participant. You may withdraw your consent at any time up until the interview takes place.

If you have any questions about the research protocol, please contact me at 270-268-9277. Questions or concerns about your rights as a research participant may be directed to the IRB Office, 901 Ginger Hall, Morehead State University, Morehead, KY 40351; 606-783-9370.

Misty Wilmoth  
LaRue County Extension Agent  
For 4-H Youth Development Education

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I have read the procedure described above for the social media interview for Kentucky 4-H Extension Agents. I voluntarily agree to participate in the interview and have received a copy of this letter.

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Signature of participant

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Date

I would like to receive a copy of the final manuscript submitted for publication.

YES/NO

## APPENDIX C

## Interview Questions:

What social media tools are you currently using and how are you using them in your program?

Are you currently using social media for communications purposes in your program?  
If so, please describe.

Are you currently using social media for marketing purposes in your program?  
If so, please describe.

Are you currently using social media for educational purposes in your program?  
If so, please describe.

Are there other ways you are currently using social media in your program?  
If so, please describe.

How many hours per week do you estimate you spend on using social media for work purposes?

What, if any, barriers do you find in using social media for educational purposes in your program? Please list and explain.

How can Kentucky 4-H help with the barriers listed?

How did you see your use of social media change during the Covid-19 global pandemic beginning in March, 2020?

Is there anything else you would like to share with me related to these topics?

## APPENDIX D

## Full Interview Transcripts

10-1-2020

## Interview with District 1 4-H Extension Agent

What social media tools are you currently using and how are you using them in your program?

Facebook is primarily the format I use. For 4-H as a whole, I usually go through the office page. But my horse club does have a page they use. They will announce meetings, market with pictures, etc. My shooting sports group also has a Facebook page to advertise their accomplishments. It is a closed group more for advertising and marketing. For the whole 4-H program, I use it for marketing upcoming events. Such as camp. We did a YouTube video through the camp to promote camp and then posted it on Facebook.

I have a personal Instagram, but not for work.

Are you currently using social media for communications purposes in your program? If so, please describe.

The only way the communication is if somebody comments back or sometimes we do get a message and we reply to the message or comment if they are asking a question.

Are you currently using social media for marketing purposes in your program? If so, please describe.

Posting of events and activities, something that is going to be happening, either soon or weeks out. Just to give people a heads up. Of course now things are different with COVID, explaining how they need to call ahead or phone in. We are also using social media for recruitment.

Are you currently using social media for educational purposes in your program? If so, please describe.

Not really. I wouldn't say such, it is more so for marketing, getting the word out.

Are there other ways you are currently using social media in your program? If so, please describe.

We do use Zoom for District Board meetings and County Extension Council. If it's an elderly population or people who may be at risk because of the pandemic, we definitely use Zoom as an option. Some just call in because it is more convenient, depending on where they are and what they are doing at the time. They have been trained by a family member or spouse or someone, but they have used it.

One of my clubs uses Remind as their main way to communicate from leaders to the members. That is their primary source of communication.

How many hours per week do you estimate you spend on using social media for work purposes?

For me personally, maybe two to three. That's about it for me. I know I should do more, but it is two to three for me.

What, if any, barriers do you find in using social media for educational purposes in your program? Please list and explain.

Personally, I am not a big social media person. For me it's a personal thing. Other barriers, the information gets not seen. One thing I notice about youth is they don't use a lot of Facebook. They use other media types, but sometimes I wonder how effective that is too. It is a self-barrier. The more response I get from the route I go if from adults responding back, not so much the youth. In that sense, we get two different demographics. With Facebook, you get the parents or grandparents. The youth think Facebook is for old people.

How can Kentucky 4-H help with the barriers listed?

Actually, I think they have been doing an excellent job. They have shown different options that we can use to get the word out with different avenues. I like the different options that have been put out. For example, now 4-H has said use Remind. Our clubs use it. Actually a teacher got that information from the school and incorporated

it into ours. I know now, YouTube videos are a big thing. Doing some club meetings, I asked how many kids had YouTube accounts. In a classroom of 20 kids, 5 or 6 would have their own YouTube channels and this was at 4<sup>th</sup> grade level.

How did you see your use of social media change during the Covid-19 global pandemic beginning in March 2020?

No.

Is there anything else you would like to share with me related to these topics?

Me personally, I hope 4-H doesn't, over the next year or two, that social media is not our primary way of getting information out. Face to face and hands on is what we are known for and based on. I like to see it as an option, but not as a primary use. You lose the connection with virtual. I have talked with teachers about the importance of interaction and being able to see the students' reactions. I hope it is an option, but not our primary mode of delivery.

9-24-2020

Interview with District 2 4-H Extension Agent

What social media tools are you currently using and how are you using them in your program?

We have a 4-H Facebook page. We have an office Facebook page, and we put everything on both. We don't Twitter. We don't have an Instagram. We do some virtual videos and take home bags. We have a couple of Facebook groups that my Snap Assistant does with a bunch of kids. We partner with our Youth Service Center and SNAP and 4-H and those kids and families. There are cooking videos and there is a bag of groceries that they pick up and make the recipes. They go through so many lessons. They pick up a grocery bag once a week for seven weeks. There is a level 1 and then a level 2 if they want to continue. Right now we have 6 in level one and 4 in level 2. Those are families, so around 45 people total. The food is purchased by the Family Resource and Youth Service Center. The videos are done on Facebook Live, then they are posted for those who didn't get to see them live.



Are you currently using social media for communications purposes in your program? If so, please describe.

Yes, we have lots of Facebook groups that we just message back and forth, in addition to the club. We do that even when we are not in a global pandemic. Because you can see exactly who has seen it the message and who hasn't. It makes it easy to know who you need to contact directly.

Are you currently using social media for marketing purposes in your program? If so, please describe.

Yes, we post flyers, make promo videos and those sorts of things and share those on our Facebook pages.

Are you currently using social media for educational purposes in your program? If so, please describe.

My co-worker is doing a virtual safety day this week. Those are pre-recorded videos that we have edited. She has surveys uploaded. They are doing door prizes to gather who has actually completed those. We do pumpkin days every other year. Agents are sending their crafts, stories, recipes, etc. Those will be shared with all the kindergarten and first graders in district 1 and 2. It is through Google Classroom. We are doing that for 1<sup>st</sup> grade safety day as well. We are trying to do things day by day and hopefully some of it can be in person eventually. Each year for pumpkin days we have about 2000 kids who attend. Each kid gets to take a pumpkin home. Throughout the day, they visit different agents and try different pumpkin recipes. There is a story with each pumpkin tasting as well. They rotate and have games, pumpkin carving, etc. The agents have recorded themselves. We are editing them to have the intros, logos, etc. It will go on OneDrive to the agents and the agents will send those to the teachers to use. We only do pumpkin days every other year. We wanted to do it virtually so it doesn't die. We have a lot of kids that don't ever get to go to a pumpkin patch. In my county, the Family Resource has bought each child a pie size pumpkin to take home. We are doing take home bags with the pumpkin, a can of pumpkin to make one of the recipes, and a cookbook of pumpkin recipes. One side will have the recipes and the other the taste testing form. There are three or four different activities. So they get the materials to do the activities. We have 200 in kindergarten and first grade. We have a really good relationship with Family Resource and my office gets along well, so it won't take long.

Are there other ways you are currently using social media in your program? If so, please describe.

Not that I can think of.

How many hours per week do you estimate you spend on using social media for work purposes?

I would say since the pandemic has hit, probably 10 hours, I guess. Before the pandemic, maybe an hour or two per week was spent on social media.

What, if any, barriers do you find in using social media for educational purposes in your program? Please list and explain.

We have a lot of grandparents raising children and a lot of time the kids understand a whole lot more than the grandparents do. What also makes me nervous about that is the grandparents hand them the phone, then when they are done watching the video we posted, what are they getting on?

How can Kentucky 4-H help with the barriers listed?

I don't really know. The scary thing to me is right now everything is so technology driven. If you already aren't good with technology, you are already behind. You may not be as interested in doing something if you don't understand it.

How did you see your use of social media change during the Covid-19 global pandemic beginning in March 2020?

It has drastically increased. I am a people person. I would rather be hands on in a classroom any day of the week. We have had to get creative. We did a virtual fishing contest through Facebook. It has been different. Hopefully we will get back to normal soon. It is hard to have the same connection and personal touch online.

Is there anything else you would like to share with me related to these topics?

No, unless there is anything else you need from me.

9-22-2020

Interview with District 3 4-H Extension Agent

What social media tools are you currently using and how are you using them in your program?

With social media, the best thing that we are using is Facebook. We have a Facebook page and we have used it quite extensively since March. We also use the newspaper, it goes to 6,000 households. We have weekly articles in there. Those are the two main things besides newsletters that we send out. I send out my newsletters through the school's parent portal on their page.

Are you currently using social media for communications purposes in your program? If so, please describe.

This week, going out tomorrow will be out 29<sup>th</sup> week of Snag a Bag. We do 100 a week. We try to cover all 7 areas of 4-H. Total, we have reached 32,706 to date. We are really seeing a difference there. By 11:00, the bags are usually gone. What is good about that, is in class, kids say "where is the office?" A plus has been them coming to the office to know where we are located. We put what we are doing in the newspaper and out to the school system. The Snag a Bag has been very good for the entire office. We post it on Facebook to promote it. We already have 1442 people seeing our post from last week. They are signing up for what clubs they are interested in. I think the marketing process has really helped us.

Are you currently using social media for marketing purposes in your program? If so, please describe.

Putting projects out on Facebook and they are picking them up weekly. My homeschool group and my dog club are doing more community service than we have normally done. The homeschool group made sun catchers and took them to the nursing home and hung those. It has been a positive. Last Friday, the dog club had a pooch parade at a different nursing home facility. The kids brought their dogs and went around the building and tapped on the windows. The residents liked seeing the dogs. We also did "Be Kind" signs and put the 4-H emblem on those. We made 50 signs that were placed throughout the community. We have upped our community service as well as marketing for Extension as a whole.

Are you currently using social media for educational purposes in your program? If so, please describe.

For every Snag a Bag we have done, it does have an educational component to it. For example, the five foods groups. Even though they may have a craft in there, there is always an educational component. Last week, we did 9-11 and there was a flag craft, but also flag etiquette information. The bags are educational. We did a scavenger hunt, they had to find a flower that was taller than them, etc. We did another one where they did bird seed in an egg shell. They had to identify birds. They are learning while having fun. We also did a cooking on the go. We had 10 Hispanic families and 10 additional families. We had 20 families sign up and would get the ingredients to make their recipe. They sent in pictures. Our kids really like the cooking ones. We are limited because we can only send home pre-packaged ingredients. We also did the virtual fishing tournament for cloverbuds, 4-H and adult age. They had to send in pictures. It is hard to tell from the pictures which fish is the biggest. That got some people in from different areas of the county that we hadn't done much with before.

This week, actually tomorrow, we are doing popcorn and you put the cob in the microwave and they love it. The secretary made a pamphlet on the history of popcorn. Next week we will send home pumpkins to decorate and put in the recipes for pumpkin muffins or other pumpkin recipes. I haven't really ran out of ideas. We are supposed to go back to school on November 4<sup>th</sup>. I have talked to the superintendent and he said I am welcome to come into the classroom. Before school started, I made my videos and made packets. But it was a drive thru pickup format for the chromebooks. But I decided I wouldn't have a record of who picked them up and who didn't, so I waited. Videos were going to be posted over Google. But I hate videoing.

Are there other ways you are currently using social media in your program? If so, please describe.

Probably not.

How many hours per week do you estimate you spend on using social media for work purposes?

Well, researching things, and then, I don't know whether you call it social media, but ordering things from Amazon and Oriental Trading. When they pick up their bags, I

sit where I can see them and I record families I see picking up our bags. I mark down how many girls and boys I see. As far as social media, if you are just talking about being on, now the time I make the bags is a day each week.

Let's say 20 hours a week and it would range, let's just go 15-20 hours a week. Half my time would definitely be because of social media or on social media.

What, if any, barriers do you find in using social media for educational purposes in your program? Please list and explain.

The drawback is those first who don't have social media, reaching those. A lot of people do call and ask about it, even though they don't have social media. The main drawback is that. Not everybody in the county has social media, not everybody gets the newspaper. It guess it is true for everything we do. We do get to all the school kids by putting it in the school parent portal.

As far as personal barriers, I really like paper and pencil. I do not like Zoom meetings. I like face to face. I get a lot more out of it. I don't ask many questions on Zoom. I will e-mail afterwards and ask a question, but I don't like to take up time for a question that is just for me. Just like videotaping, I hate it. I just finally told my daughter she was going to have to tape it. It took all afternoon to do four videos. My barriers would be because I don't like it, I don't feel comfortable with Zoom stuff. I hate the communication thing, where it was on video and you have to videotape it. I had some really good demonstrations and you couldn't hear them. I felt like my kids worked really hard, but the format didn't do them justice. Their parents aren't videographers. That was a negative for me. You know I am competitive and I like for my kids to do well. Especially when I know they are really in the top. I had two I really thought should place and they didn't. I just didn't feel good about it. I would rather just say, we just can't do it, if you can't do it and it feel fair.

How can Kentucky 4-H help with the barriers listed?

I think they can't get Facebook and internet into every home.

On my part, it just has to be up to me. It looks like things are changing, so I am just going to have to get myself more comfortable.

How did you see your use of social media change during the Covid-19 global pandemic beginning in March 2020?

Well evidently, 20 hours a week changed because I didn't do it beforehand. A lot of my time was on it where it hadn't been in the past. You are just kind of forced

because you don't want to do away with your program. I did e-mail some and communicate. My homeschool group did stop in and still participate. We still did our fair entries. We had several entries into our exhibit hall at the fair. That really didn't stop us. Honest to goodness, we have not stopped, person to person, yes, but not as far as having projects and getting things done. We always have a miscellaneous group, most things they do are on the state list though. A lot of things at state now has taken some of the creativity out of it. I used to love the nature crafts, which is no longer.

Is there anything else you would like to share with me related to these topics?

I'll just summarize it by saying I wasn't a real supporter in the beginning, but I am anxious to see how many new children that I get in 4-H. I am predicting that we will probably increase by two thirds because I have had so many families that pick up the bags that come in and want to know how to sign up for 4-H. I am anxious for October 1, and see how many new kids we have. I think I'll be very excited that I did do snag a bags and use Facebook. I am not a supporter, I prefer face-to-face, but all in all, I think our office has done a really good job. We have been busy with soil samples, because people have had more time for gardening. I do not feel we have let our community down at all. I have been uncomfortable at times, but we have worked and we will get through this, we will get through this together. How many times have you heard that? I have been just as busy as if we have been open. The difference is you are not going into the schools, but you are still communicating with those people. Definitely a lot more researching, and you can't really fly by the seat of your pants with a lesson you have already done.

I have had one child that has done everything offered statewide and three more. Especially with Ashley Osborne, and Rachel, I do have people participating. Ashley wrote me this morning asking if Breanna can be featured in a story because of her participation.

9-29-2020

Interview with District 4 4-H Extension Agent

What social media tools are you currently using and how are you using them in your program?

We have an Instagram page and we do some posting on it, my program assistant does more on it. The main avenue of social media is Facebook because that's the main avenue our families are using. I may have some families on Twitter. I have a Twitter account, but don't use it much. To be honest, I had to get it for the Youth Development Institute. It is easier to stick to Facebook. As far as programming, I have our county 4-H page, I help manage our office one. I manage the Kentucky Country Ham page, ESP, District 4-H Teen Council, Shooting Sports page. We have an InterAgency Council Page. When we get into group pages, these are closed groups, we have 13 or 14 groups. It is a way to communicate with youth and their families. It is a private group, and shows the members and you can see how many members have seen the post. In addition to using a text REMIND group. We pay for that in our office. It is based on the number of telephone numbers you use. I post to the group page and also text it out on Remind. On Remind it tells you who received it and who didn't. I do not send any snail mail anymore. If you need to call a special meeting, I can do it quickly. It is a great avenue and it is a web based thing as well. I probably have 20-30 groups in there. I can even make special groups. It is easier to communicate with everyone that way. Whenever I get ready to send something out, I update the list, taking off anyone who is no longer doing the project or adding someone new.

Are you currently using social media for communications purposes in your program? If so, please describe.

Yes. I am going to use my Facebook pages in general. Every month I post a 4-H newsletter. It is just a pdf or scanned in as pictures. People can share them. General information goes out in that. We try to post daily of programs or opportunities available.

Are you currently using social media for marketing purposes in your program? If so, please describe.

Yes, we do Facebook ads for different events and activities. A lot of it is fundraisers that we will do adds for. We run them for a certain period of time. I have done some YouTube videos of kids talking about their projects. I would interview them about their project. We then shared them on Facebook. I have had some of the videos get 1200 likes. Posting pictures and comments about a project. We just did a virtual open house on our Extension Facebook page. We ran specific questions like, what was your favorite 4-H project. If they commented, they got their name put in for a

drawing. We had a variety of gift bags to give out 10 prizes per program area. For me, right now, I am looking at highlighting our 4-H financial supporters. I want to do a short video for individuals or groups that are supporters. That is a goal of mine. We just did our livestock and country hams auction online through the fair online program. We had 30 hams and 8 livestock that sold for almost \$36,000. Now we are trying to get the kids to do a video thanking their buyers and add on donors. I'm going to compile a video. Our office has a district YouTube page. Our district has a YouTube page. We can get the information out virtually.

Are you currently using social media for educational purposes in your program? If so, please describe.

We've done videos. I am placing an order for a nice fabric backdrop. We have done a lot of how to videos, especially when we did the grab and go bags. Right now my program assistant is doing cloverbuds virtually. She will either post a video or do a Live event. Our Snap-Ed does that as well. We have even gotten volunteers to videotape teaching programs. We had a volunteer do an art video. We post videos on YouTube and have a link, or sometimes Facebook lives. We try to connect it to YouTube so those who don't have Facebook can still see it. My Horse Club did a Facebook Live meeting prior to the pandemic. Now I am trying to get them on Zoom for their meetings.

Are there other ways you are currently using social media in your program? If so, please describe.

I don't think so.

How many hours per week do you estimate you spend on using social media for work purposes?

At least an hour a day, so 7-8 hours a week. On the weekend, I will post stuff and share stuff. On Sunday I had a District teen's Zoom meeting at 8:00. I was prepping for that.

Before the pandemic, it was maybe 5 hours a week. Not as much.



What, if any, barriers do you find in using social media for educational purposes in your program? Please list and explain.

Obviously, if they are not engaged on social media, that can be a disadvantage. And I think right now people are screened out, they are getting too much screen time in the last 6 months. It seems like our engagement was more in the beginning. I got online at 9:00 this morning, I am still online. That is the biggest challenge right now. Trying to keep groups engaged to where they want to come back and be more involved.

How can Kentucky 4-H help with the barriers listed?

In the beginning, when the pandemic just hit, we were relaying a lot on grab and go bags. If there was a way for us to connect with our public schools statewide, to where they are coming to us more as a resource. I know a lot of that you are going to have to do at a local level. The state is trying to help determine how to take virtual programming to the next step. Mark just told us today the 6 hour rule is going to change. I am doing an Ag Day program for 3<sup>rd</sup> graders. Teachers are only going to have so much screen time per day. They are only going to give us 15-20 minutes a day for our program. Try to get more interactive and engaging things. WE need more instruction and guidance on how we can do that, for somebody who has been in Extension for 30 years. And I am probably one of the more techy people in my office, and I have co-workers that are younger than more. I think you have to evolve the way society evolves. Trying to teach people Zoom meetings. Me and my FCS Agent are going to start opening our office to people to come in with their computer and we can show them how to get on Zoom or whatever questions they have. A lady didn't know how to cut and paste to get a link to work. We are going to do a weekly techy thing. That will help our clientele, not just in Extension programs. For me, I don't know how to navigate Google Classroom. I find a disconnect that all the public schools are suing Google Classroom, but the state tells us not to use it. We need more training, even though the university isn't backing it. If we are part of schools, we have to know how to navigate their stuff. You need interactive things that can be meshed into social media. When you get into Google, that's social media too. It's not the platform we use, but still we need to know how to do it, if you are going to engage these kids in educational programs.

How did you see your use of social media change during the Covid-19 global pandemic beginning in March 2020?

Yes, people were eager to keep kids involved and not just watching a video. If they could pick up a kit from us. They were wanting that information in the beginning, like a sponge. I feel for parents having to be a virtual educator. Our postage is going through the roof at the office. We are trying to promote e- newsletters. I have an idea of setting up listserves through UK. Is there a way for them to go to the website and sign themselves up for the listserve. I am trying to figure out, how do I get people's information that is correct and keep that listserve up and going. For Reality Store, I will send out tons of e-mails. I will get several that are sent back. I don't have time to go through and edit my list and pull those out so I don't get them again next year. There should be a way they can go to the web address and add themselves to list serves. Do we have the technology, yes. Do we have the knowledge as agents, no. In three months, our office has already spent over \$1000 in bulk mailings. We are on track to be over budget, so we are going to have to transition to focus on e-mails and text reminds. I can't tell you the last time I send an actual mail reminder. There has to be some responsibility on you, as the participant. We ended up getting a listserve through the university for our InterAgency Council. We do a monthly Zoom and we have had up to 60 people in a Zoom now. In a regular meeting before, if we had 30, that was good. We post through Facebook Live, you can do a Zoom through Facebook Live. We did that for the country ham results. It takes more than one person to manage it. I got photos from agents of winners. We did a Zoom, we had a PowerPoint, and ran it on Facebook Live. So you are meshing lots of technology. It's on YouTube now. There is an app you can get on your phone and it is like Canva for your phone. Sitting in the awards program at the national meeting, I took pictures and used the app to make it branded and look nice and then posted the all from my phone. Luckily, I had the knowledge and skills set to do it.

Is there anything else you would like to share with me related to these topics?

I know a lot of this gets into instructional design, and getting into our programs and how they can be more engaging for our clientele. We have been forced into redefining our roles in Extension. If you sit back and don't do anything, you are going to be out of a job. You have to be relevant and cater to our clientele. I remember when the pandemic first hit, I did Zoom family meetings. You should have seen me trying to teach my mother in law how to use Zoom virtually. It was good to see people and connect, even though it was virtually. This summer when we were showing people how to wash hams, I did a video on how do you wash your ham. Some people couldn't watch the video because of their internet.

We did our ham and livestock auction through the fair entry system. I probably spent 80 hours working on that. There were some issues with the system because it was a new feature. It worked out okay. We had a great sale, but it was challenging to get signed up as a bidder. The add-on feature was a great feature. It allowed people to add on a set amount to a certain child or multiple people.

9-28-2020

Interview with District 5 4-H Extension Agent

What social media tools are you currently using and how are you using them in your program?

We have a county Facebook page that our whole office shares. We have done it that way for years because we felt like it was a better way to advertise all of our programs to people. Our Facebook page is used heavily here. I use it for 4-H, mostly for marketing and recruitment. I don't use it for our current members as much. The audience that uses it is more of the community in general. Some of our current members see it. I don't know if you would consider Remind social media, but Remind is what I have been using for the past three years as the communication tool. If I need to get a message out quickly to our active members, that is what I use. It is a reminder for deadlines or anything that has a quick turnaround. Of course we have our website, that one is difficult for us to keep updated. We do try to put as much on there as we can, but more general information. I hadn't gotten into any of the other like Instagram, etc. Some of the other agents in the office might. Since COVID 19, I have used YouTube, I have not used it before this summer. This summer when we realized virtual programming was going to be the thing for a while, we started using YouTube. Also, Google Drive, just to share information. I am still learning how all of that works. I have been using the things I heard them say it was okay to use.

Are you currently using social media for communications purposes in your program? If so, please describe.

Remind is our number one for communicating with members, that are current, active, already enrolled. The Facebook page is general for the public, more for marketing.

Are you currently using social media for marketing purposes in your program? If so, please describe.

Facebook is currently used for marketing the program.

Are you currently using social media for educational purposes in your program? If so, please describe.

This summer, we did something called a Summer Discovery series. This was because of COVID-19. We did the brown bags, while school was still in session. But we wanted something different, 4-H focused. Each week in the summer starting June 1, we promoted the 7 areas of 4-H and also did a 4-H Camp focus for 9 weeks. It was a virtual way we could do that. Week 1 was agriculture. We talked about what is agriculture? What is offered in our program in that area? We talked about our clubs that fit into that core area. We started out doing Live videos on Facebook. Later on, I evaluated that, we didn't get a lot of viewers during that session. We did after the fact. So we started recording videos and posting them on Facebook or our website. For our county fair, we had our projects turned in, then we did a FB live of the results. We did a sign up in May for the Discovery Series. We had about 30 pre-register. We did keep the registration open the whole summer, but we didn't really get any more added on after the start. The views that we had on Facebook, I was a little bit blown away with how many we had. I'll have to go back and look, but some of them were in the 1500 views range. I would go back to look and see and I was shocked by how many people viewed them. This was a big learning curve for me. I hate being on video. Since I have been in the county, we have always done a television show. Every time it is my turn, I always hate it. I hate to be on camera. I do it two or three times a year. The 4-H assistant and I recorded videos together and we did do some minor editing. We have a Sony video recorder. I just used the program with the camcorder, whatever video editor came with it.

Are there other ways you are currently using social media in your program? If so, please describe.

I feel like a lot of these things that we are doing has been a direct result of COVID-19. I wasn't doing virtual programming before now. We have always had the Facebook program. Do you consider Zoom, social media? I guess it is. We are currently doing a virtual art program. We did a pre-registration and we have 10 kids that signed up for that. It is a 4 week program we do once a week. That will be my 6 hours of art for the year. Special interest programs like that have been hard to

conduct as a club. They are there for the content and aren't really interested in officers, etc. So this year, we decided to change some of the clubs to special interest programs, such as art and photography. They signed up and we made a supply box for them to pick up with all of their supplies for the program. There was no cost to them. We will do photography next. We have put a lot of our traditional program on hold for now. Since we are doing it different anyway, we are transitioning them into a special interest group instead of a club. I still feel like we can give them a 4-H experience. We are also doing 4-H in a Box. It is like a glorified brown bag program, but instead of them just coming to get a bag with one activity in it. We focused on health for September. It is also through Zoom. They pick up their box, then we meet on Zoom once a week. That has not been as popular as the virtual clubs. It had activities that we were going to do with them and also activities we encourage them to do on their own. Environmental education is next month, then November is science, engineering, and technology. The Zoom meetings are at 4:00.

How many hours per week do you estimate you spend on using social media for work purposes?

It is definitely different now. Before all of the non-traditional ways of doing 4-H because of COVID-19, I probably did a post every week or two, so I would say 1 hour, if that. Now, we are probably doing 4 hours per week, at least. The 4-H in a Box and the marketing and advertising for all of that. It is definitely more now than before.

What, if any, barriers do you find in using social media for educational purposes in your program? Please list and explain.

I would say the number one barrier is my lack of knowledge on how to use it. I have had to spend a lot of time figuring it out. I would never say I am a tech savvy person. We use it because it is a part of our life. My lack of knowledge. I had never set up my own Zoom call until all of this happened. Other barriers would be not everyone has the same access to internet or the same level of access. Some parents are kind of in the same boat as me on their lack of knowledge of how to use it. When I share with them our virtual programs, their interest kind of turns off. I don't know if they are overloaded with virtual programs, or if it is their lack of knowledge on how to do all of that. It could just be a virtual overload. I have felt with several calls we have gotten or even current members. Now that we have a schedule in place, many of

them don't want to do their virtual part. We are trying to do in person programs very gradually.

How can Kentucky 4-H help with the barriers listed?

It hate to say more training, because I feel like right now we are getting lots of training. I do feel like Kentucky 4-H is doing a good job of offering us options. Everybody is kind of at a different level with it. Maybe a quick resource list or tips on virtual programming. The state specialists have kind of taken their areas and are working on virtual clubs. They have helped take some of the burden off of us. Some of our clubs are meeting virtually, but there is no way I can offer everything. I have been able to share what the state specialists are doing.

How did you see your use of social media change during the Covid-19 global pandemic beginning in March 2020?

I think our view and our followers definitely increased on our Facebook page because we were putting information out there that people wanted to know. They started to get phone calls in the beginning when toilet paper was sold out and grocery stores shelves were going wiped out. We were getting a lot of calls for basic knowledge, cooking, etc. People that were in a panic mode called to ask questions. We were posted information and providing brown bags, we did get an increase because of that. We were trying to be relevant. Posts went from one a week to three or four a week. View and followers increased.

Is there anything else you would like to share with me related to these topics?

This must have been really meant to be for you because the timing on all of this. People are relying on technology for everything right now. It clicked with me on how perfect this topic is for right now. I have never really depended on technology to do programming like I am now. It shows me I wasn't prepared to do something our clientele was ready for all along. Because of the current situation we are in. Now I realize I had a whole population of people out there I couldn't have been reaching. We found people we had never done programming with before that were coming to pick up our brown bags. We were forced to move in a direction to virtual programming and reached new people because of it. A lot of the changes will continue because it made us realize we can reach a whole new population. Another thing I have learned is generational differences and how it impacts how you respond to things. I definitely think this, educational technology in general is very affected by

generational differences. Barriers vary by generation. It is interesting to think about the differences. I see it in my own office. Our agents and staff, there is a big difference.

9-20-2020

Interview with District 6 4-H Extension Agent

What social media tools are you currently using and how are you using them in your program?

We have a county Facebook page, so all of our program areas have combined to do posts, around 4 or more per day. That way the page stays more active. We found having separate pages for each program area made it difficult. That was something that UK had recommended having the whole county on one page. Here lately we have been sharing some of the virtual things that are coming through the state office. We will take some things that are going in our newsletter or announcements that are too late for a newsletter, we put it on the Facebook page. Things with a short turnaround. We started to try to do Mail Chimp so that our mailings also go out digitally, if you choose to receive them that way. We can take our newsletter and have it uploaded to there. It tracks who is actually clicking to open it. It also tracks when the links in the newsletter are clicked to link to our website or other information. That has been helpful to get feedback to see what links people are clicking on. The majority are still mailed. We sent out postcards to get preferences and generally update information. The majority still want the hard copies. I had some things I sent in the mail that took three plus weeks within Kentucky. We had been using a lot of the bulk mail. When UK decided to change that set up, that's why we tried to look at this alternative route, to try to save on some of the cost. One of our staff assistants researched it. We have also started doing bulk mail through the post office directly. We are trying out the Mail Chimp service. Once we get our enrollments in this year, we are hoping through the Mail Chimp and 4-H Online 2.0, we are going to try broadcast for our newsletters. There is an Instagram account that has been set up, but it is not active. I had a couple of teens that were taking care of that, but it has been dropped. We have a few clubs that have their own club Facebook group or page. I took some social media guidelines that UK had and tweaked those to meet the needs of our club leaders. When we do our training in the fall, we give the volunteers those guidelines. The pages are supposed to be set to private and only accept parents or kids that are in that club. Around 5 of our clubs have a Facebook page for their club.

Are you currently using social media for communications purposes in your program? If so, please describe.

Yes. Mostly promoting programs or upcoming events. The newsletters through Mail Chimp or the 4-H Online Broadcast that we are starting to do. When the state virtual clubs thing came out, I went through the few that we still had as active on 4-H online and we sent out that information through the broadcast on 4-H Online. There are issues with families completing a new enrollment form each year. We send a hard copy of the enrollment form with our newsletter for like three months in the fall. We do our mailings to the family of, instead of getting multiples for each child in 4-H. There is an option when they do the broadcast to select to mail to a family, so if you have multiple e-mails listed, it will only go to one.

Are you currently using social media for marketing purposes in your program? If so, please describe.

Not really. Within our office in general, we don't do a ton of marketing. There are some community events that we participate in. We do market or promote 4-H camp. In 2019 we used Event Bright for camp sign ups. Being able to promote that on Facebook, we have paid the Boost update thing to promote that more, so more people could see it.

Are you currently using social media for educational purposes in your program? If so, please describe.

We just promote the opportunities that we have. We did take and make kits in the summer. There were hands on educational materials in the kits, then we promoted those on social media. I have used Zoom to do a shooting sports leader meeting. We also recorded a full leader training to e-mail the link out for leaders to get their hour of education. All of our volunteer leaders are required to participate. When we were making face masks, we did record a how to video for cutting out and sewing the fabric ties when we were short on elastic. We posted that recording to Facebook and our website. We have several volunteers that are not a technologically advanced and it is really not our area of expertise either. The majority of our clubs have not been meeting.



Are there other ways you are currently using social media in your program? If so, please describe.

We are using social media for recognition opportunities. Such as recognition of our achievement winners when we didn't have teen conference over the summer. We are working on doing volunteer recognition during national 4-H week. We typically did an open house to recognize them, so we are going to do it virtual this year. It will probably be a PowerPoint of photos of the clubs and activities they have done over the year. We are going to recognize our volunteers on Facebook and then give them their awards at our November CEC and 4-H Council meeting.

How many hours per week do you estimate you spend on using social media for work purposes?

Sometimes I will post, but we also have a staff assistant who is in charge of that. I send information to her and she creates the posts. For me, hours per week, maybe 2 hours per week, forwarding things to the staff assistant to share. I imagine her time on social media is around 5 hours a week. When looking at making videos and editing, it would add a couple of hours, but it is not something we do weekly.

What, if any, barriers do you find in using social media for educational purposes in your program? Please list and explain.

The huge thing has been 4-H is hands on education and I can't provide that through a virtual setting. There are some things where you can deliver materials and then did a Zoom meeting or recording to lead them through the activity. In most cases it is really hard to do that. It is cheaper to buy a tub of cream cheese for an FCS thing than to buy 10 or 12 individual tubs of cream cheese. It is much more expensive than it would have been in the past to provide the materials.

I don't think it is as big of an issue now because most of the schools have provided hot spots or ways to access. But kids who live on my road probably don't have it. And reliability is also an issue.

It can sometimes be easier to present virtually because it is not 30 sets of eyeballs staring at your making mistakes. For some it is a comfortable setting, for others it is not helpful if they are just not used to it. It makes for a different atmosphere than the normal. I also wonder, doing something over a video, are the kids actually getting anything from it. Are they paying attention to it, or is it just kind of a waste of time. If it is recorded, you don't know who or how many people are seeing it. As a 4-H

program in our office we had talked about posting on YouTube, but my concern with that is we can't get a breakdown of the demographics. Quantitative numbers are a part of our job, but we can't get those from a video post. We talked about posting about a program and asking them to click a link or fill out a Qualtrics survey or e-mail us and we would send it individually. But even then, we might get a request for a program, I may not know that you have two kids watching it instead of one. We had a few that texted pictures or posted pictures on Facebook when they completed the brown bag activities.

How can Kentucky 4-H help with the barriers listed?

At the beginning I feel like the state office had put together a lot of materials for directly reaching kids. There were posts on Instagram and Facebook to do programming to directly reach kids. Starting this morning, they are having specialists training 4-H agents on how to use the curriculum we have in a virtual setting. I think that will help. But up until this point it hasn't been tailored to agents and helping them reach the kids. Also highlighting unique ways agents are doing programming is useful. The KY 4-H Agents professional page on Facebook has been helpful to know what other people are offering.

How did you see your use of social media change during the Covid-19 global pandemic beginning in March 2020?

I know we have had more interactions on Facebook posts then we had in the past. It could be as simple as people asking if we had any more kits left or where our office is located. I think we also received a few more Facebook messages with questions in general instead of calling our office when we were remote working.

Is there anything else you would like to share with me related to these topics?

I will say, I think our program areas within our office have been able to work well together on getting information out and changing to a lot of a social media format. With the facemasks in particular, we had homemakers and community members and 4-Hers making facemasks and donating materials. Using Facebook to let people know when and where materials were available. FCS and SNAP has had all those food demonstrations. They have been nice to know about. I don't know if they would have shared those if it wasn't a time when agents had more time and were looking for things to do.

9-18-2020

Interview with District 7 4-H Extension Agent

What social media tools are you currently using and how are you using them in your program?

We have the website that UK assigns, and we utilize that a little bit. The main driver where we have been moving is, two or three years ago, the 4-H program assistant had time to start a county 4-H Facebook page, and we have posted a few things there. The County Extension Service has had a page for several years. Occasionally posting things there, like here's the camp dates. I started this year just consciously trying to drive people to the Facebook page in regards to making posts. I used it during camp to post pictures. I did that the last couple of summers. Just to start getting people used to it. That actually became my primary source and still is right now my primary source. I created an Instagram Account and that was a process. I'll be honest, even though my husband is the STEM guy. There's only so much I can keep track of and that I want people to be able to use to get a hold of me. I'm trying to balance the professional and personal.

One of the things I did during lock down, starting mid-April, was doing a weekly video update. There were things that I needed to bring everyone up to speed. We started to see our traffic increase on Facebook in January/February. People were waiting to see when we would have our first meeting for shooting sports. In mid-March, after being in a meeting the week before at the health department, they said no as far as having our large initial shooting sports safety meeting. I was trying to keep currently members up to date in the process.

We had a couple of clubs that had Facebook groups and I would post things there. I also posted on my personal Facebook page. I do have a lot of 4-H alumni and 4-H families, as I get to know more people, or people that had little kids that are now grown up, what I share on our 4-H Facebook page, I also share on my personal page. We really started to see an increase. The Instagram posts I do always direct people to the Facebook page for details. For us it is easier to edit, than the website. I have found people are less likely to go to the webpage. I also use Remind and I kept the same ones that joined. We have pushed people to join Remind for updates. When I was doing Forever 4-H salutes, I would send it out on Remind, when it has been posted somewhere else.

I was on an e-Extension webinar yesterday about ADA compliance for online platforms. There was a lot I did not realize because we haven't necessarily been taught. The presenter noted, when you do a YouTube, even if you use the automatic, it will take you hours to correct the automatic scripting.

I was the area contact agent for communications contest this year. We were the host, so the base that the state ended up using was off of what we pulled together. We couldn't wait any longer. We had to get information from families to the county. Even county contests had to be delayed a little bit. That is the synopsis of how I have used social media. For District 7, some were faster than others at doing things. McCracken County actually uses a company to do their social media. Some other counties have Facebook, just one per the office. Some use Instagram. I kind of stumble upon some on there. There could be one or two of them doing something really brand new. For a lot of us, we have been doing the basics and just in the last few months trying to do more. We really started to see it increase.

Are you currently using social media for communications purposes in your program? If so, please describe.

Primarily through Facebook, from the details for sign ups, they have to get to the Qualtrics thru Facebook. Even on personal and individual pages, I do the intro and tell them to go to the specific page for further information. I have been trying to drive people to the same place. We have been doing some traditional mailings too, I do have some families that are not on Facebook. That way they have the information so they can access it too.

Are you currently using social media for marketing purposes in your program? If so, please describe.

A lot of it depends on how you define marketing. Mid-March, the 4-H Council ended up meeting with a mix of in-person and virtual, we actually cut our camp fee quite a bit because we were wanting to get people signed up for camp. Getting the word out about that, I got information to the schools for them to post on their sites. Many of them share on their sites when I post something. As far as campaign kinds of things, I have not done campaign style marketing. We do advertise about virtual clubs.

Are you currently using social media for educational purposes in your program? If so, please describe.

I did the weekly video updates up until the first of June. That was educational, giving them procedures, etc. Sharing offerings from the state through 4-H and also some from FCS. As far as doing Facebook Live, we have not done that. With our virtual clubs, we will be on Zoom. We plan to do some how-to videos that we will post on our website. As far as confidentiality, we are not doing Facebook Live. I have had at least one who said no to recording as far as permission. With my Forever 4-Hers, the parents got me the pictures to use. I understand where those parents are coming from because you never know the child's background. As I get some videos together, primarily I will use Zoom for virtual meetings.

Are there other ways you are currently using social media in your program? If so, please describe.

I will say I haven't really created events in Facebook overall, but I did find out yesterday if you want your flyers to be more reader read, it is best to create an event. It picks that up more so. That was something I did not know. And try not to use flyers with images and a lot of wording. For those that are visually impaired, it actually brings up the reader part more.

How many hours per week do you estimate you spend on using social media for work purposes?

If you asked me that question in May or June, I would have to seriously answer it was almost at least 30 hours of my week, if not more, just from the standpoint of, I'm also thinking of when I was editing videos. Now at least 20 hours per week. But it also depends on the definition because I'm in the process of processing registrations that individuals go to through social media. It just varies. I was on night duty the other night and I waited for state wide posts, but by the time it got posted on the 4-H side, I already had to leave the office. So, here I am doing night duty and I see the post and I go ahead and share. It wasn't during my normal time period, but I wanted to go ahead and get it out there. But I have really for my personal sanity, I have tried to make a conscious effort to not do work related social media during non-work hours. I have several parents that contact me through Messenger. Sometimes I give an answer back and sometimes I decide it can wait until Monday morning. In your survey, finding out social media use January/February and then looking at March through June would be an interesting.

What, if any, barriers do you find in using social media for educational purposes in your program? Please list and explain.

That personal connection that you would get otherwise. Working with youth, I have some that I already know are not signing up for virtual clubs, because they don't want to do anything online because of the virtual learning that had to happen this last spring. Some had an okay experience with it, some did not.

I know everybody brings up access to Internet and I totally agree, but I really feel for a lot of the same youth with an opportunity gap, I would run into the transportation issue as a barrier. For a lot of us the transportation barrier has been replaced with the Internet barrier. They are bored, they want to do stuff, but they are burnt out with online.

Being able to have that personal connection. How are we going to reach them if we can't go see them? For this year we have to do what we can do. Thankfully, we have schools that are getting information out. But I also know that those e-mails get buried. We are not the only ones. We had an ASAP meeting on Tuesday, someone from the health department usually goes in the schools and does programming too. We were talking about how we are going to do things now. I think they are so overwhelmed. It is not just Extension. We are all going to be trying to figure out how to reach the audiences. For a lot of us it is the confusion of one day you can use this platform and the next day you can't. While it has been frustrating, it has also given us the push to find ways to be innovative. Maybe we have gotten stuck in our ways and how do we branch out from that. I'm already thinking ahead, trying to get my shooting sports coaches to record video of what they normally present in person. When we get new members we can share that educational piece online. When they are able to be in person, we can proceed. We may be able to use this in coming years and maybe just add updates. Sometimes weather becomes an issue. I'm trying to think ahead, there are already some states who have been in that mindset. Some because of weather, other because of short staffing. While we have been thrown in the fire, it is forcing us to look at how we can do things differently.

How can Kentucky 4-H help with the barriers listed?

Moving forward on the statewide virtual clubs, I think is good. One of the things, I know everybody was overwhelmed with was e-mails. We have seen a change with how our leadership is directing us from the beginning to now to kind of, do what you can. One of the things that I felt that needed to happen was to utilize the contact agents. If you have a state committee, utilize us. And I realize sometimes they are

aware of what the changes are, but somedays I don't remember who all is here and not here as far as staff. I do feel it would have been beneficial. Isaac reached out to the health group. Not feeling like you have to do it all yourself. We need to get the county agent perspective. I am thankful that they are starting to look at how they utilize the teen leadership boards, but we need to get the balance of getting the county agent's perspective. I know things were changing rapidly. A lot of us wanted to help. We wanted to find ways we could be useful. I even heard that from some of our newest agents. When something rolled out, I would get calls or texts asking why didn't they ask us what would work? I also feel that having that strategic outlook on how we do handle different things and needing to have more of a concrete idea of what platforms we could use, and basic instruction. We also saw where FCS has the benefit, they rapidly did videos by specialists that look very professional. I really feel we need to make one person focusing on marketing a social media only.

How did you see your use of social media change during the Covid-19 global pandemic beginning in March 2020?

We weren't ones to jump into doing the kits. For some it was obvious they had done it before with snow days, etc. Based on Facebook, since March 16<sup>th</sup>, daily reach increased.

We went from 350 to 5500 by the end of June on Facebook.

I had to learn how to use the data insights. A district wide survey asked for activity in the last 10 days. Nothing gives you 10 days, it is 7 or 28. Reached and engagement, I know for Mark, that is one of the things he has been looking at. I had a couple of posts in June, the Adulting 101, it was even picked up by someone in Texas and she shared it. That ended up reaching a minority population that I would have never reached. Someone else ended up sharing it from her post. I think they ended up having like 900 participants or so.

Is there anything else you would like to share with me related to these topics?

Finding that silver lining that can be found in a pandemic, I do feel across the board this has affected how we communicate and where people go for information. I really see a lot of this staying in place. I can really foresee my 4-H Council deciding to go to every other meeting virtually. Even how we conduct some of our evening activities. How we get the word out. And I know 4-H isn't the only program area that is being affected. We have Homemakers who don't even own a computer, and

right now that is how their programming is being done. With Ag, a lot of the farmers have started using the technology. My dad was on Zoom calls and meetings constantly. There has quickly been a bridge between our youth and our older population of being about to use technology that they weren't comfortable with before. We have to figure out where it has its place. With Kentucky 4-H, for our volunteers, we need the very basics of how to use Zoom. We have to start with how to get to Zoom, how to do polls, how to do break out rooms. Even those basic things, not everybody knows.



## APPENDIX E

## Compiled Responses from Interviews

## Interview Responses for Question #1.

What social media tools are you currently using and how are you using them in your program?

District 1	Facebook, YouTube, Instagram
District 2	Facebook
District 3	Facebook, Parent Portal through School System
District 4	Instagram, Facebook, Twitter, Remind
District 5	Facebook, Remind, website, YouTube, Google Drive
District 6	Facebook, Mail Chimp, 4-H Online 2.0, Instagram
District 7	Website, Facebook, Instagram, Remind

## Interview Responses for Question #2.

Are you currently using social media for communications purposes in your program? If so, please describe.

District 1	On Facebook, comments and messages with questions asked that we respond to
District 2	Facebook groups used to message back and forth
District 3	Posting activities or events on Facebook
District 4	Posting daily to Facebook about programs and opportunities available. Posting newsletter to Facebook.
District 5	Remind is used for communicating with active members, Facebook is used for communication with general public.
District 6	Newsletters sent through Mail Chimp or the 4-H Online Broadcast
District 7	Posting on Facebook, directing to a Qualtrics link for sign ups

## Interview Responses for Question #3.

Are you currently using social media for marketing purposes in your program? If so, please describe.

District 1	Posting events and activities on Facebook
District 2	Posting flyers and promo videos on Facebook
District 3	Posting projects kits on Facebook, promoting community service projects

District 4	Purchasing Facebook advertising, YouTube videos of members talking about their projects, then shared on Facebook.
District 5	Facebook is used for marketing the 4-H program.
District 6	Facebook advertising to boost a post.
District 7	Schools sharing posts to their sites, Advertising virtual clubs.

#### Interview Responses for Question #4.

Are you currently using social media for educational purposes in your program? If so, please describe.

District 1	Not really, more for marketing and getting the word out.
District 2	Using Google Classroom to share virtual programming with teachers for a virtual safety day.
District 3	Educational kits to pick up weekly, promoted on Facebook. Cooking kits with virtual lesson, virtual fishing tournament, videos and packets made for school club educational lessons, to be posted on Google Classroom.
District 4	Educational kits to pick up, how to videos placed on YouTube with links posted on Facebook, volunteers recording lessons on video, Facebook Lives on lessons that are posted also for watching later, Club Meeting held on Facebook Live, Zoom club meetings.
District 5	Educational kits for pick up, Summer Discovery Series of virtual lessons on 7 areas of 4-H, used Facebook Live videos. Later switched to recording videos then posting to Facebook and website.
District 6	Educational kits to pick up, promoted on Facebook. Leader meeting through Zoom, Recorded leader training and e-mailed out link to video. How to videos made and link posted on Facebook and website.
District 7	Video updates posted on Facebook, sharing state level offerings, virtual club meetings on Zoom, How to videos posted on website.

#### Interview Responses for Question #5.

Are there other ways you are currently using social media in your program? If so, please describe.

District 1	Zoom for meetings, Remind
District 2	No
District 3	No
District 4	No
District 5	Zoom for meetings
District 6	For recognition of members and volunteers

District 7	Creating an event in Facebook
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## Interview Responses for Question #6

How many hours per week do you estimate you spend on using social media for work purposes?

District 1	2-3 hours per week
District 2	10 hours per week now, probably 1-2 before the pandemic
District 3	15-20 hours per week
District 4	7-8 hours per week, probably 5 hours a week before the pandemic
District 5	4 hours per week, probably 1 hour a week before the pandemic
District 6	2 hours per week, add two hours additional on the weeks we are making and editing videos
District 7	At least 20 hours per week

## Interview Responses for Question #7

What, if any, barriers do you find in using social media for educational purposes in your program? Please list and explain.

District 1	Personal barrier of not being a social media person, other barrier is the information may not be seen, struggle with knowing what platform to use to reach your intended audience, different demographics on different platforms.
District 2	Large number of grandparents raising children and the grandparents are not generally tech savvy.
District 3	Not everyone has social media, Personal barrier of preferring face-to-face, personally not as engaged on Zoom meetings as in person, not feeling comfortable on video and Zoom meetings. For 4-H competitions such as speeches and demonstrations, hard to judge fairly because one child may have better equipment or a parent who is a better videographer.
District 4	Not everyone is on social media, right now people are getting too much screen time, so they may not want to participate in a virtual program, difficult to keep groups engaged in a virtual format.
District 5	Lack of knowledge on how to use it, not everyone has the access to the internet or the same level of access, people are overloaded with virtual programs right now.
District 6	4-H is hands-on by nature, but it is very difficult to do hands-on virtually. Not all youth have reliable internet. Hard to get number of

	participants with virtual programs such as posted videos. It is also difficult to know if they are paying attention or engaged.
District 7	Do not have the personal connection with virtual that you have in person, some are so burnt out they do not want to do anything online, access to the Internet is still an issue, confusion over what platforms we are allowed to use and the changes.

#### Interview Responses for Question #8

How can Kentucky 4-H help with the barriers listed?

District 1	Kentucky 4-H is doing an excellent job providing options and guidance.
District 2	Unsure, but scary that everything is so technology driven right now and if you are not good with technology, you are already behind. Also, you may not be interested in doing something if you do not understand it.
District 3	Kentucky 4-H can't get Facebook or the internet in every home. As far as my personal barriers, I am just going to have to get myself more comfortable.
District 4	Would be nice to have a connection with public schools state wide, we need more guidance and instruction on how to make virtual programs more interactive and engaging, schools are limiting screen time per day, there is a disconnect when all public schools are using Google Classroom, but we are told not to use it.
District 5	Kentucky 4-H is doing a good job of offering us options, we do need a quick resource list or tips for virtual programming
District 6	Kentucky 4-H put together a lot of materials for directly reaching members, now specialists are training agents on how to use the curriculum in a virtual setting, highlighting unique ways agents are doing programming has been useful.
District 7	Statewide virtual clubs are useful, state should utilize contact agents and state committees more, should consult agents about programming as far as what will work well and what will not, we need more concrete idea of what platforms we can use and basic instruction on those, we need on person focusing on marketing and social media only at the state level.

#### Interview Responses for Question #9

How did you see your use of social media change during the Covid-19 global pandemic beginning in March, 2020?

District 1	No change
District 2	Drastically increased
District 3	Has increased to take up a lot of my time now
District 4	In the beginning, people wanted information like a sponge. Has drastically increased our postage costs, we are working to set up listserves and promoting e-newsletters.
District 5	Our views and followers definitely increased on our Facebook page. Posts went from one a week to three or four a week.
District 6	More interactions on Facebook posts than in the past, more Facebook messages with questions.
District 7	Facebook daily reach and followers increased.

### Interview Responses for Question #10

Is there anything else you would like to share with me related to these topics?

District 1	Over the next year or so, I hope social media does not become our primary way of getting information out. Face-to-face and hands-on is what 4-H is known for. I would like to see social media as an option, but not a primary use. You lose the connection with virtual.
District 2	No
District 3	I was not a real supporter of social media in the beginning, but I am anxious to see if it will help us increase our membership. We have gained a lot of new interest because of the educational kits we did weekly. I prefer face-to-face, but feel our office has done a really good job of still reaching youth during the pandemic.
District 4	A lot of it gets into instructional design and how we can make our programs more engaging for our clientele. We have been forced to redefine our roles in Extension. We have to be relevant and cater to our clientele. Changing programs to virtual format can be very time consuming.
District 5	Have never depended on technology to do programming like required now, shows I was not prepared to do something our clientele was ready for all along, there is a whole population of people out there I was not reaching, a lot of the changes will continue because of reaching new populations, generational differences impact how you respond to things, barriers vary by generation.
District 6	Program areas in the office have worked well together to get information out and to change to social media formats, office and community have worked together to help with local needs.
District 7	There is silver lining to be found in a pandemic, it has affected how we communicate and where people go for information, many of the

	changes will probably remain even after the pandemic such as 4-H Council deciding to meet virtually every other meeting, there were bridges built between youth and our older population as far as helping with use of technology.
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## APPENDIX F

Questionnaire template:

1. Which social media tools do you currently use in your program? (check all that are used)

Facebook, Instagram, Twitter, YouTube, Remind, Google Classroom or Google Drive, Zoom, Other (please list)

2. Please rank the top three social media tools you use the most with “1” being most used, “2” being second most used, etc.

Facebook, Instagram, Twitter, YouTube, Remind, Google Classroom or Google Drive, Zoom

Other (please list)

3. Please check all the ways you currently use social media in your profession.

Communications, Marketing, Education, Recognition, Recruitment, Fundraising, Professional Development, Other (please list)

4. Please rank the top three ways you use social media in your 4-H program with “1” being most used.

Communications, Marketing, Education, Recognition, Recruitment, Fundraising, Professional Development, Other (please list)

5. How many hours per week do you estimate that you are currently using social media for work purposes?

0-5 hours, 6-10 hours, 11-15 hours, 16-20 hours, Over 20 hours per week

6. Before March 2020, when the global pandemic required programs to be conducted virtually, how many hours per week to do you estimate you were spending using social media for work purposes?

0-5 hours, 6-10 hours, 11-15 hours, 16-20 hours, Over 20 hours per week

7. Please check any and all barriers you feel you face in using social media in your work.

Not everyone uses social media

Limited access to Internet or reliable Internet

Struggle with which platform to use for intended audience

Personal preference of face-to-face contact

Time consuming

Grandparents who may not be tech savvy raising their grandchildren

Not comfortable on video

Lack of knowledge of how to use

Difficult to engage audience in virtual format

Increased screen time required during pandemic making it less appealing

Other (please list)

8. Please rank the top 3 barriers you feel you face in using social media in your work. Rank "1" as the biggest barrier, "2" as the second biggest barrier, etc.

Not everyone uses social media

Limited access to Internet or reliable Internet

Struggle with which platform to use for intended audience

Personal preference of face-to-face contact

Time consuming

Grandparents who may not be tech savvy raising their grandchildren

Not comfortable on video

Lack of knowledge of how to use

Difficult to engage audience in virtual format

Increased screen time required during pandemic making it less appealing

Other (please list)

9. How did your use of social media change during the Covid-19 global pandemic beginning in March, 2020?

Drastically increased

Increased somewhat

Increased a little



Stayed the same  
Decreased a little  
Decreased somewhat  
Drastically decreased

10. Please check the statement or multiple statements that fit your current opinion of social media as it relates to 4-H programming.

Social media allows me to reach new audiences.  
Social media helps me recruit 4-H members or volunteers.  
Social media helps me fundraise for my program.  
Social media has allowed me to continue my program during the pandemic.  
I only use social media in my program because I feel like it is required.  
I do not see the benefit of using social media in my program.  
Social media loses the personal touch and engagement.  
I do not want social media to become our primary form of delivery.  
Other (please list)

Select Gender with which you identify: Male, Female, Other, Prefer Not to Say

Select Race: White, African American, American Indian or Alaskan Native, Asian,

Other

Select Ethnicity: Non-Hispanic, Hispanic

Age: under 25, 25-34, 35-44, 45-54, 55-64, 65 or over.

Years working as a 4-H Extension Agent: 0-5, 6-10, 11-15, 16-20, 21-25, 26-30,

Over 30 years

Extension Region: West, Central, East

Current Extension District: 1, 2, 3, 4, 5, 6, 7

## APPENDIX G

## Communication to Kentucky 4-H Extension Agents

As a part of her doctoral work through Morehead State University, LaRue County 4-H Agent and doctoral candidate, Misty Wilmoth, is conducting research on the use of social media by 4-H Extension Agents in Kentucky. She has interviewed one 4-H Agent per district and compiled the following questionnaire to study current social media use and barriers.

Participants in the study will not receive any financial compensation or rewards and there is no anticipated risks by participating in the study. However, the study will help to identify ways 4-H Agents in Kentucky are currently using social media and the barriers they are facing. Responses will remain anonymous and Agents are not asked to identify themselves by name or county.

All Kentucky 4-H Agents and Agents with 4-H responsibilities are invited and encouraged to participate in this short questionnaire. Please use the following link [https://uky.az1.qualtrics.com/jfe/form/SV\\_0SuRoZlqwfHXraB](https://uky.az1.qualtrics.com/jfe/form/SV_0SuRoZlqwfHXraB) to participate by Friday, November 13<sup>th</sup>.

If you have any questions about this research protocol, please contact Misty Wilmoth at 270-268-9277. Questions or concerns about your rights as a research participant may be directed to the IRB Office, 901 Ginger Hall, Morehead State University, Morehead, KY 40351; 606-783-9370.

Thank you for your time and completion of the survey.

## APPENDIX H

Questionnaire Raw Data:

<b>Respondent</b>	<b>Q1: Social Media Tools Used</b>	<b>Q2: Ranking Social Media (listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
1	Facebook, Twitter, YouTube, Remind, Other (please list)	
2	Zoom	Facebook, Instagram, Remind
3	Facebook, Instagram	Twitter, Instagram, Facebook
4	Facebook, YouTube, Remind, Zoom, Other (please list)	Facebook, Remind, YouTube
5	Facebook, YouTube, Remind, Zoom	Remind, Facebook, Zoom
6	Facebook, Zoom	Facebook, Zoom, Instagram
7	Facebook, Google Classroom or Google Drive, Zoom	Facebook, Google Classroom or Google Drive, Zoom
8	Facebook, Remind, Zoom	Facebook, Remind, Zoom
9	Facebook, Zoom	Facebook, Zoom, YouTube
10	Facebook, Instagram, Twitter, YouTube, Remind, Zoom	Facebook, Remind, Instagram
11	Facebook, Instagram, Remind, Zoom	Facebook, Zoom, Instagram
12	Facebook, Instagram, Zoom	Facebook, Instagram, Zoom
13	Facebook, Instagram, YouTube, Remind, Zoom	Facebook, Zoom, Instagram
14	Facebook, Instagram, YouTube, Remind, Zoom	Facebook, Zoom, Remind
15	Facebook, Instagram, Remind	Facebook, Instagram, Remind
16	Facebook, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Remind, Zoom
17	Facebook, YouTube, Google Classroom or Google Drive, Zoom	Facebook, Zoom, YouTube
18	Facebook, YouTube, Zoom	Facebook, YouTube, Zoom
19	Facebook, Instagram, Twitter, YouTube, Zoom	Facebook, Instagram, YouTube
20	Facebook, Instagram, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Instagram, YouTube
21	Facebook, YouTube, Google Drive or Google Classroom, Zoom	Facebook, YouTube, Google Classroom or Google Drive
22	Facebook, Remind	Facebook, Remind, Instagram
23	Facebook, YouTube, Google Classroom or Google Drive, Zoom	Facebook, YouTube, Zoom
24	Remind, Zoom, Other (please list)	Zoom, Remind, YouTube
25	Facebook, Instagram, Zoom	Facebook, Instagram Zoom
26	Facebook, YouTube, Zoom	Facebook, Zoom, YouTube
27	Facebook, Zoom	Facebook, Zoom, Remind
28	Facebook, YouTube, Remind, Zoom	Facebook, YouTube, Remind
29	Facebook, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Google Classroom or Google Drive, Zoom

<b>Respondent</b>	<b>Q1: Social Media Tools Used</b>	<b>Q2: Ranking Social Media (listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
30	Facebook, Instagram, Twitter, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Zoom, Instagram
31	Facebook, YouTube, Remind, Zoom	Facebook, YouTube, Zoom
32	Facebook, Zoom	Facebook, Zoom, Instagram
33	Facebook, Zoom	Facebook, Instagram, Zoom
34	Facebook, YouTube, Zoom	Facebook, YouTube, Zoom
35	Facebook, Instagram, YouTube, Google Classroom or Google Drive, Zoom	Facebook, Zoom, Google Classroom or Google Drive
36	Facebook, YouTube, Remind, Zoom	Facebook, Remind, Zoom
37	Facebook, Twitter, Zoom	Facebook, Zoom, Twitter
38	Facebook, Instagram, YouTube, Remind, Zoom	Facebook, Remind, Twitter
39	Facebook, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Remind, Instagram
40	Facebook, Remind, Zoom	Facebook, Zoom, Remind
41	Facebook, Instagram, Twitter, YouTube, Google Classroom or Google Drive, Zoom	Facebook, Instagram, Zoom
42	Facebook, Remind, Zoom	Facebook, Remind, Zoom
43	Facebook, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Remind, Zoom
44	Facebook, YouTube, Zoom	
45	Facebook, Instagram, Remind, Zoom	Facebook, Zoom, YouTube
46	Facebook, Instagram, Twitter, YouTube, Remind, Google Classroom or Google Drive, Zoom, Other (please list)	Facebook, Zoom, Instagram
47	Facebook, Zoom	Facebook, Twitter, Instagram
48	Facebook, YouTube, Google Classroom or Google Drive, Other (please list)	Zoom, Facebook, YouTube
49	Facebook, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Zoom, YouTube
50	Facebook, Instagram, YouTube, Zoom	Facebook, Zoom, Remind
51	Facebook, Instagram, Twitter, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Instagram, YouTube
52	Facebook, Instagram, YouTube, Google Classroom or Google Drive, Zoom	Facebook, Remind, YouTube
53	Facebook, YouTube, Remind, Zoom	Instagram, Facebook, Zoom
54	Facebook, Instagram, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Remind, Zoom
55	Facebook, Instagram, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Remind, Instagram
56	Facebook, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Instagram, Remind
57	Facebook, YouTube, Zoom	Facebook, Zoom, Google Classroom or Google Drive

<b>Respondent</b>	<b>Q1: Social Media Tools Used</b>	<b>Q2: Ranking Social Media (listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
58	Facebook, YouTube, Zoom	Facebook, Zoom, YouTube
59	Facebook, Instagram, YouTube, Remind, Zoom	Facebook, Zoom, YouTube
60	Facebook, Remind, Zoom	Remind, Facebook, Zoom
61	Facebook, Instagram, Twitter, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Remind, Zoom
62	Facebook, Instagram, Remind, Zoom	Facebook, Remind, Zoom
63	Facebook, Instagram, YouTube, Zoom	Facebook, Remind, Zoom
64	Facebook, Instagram, YouTube, Remind, Zoom	Facebook, Instagram, Zoom
65	Facebook, YouTube	Facebook, Remind, Instagram
66	Facebook, Remind, Google Classroom or Google Drive, Zoom	Facebook, Zoom, Other (please list)
67	Facebook, Instagram, Twitter, YouTube, Zoom	Remind, Instagram, Facebook
68	Facebook, Remind, Google Classroom or Google Drive, Zoom	Facebook, Twitter, Instagram
69	Facebook, Remind, Zoom	Facebook, Remind, Google Classroom or Google Drive
70	Facebook	Facebook, Remind, Zoom
71	Facebook, YouTube, Zoom	Facebook, Instagram, Twitter
72	Facebook, Remind, Zoom	Facebook, Instagram, Twitter
73	Facebook, Instagram, YouTube, Zoom	Facebook, Zoom, Remind
74	Facebook, Remind, Zoom	Facebook, Instagram, Zoom
75	Facebook, Google Classroom or Google Drive, Zoom	Facebook, Zoom, Remind
76	Facebook, YouTube, Zoom	Facebook, Zoom, Google Classroom or Google Drive
77	Facebook, Zoom	Facebook, Zoom, YouTube
78	Facebook, YouTube, Zoom	Facebook, Zoom YouTube
79	Facebook, Twitter, YouTube, Remind, Google Classroom or Google Drive, Zoom	Zoom, Facebook, Remind
80	Facebook, Remind, Zoom	Facebook, Zoom, Remind
81	Facebook, Instagram, YouTube, Zoom	Facebook, Instagram, Zoom
82	Facebook, Zoom	Facebook, Instagram, Zoom
83	Facebook, Remind, Zoom	Facebook, Instagram, Twitter
84	Facebook, Instagram	Facebook, Instagram, Zoom
85	Facebook, YouTube, Google Classroom or Google Drive, Zoom	Zoom, Facebook, Google Classroom or Google Drive
86	Facebook, YouTube, Zoom	Facebook, Zoom, YouTube
87	Facebook, Remind, Google Classroom or Google Drive, Zoom	Facebook, Zoom, YouTube

<b>Respondent</b>	<b>Q1: Social Media Tools Used</b>	<b>Q2: Ranking Social Media (listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
88	Facebook, Zoom, Other (please list)	Facebook, Zoom, Google Classroom or Google Drive
89	Facebook, YouTube, Remind, Zoom	Facebook, Remind, Zoom
90	Facebook, Instagram, YouTube, Zoom	Zoom, Instagram, Facebook
91	Facebook, Remind, Google Classroom or Google Drive, Zoom	Facebook, Remind, Zoom
92	Facebook, YouTube, Remind, Zoom	Facebook, Zoom, YouTube
93	Facebook, YouTube, Remind, Google Classroom or Google Drive, Zoom	Facebook, Zoom, YouTube

<b>Respondent</b>	<b>Q3: Ways Using Social Media</b>	<b>Q4: Ranking of Ways Using Social Media (listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
1		
2		
3	marketing, recognition	recruitment, communications, education
4	communications, marketing, education, recognition, recruitment, professional development	communications, education, other (please list)
5	communications, marketing, education, recognition, recruitment, fundraising	marketing, recruitment, communications
6	communications, marketing, education, recognition, recruitment, fundraising, professional development	communications, marketing, recognition
7	communications, marketing, education, recognition, recruitment	communications, marketing, education
8	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, education
9	communications, marketing, education, recognition, recruitment, professional development	communications, marketing recruitment
10	communications, marketing education, recognition, recruitment, fundraising, professional development	marketing recruitment, communications
11	communications, marketing, education, professional development	communications, marketing, education
12	communications, marketing, education, recognition, recruitment, fundraising	marketing, communications, education
13	communications, marketing, education, recognition, recruitment, professional development	communications, recruitment, marketing
14	communications, marketing, education, recognition, recruitment, fundraising	marketing, communications, education
15	communications, marketing, education, recognition, recruitment, fundraising	marketing, recruitment, recognition
16	communications, marketing, education, recognition, recruitment, fundraising, professional development	communications, marketing, professional development
17	communications, marketing, education, recognition, fundraising	recognition, communications, recruitment
18	communications, marketing, education, recognition, recruitment, professional development	professional development, communications, marketing
19	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, education
20	communications, marketing, education, recognition, recruitment, fundraising, professional development	marketing, communications, education

<b>Respondent</b>	<b>Q3: Ways Using Social Media</b>	<b>Q4: Ranking of Ways Using Social Media (listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
21	communications, marketing, education, recognition, recruitment	communications, marketing, education
22	communications, marketing, education, recognition, recruitment, fundraising	marketing, communications, education
23	communications, marketing, education, recognition, recruitment, fundraising, professional development	communications, marketing, education
24	education, professional development	education, communications, professional development
25	communications, marketing, education, recognition, recruitment	marketing, education, communications
26	communications, marketing, education, recognition, recruitment, fundraising	communications, education, recruitment
27	communications, marketing, education, recognition, recruitment, fundraising	recruitment, communications, marketing
28	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, education
29	communications, marketing, education, recognition, recruitment, fundraising	marketing, education, communications
30	communications, marketing, education, recognition, recruitment, fundraising, professional development	education, communications, marketing
31	Communications, marketing, education, recognition, recruitment, fundraising, professional development	marketing, education, communications
32	communications, marketing, education, recognition, recruitment, professional development	communications, recognition, professional development
33	communications, marketing, recruitment	communications, marketing, recognition
34	communications, marketing, education, recognition, recruitment, professional development	education, communications, marketing
35	communications, marketing, education, recognition, recruitment, fundraising, professional development	education, marketing, recruitment
36	communications, marketing, education, recruitment	communications, marketing, education
37	communications, marketing, education	marketing, education, communications
38	communications, marketing, education, recognition, recruitment, fundraising, professional development	recruitment, marketing, communications
39	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, recruitment



<b>Respondent</b>	<b>Q3: Ways Using Social Media</b>	<b>Q4: Ranking of Ways Using Social Media (listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
40	communications, marketing, education, recognition, recruitment, professional development	Communications, recognition, recruitment
41	communications, marketing, education, recognition, recruitment, fundraising, professional development	marketing, communications, education
42	communications, marketing, education, recognition, recruitment, fundraising	communications, education, marketing
43	communications, marketing, education, recognition, recruitment, fundraising	marketing, recruitment, communications
44	Communications, marketing, education, recognition, recruitment, fundraising, professional development	communications, marketing, education
45	communications, marketing, education, recruitment, professional development	education, marketing, communications
46	communications, marketing, education, recognition, recruitment, fundraising	marketing, communications, recruitment
47	communications, marketing, education, recognition, professional development	communications, marketing, professional development
48	communications, marketing, education, recognition, recruitment, fundraising, professional development	communications, marketing, recognition
49	communications, marketing, education, recognition, recruitment, fundraising, professional development	communications, marketing, recruitment
50	communications, marketing, education, recognition, recruitment, fundraising, professional development	marketing, education, recruitment
51	communications, marketing, education, recognition, recruitment, professional development	communications, marketing, recognition
52	communications, marketing, education, recognition, recruitment, professional development	communications, marketing, education
53	communications, marketing, recognition, recruitment, fundraising	communications, marketing, education
54	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, education
55	communications, marketing, education, recognition, recruitment	communications, marketing, education
56	communications, marketing, education, recognition, recruitment, professional development	communications, marketing, recognition
57	communications, marketing, recognition, recruitment, fundraising	communications, recognition, marketing

<b>Respondent</b>	<b>Q3: Ways Using Social Media</b>	<b>Q4: Ranking of Ways Using Social Media (listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
58	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, recognition
59	communications, marketing, education, recognition, recruitment, fundraising, professional development	marketing, recruitment, communications
60	communications, marketing, education, recognition, recruitment, fundraising, professional development	communications, marketing, recruitment
61	communications, marketing, education, recognition, recruitment	communications, marketing, education
62	communications, marketing, education, recognition, recruitment, fundraising, professional development	marketing, recognition, communications
63	communications, marketing, education, recruitment	marketing, communications, education
64	communications, marketing, education, recognition, recruitment	marketing, recruitment, communications
65	communications, marketing, recognition, recruitment, fundraising	communications, marketing, education
66	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, recognition
67	communications, marketing, education, recognition, recruitment, fundraising	communications, education, marketing
68	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, recognition
69	communications, marketing, education, professional development	marketing, communications, professional development
70	communications, marketing, education, recruitment	communications, marketing, education
71	communications, marketing, education, recognition, recruitment, fundraising, professional development	communications, marketing, education
72	communications, marketing, education, recognition, recruitment, professional development	marketing, recruitment, education
73	communications, marketing, education, recognition, fundraising	marketing, communications, fundraising
74	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, recognition
75	Communications, marketing, education, recognition, recruitment	Marketing, communications, recognition
76	communications, marketing, education, recruitment, professional development	education, communications, marketing
77	communications, marketing, education, recruitment, professional development	communications, education, recruitment

<b>Respondent</b>	<b>Q3: Ways Using Social Media</b>	<b>Q4: Ranking of Ways Using Social Media (listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
78	communications, marketing, education, recognition, recruitment, fundraising, professional development	marketing, communications, education
79	communications, marketing, education, recruitment, professional development	education, recruitment, communications
80	communications, marketing, education, recognition, recruitment, professional development	marketing, communications, recognition
81	communications, marketing, education, recognition, recruitment, other (please list)	marketing, recognition, communications
82	communications, marketing, recognition, fundraising	communications, marketing, recognition
83	communications, marketing, education, recognition, recruitment, professional development	communications, marketing, education
84	communications, marketing, education, recognition, recruitment, fundraising	communications, marketing, education
85	communications, marketing, education, recognition, recruitment, fundraising, professional development	professional development, education, recognition
86	communications, marketing, professional development	marketing, communications, professional development
87	communications, marketing, education, recognition, recruitment	marketing, recruitment, education
88	communications, marketing, education, recognition, recruitment, professional development	communications, marketing, education
89	communications, marketing, education, recognition, recruitment, fundraising	marketing, communications, education
90	communications, marketing, education, recruitment, fundraising, professional development	communications, marketing, professional development
91	communications, marketing, education, recognition, recruitment, fundraising, professional development	communications, education, marketing
92	communications, marketing, education, recognition, recruitment, fundraising, professional development	communication, marketing, education
93	communications, marketing, education, recognition, recruitment, fundraising	marketing, education, fundraising

<b>Respondent</b>	<b>Q4: Hours per week using social media for work</b>	<b>Q5: Hours per week before the pandemic</b>
1		
2		
3	11-15 hours	0-5 hours
4	6-10 hours	0-5 hours
5	16-20 hours	6-10 hours
6	11-15 hours	6-10 hours
7	16-20 hours	0-5 hours
8	6-10 hours	0-5 hours
9	0-5 hours	0-5 hours
10	0-5 hours	0-5 hours
11	11-15 hours	0-5 hours
12	11-15 hours	0-5 hours
13	0-5 hours	0-5 hours
14	11-15 hours	6-10 hours
15	11-15 hours	6-10 hours
16	6-10 hours	0-5 hours
17	0-5 hours	0-5 hours
18	6-10 hours	0-5 hours
19	6-10 hours	0-5 hours
20	6-10 hours	0-5 hours
21	16-20 hours	0-5 hours
22	0-5 hours	0-5 hours
23	6-10 hours	0-5 hours
24	0-5 hours	0-5 hours
25	0-5 hours	0-5 hours
26	11-15 hours	0-5 hours
27	0-5 hours	0-5 hours
28	11-15 hours	6-10 hours
29	0-5 hours	0-5 hours
30	0-5 hours	0-5 hours
31	6-10 hours	0-5 hours
32	0-5 hours	0-5 hours
33	16-20 hours	6-10 hours
34	6-10 hours	0-5 hours
35	11-15 hours	6-10 hours
36	11-15 hours	0-5 hours
37	6-10 hours	0-5 hours
38	6-10 hours	0-5 hours
39	16-20 hours	11-15 hours
40	11-15 hours	0-5 hours
41	11-15 hours	0-5 hours
42	0-5 hours	6-10 hours
43	11-15 hours	0-5 hours
44	6-10 hours	0-5 hours
45	Over 20 hours per week	0-5 hours
46	6-10 hours	0-5 hours
47	0-5 hours	0-5 hours

48	Over 20 hours per week	0-5 hours
49	0-5 hours	0-5 hours
50	11-15 hours	0-5 hours
51	6-10 hours	0-5 hours
52	0-5 hours	0-5 hours
53	0-5 hours	0-5 hours
54	11-15 hours	6-10 hours
55	11-15 hours	0-5 hours
56	Over 20 hours per week	6-10 hours
57	6-10 hours	0-5 hours
58	16-20 hours	11-15 hours
59	6-10 hours	0-5 hours
60	6-10 hours	0-5 hours
61	11-15 hours	6-10 hours
62	6-10 hours	6-10 hours
63	6-10 hours	0-5 hours
64	0-5 hours	0-5 hours
65	6-10 hours	0-5 hours
66	11-15 hours	6-10 hours
67	6-10 hours	0-5 hours
68	11-15 hours	6-10 hours
69	Over 20 hours per week	6-10 hours
70	0-5 hours	0-5 hours
71	Over 20 hours per week	6-10 hours
72	6-10 hours	11-15 hours
73	11-15 hours	0-5 hours
74	6-10 hours	0-5 hours
75	6-10 hours	0-5 hours
76	6-10 hours	0-5 hours
77	6-10 hours	0-5 hours
78	6-10 hours	0-5 hours
79	6-10 hours	0-5 hours
80	0-5 hours	0-5 hours
81	6-10 hours	0-5 hours
82	11-15 hours	0-5 hours
83	16-20 hours	0-5 hours
84	11-15 hours	6-10 hours
85	16-20 hours	0-5 hours
86	11-15 hours	0-5 hours
87	0-5 hours	0-5 hours
88	11-15 hours	0-5 hours
89	0-5 hours	0-5 hours
90	Over 20 hours per week	6-10 hours
91	16-20 hours	11-15 hours
92	11-15 hours	6-10 hours
93	6-10 hours	0-5 hours

Respondent	Q7: Barriers to Social Media Use	Q8: Ranking Barrier, (Listed in order of 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> )
1		
2		
3	Not everyone uses social media, struggle with which platform to use for intended audience, other (please list)	Time consuming, not everyone uses social media, personal preference of face-to-face contact
4	Not everyone uses social media, struggle with which platform to use for intended audience, personal preference of face-to-face contact, other (please list)	
5	Not everyone uses social media, limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren, increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable Internet, not everyone uses social media, grandparents who many not be tech savvy raising their grandchildren
6	Struggle with which platform to use for intended audience, personal preference of face-to-face contact, time consuming, not comfortable on video, difficult to engage audience in virtual format, increased screen time required during pandemic making it less appealing	Personal preference of face-to-face contact, struggle with which platform to use for intended audience, time consuming
7	Not everyone uses social media, limited access to Internet or reliable Internet, personal preference of face-to-face contact, time consuming, lack of knowledge of how to use, difficult to engage audience in virtual format	Limited access to Internet or reliable Internet, lack of knowledge of how to use, difficult to engage audience in virtual format
8	Not everyone uses social media, limited access to Internet or reliable Internet, time consuming, grandparents who may not be tech savvy raising their grandchildren, difficult to engage audience in virtual format	Limited access to Internet or reliable Internet, not everyone uses social media, struggle with which platform to use for intended audience
9	Not everyone uses social media, limited access to Internet or reliable Internet, struggle which platform to use for intended audience, personal preference of face-to-face contact, grandparents who may not be tech savvy raising their grandchildren, difficult to engage audience in virtual format, increased screen time required during pandemic making it less appealing	Personal preference of face-to-face contact, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience

<b>Respondent</b>	<b>Q7: Barriers to Social Media Use</b>	<b>Q8: Ranking Barrier, (Listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
10	Not everyone uses social media, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience, personal preference of face-to-face contact, time consuming, grandparents who may not be tech savvy raising their grandchildren, not comfortable on video, lack of knowledge of how to use, difficult to engage audience in virtual format, increased screen time required during pandemic making it less appealing	Not everyone uses social media, limited access to Internet or reliable Internet, personal preference of face-to-face contact
11	Not everyone uses social media, Limited access to Internet or reliable Internet, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, increased screen time during pandemic making it less appealing, difficult to engage audience in virtual format
12	Time consuming, Not comfortable on video, Lack of knowledge of how to use	Lack of knowledge of how to use, not comfortable on video, time consuming
13	Not everyone uses social media ,Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable Internet, struggle with which platform to use for intended audience, not everyone uses social media
14	Limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren	Limited access to Internet or reliable Internet, grandparents who may not be tech savvy raising their grandchildren, not everyone uses social media
15	Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable Internet, personal preference of face-to-face contact, increased screen time during the pandemic making it less appealing
16	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Grandparents who may not be tech savvy raising their grandchildren, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable Internet, not everyone uses social media, grandparents who may not be tech savvy raising their grandchildren

<b>Respondent</b>	<b>Q7: Barriers to Social Media Use</b>	<b>Q8: Ranking Barrier, (Listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
17	Not everyone uses social media, Limited access to Internet or reliable Internet, Time consuming, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable Internet, increased screen time during the pandemic making it less appealing, not everyone uses social media
18	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Difficult to engage audience in virtual format, limited access to Internet or reliable Internet, lack of knowledge of how to use
19	Not everyone uses social media ,Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren	Not everyone uses social media, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience
20	Not everyone uses social media, Limited access to Internet or reliable Internet	Limited access to Internet or reliable Internet, not everyone uses social media, grandparents who may not be tech savvy raising their grandchildren
21	Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable Internet, increased screen time during the pandemic making it less appealing, personal preference of face-to-face contact
22	Not everyone uses social media, Limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, limited access to Internet or reliable Internet, not everyone uses social media
23	Not everyone uses social media, Limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video	Limited access to Internet or reliable Internet, not everyone uses social media, grandparents who may not be tech savvy raising their grandchildren



<b>Respondent</b>	<b>Q7: Barriers to Social Media Use</b>	<b>Q8: Ranking Barrier, (Listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
24	Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Difficult to engage audience in virtual format	Personal preference of face-to-face contact, limited access to Internet or reliable Internet, difficult to engage audience in virtual format
25	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Difficult to engage audience in virtual format, increased screen time during pandemic making it less appealing, limited access to Internet or reliable Internet
26	Not everyone uses social media, Limited access to Internet or reliable Internet, Difficult to engage audience in virtual format	Limited access to Internet or reliable Internet, not everyone uses social media, difficult to engage audience in virtual format
27	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable internet, not everyone uses social media, grandparents who may not be tech savvy raising their grandchildren
28	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, increased screen time during the pandemic making it less appealing, limited access to Internet or reliable Internet
29	Not everyone uses social media, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Difficult to engage audience in virtual format, not everyone uses social media, increased screen time during pandemic making it less appealing
30	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Time consuming, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Struggle with which platform to use for intended audience, not everyone uses social media, personal preference of face-to-face contact

<b>Respondent</b>	<b>Q7: Barriers to Social Media Use</b>	<b>Q8: Ranking Barrier, (Listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
31	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, difficult to engage audience in virtual format, not everyone uses social media
32	Not everyone uses social media, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Personal preference of face-to-face contact, not everyone uses social media, not comfortable on video
33	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable Internet, increased screen time during pandemic making it less appealing, personal preference of face-to-face contact
34	Not everyone uses social media, Limited access to Internet or reliable Internet, Time consuming, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, increased screen time during the pandemic making it less appealing, limited access to Internet or reliable Internet
35	Not everyone uses social media, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, time consuming, not everyone uses social media
36	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Time consuming, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during pandemic making it less appealing, not everyone uses social media, time consuming
37	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format	Lack of knowledge of how to use, personal preference of face-to-face contact, not comfortable on video

<b>Respondent</b>	<b>Q7: Barriers to Social Media Use</b>	<b>Q8: Ranking Barrier, (Listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
38	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during pandemic making it less appealing, limited access to Internet or reliable Internet, lack of knowledge of how to use
39	Not everyone uses social media, Limited access to Internet or reliable Internet, Not comfortable on video, Increased screen time required during pandemic making it less appealing, Other (please list)	Time consuming, not comfortable on video, personal preference of face-to-face contact
40	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Lack of knowledge of how to use, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, limited access to Internet or reliable Internet, personal preference of face-to-face contact
41	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, limited access to Internet or reliable Internet, lack of knowledge of how to use
42	Not everyone uses social media, Personal preference of face-to-face contact, Not comfortable on video, Lack of knowledge of how to use	Not everyone uses social media, lack of knowledge of how to use, not comfortable on video
43	Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Not comfortable on video, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, difficult to engage audience in virtual format, not comfortable on video
44	Not everyone uses social media ,Limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, difficult to engage audience in virtual format, increased screen time during the pandemic making it less appealing
45	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, not everyone uses social media, time consuming

Respondent	Q7: Barriers to Social Media Use	Q8: Ranking Barrier, (Listed in order of 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> )
46	Not everyone uses social media, Struggle with which platform to use for intended audience, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing, Other (please list)	Not everyone uses social media, struggle with which platform to use for intended audience, grandparents who many not be tech savvy raising their grandchildren
47	Not everyone uses social media, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video	Personal preference of face-to-face contact, not comfortable on video, not everyone uses social media
48	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Time consuming, not everyone uses social media, increased screen time during the pandemic making it less appealing
49	Not everyone uses social media, Time consuming ,Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Time consuming, not everyone uses social media, difficult to engage audience in virtual format
50	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, struggle with which platform to use for intended audience, increased screen time during the pandemic making it less appealing
51	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, limited access to Internet or reliable Internet, lack of knowledge of how to use
52	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Lack of knowledge of how to use, Increased screen time required during pandemic making it less appealing	Lack of knowledge of how to use, time consuming, personal preference of face-to-face contact
53	Not everyone uses social media, Limited access to Internet or reliable Internet, Lack of knowledge of how to use, Difficult to engage audience in virtual format	Not everyone uses social media, limited access to Internet or reliable Internet, personal preference of face-to-face contact

<b>Respondent</b>	<b>Q7: Barriers to Social Media Use</b>	<b>Q8: Ranking Barrier, (Listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
54	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience
55	Not everyone uses social media, Limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable Internet, not everyone uses social media, lack of knowledge of how to use
56	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, personal preference of face-to-face contact, limited access to Internet or reliable Internet
57	Not everyone uses social media, Grandparents who may not be tech savvy raising their grandchildren, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, difficult to engage audience in virtual format, increased screen time during the pandemic making it less appealing
58	Not everyone uses social media, Struggle with which platform to use for intended audience, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, increased screen time during the pandemic making it less appealing, personal preference of face-to-face contact
59	Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, personal preference of face-to-face contact, difficult to engage audience in virtual format
60	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, not everyone uses social media, limited access to the Internet or reliable Internet
61	Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Grandparents who may not be tech savvy raising their grandchildren, increased screen time during the pandemic making it less appealing, difficult to engage audience in virtual format

Respondent	Q7: Barriers to Social Media Use	Q8: Ranking Barrier, (Listed in order of 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> )
62	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, limited access to Internet or reliable Internet, increased screen time during the pandemic making it less appealing
63	Not everyone uses social media, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, not everyone uses social media, difficult to engage audience in virtual format
64	Not everyone uses social media ,Limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren, Lack of knowledge of how to use, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable internet, not everyone uses social media, grandparents who may not be tech savvy raising their grandchildren
65	Not everyone uses social media ,Limited access to Internet or reliable Internet	Not everyone uses social media, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience
66	Struggle with which platform to use for intended audience, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Struggle with which platform to use for intended audience, difficult to engage audience in virtual format, increased screen time during the pandemic making it less appealing
67	Not everyone uses social media, Limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Struggle with which platform to use for intended audience, not everyone uses social media, limited access to Internet ore reliable Internet
68	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, not everyone uses social media, limited access to the Internet or reliable Internet
69	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Time consuming, Not comfortable on video, Difficult to engage audience in virtual format	Not everyone uses social media, personal preference of face-to-face contact, not comfortable on video

<b>Respondent</b>	<b>Q7: Barriers to Social Media Use</b>	<b>Q8: Ranking Barrier, (Listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
70	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren	Not everyone uses social media, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience
71	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience
72	Not comfortable on video, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, difficult to engage audience in virtual format, limited access to Internet or reliable Internet
73	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Limited access to Internet or reliable Internet, difficult to engage audience in virtual format, increased screen time during pandemic making it less appealing
74	Not everyone uses social media, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during the pandemic making it less appealing, difficult to engage audience in virtual format, not everyone uses social media
75	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Difficult to engage audience in virtual format	Limited access to Internet or reliable Internet, not everyone uses social media, personal preference of face-to-face contact
76	Not everyone uses social media, Limited access to Internet or reliable Internet	Not everyone uses social media, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience

<b>Respondent</b>	<b>Q7: Barriers to Social Media Use</b>	<b>Q8: Ranking Barrier, (Listed in order of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)</b>
77	Not everyone uses social media, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, grandparents who many not be tech savvy raising their grandchildren, difficult to engage audience in virtual format
78	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Increased screen time required during pandemic making it less appealing	Increased screen time during pandemic making it less appealing, not everyone uses social media, limited access to Internet or reliable Internet
79	Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during pandemic making it less appealing, difficult to engage audience in virtual format, lack of knowledge of how to use
80	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during pandemic making it less appealing, limited access to Internet or reliable Internet, not everyone uses social media
81	Not everyone uses social media, Grandparents who may not be tech savvy raising their grandchildren, Other (please list)	Not everyone uses social media, grandparents who may not be tech savvy raising their grandchildren, limited access to Internet or reliable Internet
82	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Time consuming, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, struggle with which platform to use for intended audience, not comfortable on video
83	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Not comfortable on video, Difficult to engage audience in virtual format	Not everyone uses social media, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience



Respondent	Q7: Barriers to Social Media Use	Q8: Ranking Barrier, (Listed in order of 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> )
84	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, limited access to Internet or reliable Internet, struggle with which platform to use for intended audience
85	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, increased screen time during the pandemic making it less appealing, difficult to engage audience in virtual format
86	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use	Personal preference for face-to-face contact, lack of knowledge of how to use, not comfortable on video
87	Not everyone uses social media, Limited access to Internet or reliable Internet, Struggle with which platform to use for intended audience, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Difficult to engage audience in virtual format, increased screen time during pandemic making it less appealing, not comfortable on video
88	Not everyone uses social media, Time consuming, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, increased screen time during pandemic making it less appealing, time consuming
89	Not everyone uses social media, Limited access to Internet or reliable Internet, Personal preference of face-to-face contact, Grandparents who may not be tech savvy raising their grandchildren, Not comfortable on video, Lack of knowledge of how to use, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, limited access to Internet or reliable Internet, grandparents who may not be tech savvy raising their grandchildren
90	Limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren, Increased screen time required during pandemic making it less appealing	Increased screen time during pandemic making it less appealing, limited access to Internet or reliable Internet, grandparents who may not be tech savvy raising their grandchildren
91	Increased screen time required during pandemic making it less appealing	

Respondent	Q7: Barriers to Social Media Use	Q8: Ranking Barrier, (Listed in order of 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> )
92	Not everyone uses social media, Limited access to Internet or reliable Internet, Grandparents who may not be tech savvy raising their grandchildren, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Increased screen time during pandemic making it less appealing, difficult to engage audience in virtual format, not everyone uses social media
93	Not everyone uses social media, Difficult to engage audience in virtual format, Increased screen time required during pandemic making it less appealing	Not everyone uses social media, difficult to engage audience in virtual format, not comfortable on video

Respondent	Q9: Change in Social Media Use	Q10: Opinions of Social Media
1		
2		
3	Drastically increased	Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic.
4	Drastically increased	Social media has allowed me to continue my program during the pandemic, I only use social media in my program because I feel it is required.
5	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
6	Increased somewhat	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
7	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
8	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic.
9	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
10	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic.
11	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.

Respondent	Q9: Change in Social Media Use	Q10: Opinions of Social Media
12	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
13	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
14	Increased a little	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
15	Increased somewhat	Social media allows me to reach new audiences, Social media helps me fundraise for my program.
16	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
17	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic.
18	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
19	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
20	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic.
21	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
22	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I only use social media in my program because I feel it is required.

Respondent	Q9: Change in Social Media Use	Q10: Opinions of Social Media
23	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic.
24	Increased somewhat	Social media allows me to reach new audiences, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
25	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I only use social media in my program because I feel it is required, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
26	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
27	Increased somewhat	Social media has allowed me to continue my program during the pandemic.
28	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
29	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I only use social media in my program because I feel it is required, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
30	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, I only use social media in my program because I feel it is required, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
31	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
32	Drastically increased	I only use social media in my program because I feel it is required, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.

Respondent	Q9: Change in Social Media Use	Q10: Opinions of Social Media
33	Increased a little	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
34	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
35	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
36	Increased somewhat	Social media helps me recruit 4-H members or volunteers, Social media loses the personal touch and engagement.
37	Drastically increased	I only use social media in my program because I feel it is required, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
38	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
39	Increased a little	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
40	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I only use social media in my program because I feel it is required, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
41	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement.
42	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement.

Respondent	Q9: Change in Social Media Use	Q10: Opinions of Social Media
43	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic.
44	Increased somewhat	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
45	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
46	Drastically increased	Social media allows me to reach new audiences, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery, Other (please list)
47	Increased somewhat	Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
48	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement.
49	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
50	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
51	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
52	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I only use social media in my program because I feel it is required, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
53	Increased a little	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement.

Respondent	Q9: Change in Social Media Use	Q10: Opinions of Social Media
54	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
55	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
56	Drastically increased	Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
57	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic.
58	Increased somewhat	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
59	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement.
60	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
61	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
62	Increased a little	Social media helps me recruit 4-H members or volunteers.
63	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
64	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
65	Increased somewhat	Social media allows me to reach new audiences.



Respondent	Q9: Change in Social Media Use	Q10: Opinions of Social Media
66	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
67	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I only use social media in my program because I feel it is required, Social media loses the personal touch and engagement.
68	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
69	Increased somewhat	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
70	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
71	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
72	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement.
73	Drastically increased	Social media helps me fundraise for my program, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
74	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
75	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program.
76	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic.

Respondent	Q9: Change in Social Media Use	Q10: Opinions of Social Media
77	Increased somewhat	Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
78	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
79	Drastically increased	Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
80	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, I do not want social media to become our primary form of delivery.
81	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.
82	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic.
83	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement.
84	Increased somewhat	Social media has allowed me to continue my program during the pandemic.
85	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement.
86	Drastically increased	Social media allows me to reach new audiences, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
87	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, I only use social media in my program because I feel it is required, I do not want social media to become our primary form of delivery.
88	Drastically increased	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic.

Respondent	Q9: Change in Social Media Use	Q10: Opinions of Social Media
89	Increased somewhat	Social media allows me to reach new audiences, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
90	Drastically increased	Social media allows me to reach new audiences, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic.
91		
92	Increased somewhat	Social media allows me to reach new audiences, Social media helps me recruit 4-H members or volunteers, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement, I do not want social media to become our primary form of delivery.
93	Increased somewhat	Social media allows me to reach new audiences, Social media helps me fundraise for my program, Social media has allowed me to continue my program during the pandemic, Social media loses the personal touch and engagement.

<b>Respondent</b>	<b>Q11: Gender</b>	<b>Q12: Race</b>	<b>Q13: Ethnicity</b>	<b>Q14: Age</b>	<b>Q15: Years Worked</b>	<b>Q16: Region</b>	<b>Q17: District</b>
1							
2							
3	Female	White	Non-Hispanic	35-44	21-25	West	District 5
4	Female	White	Non-Hispanic	35-44	16-20	Central	District 7
5	Female	White	Non-Hispanic	25-34	6-10	West	District 5
6	Female	White	Non-Hispanic	55-64	26-30	Central	District 3
7	Male	White	Non-Hispanic	55-64	26-30	West	District 6
8	Female	White	Non-Hispanic	25-34	11-15	East	District 1
9	Female	White	Non-Hispanic	65+	30+	East	District 1
10	Male	White	Non-Hispanic	45-54	21-25	East	District 5
11	Female	White	Non-Hispanic	Under 25	0-5	Central	District 4
12	Female	White	Non-Hispanic	55-64	16-20	West	District 7
13	Female	White	Non-Hispanic	55-64	21-25	Central	District 3
14	Female	White	Non-Hispanic	35-44	11-15	Central	District 4
15	Female	White	Non-Hispanic	Under 25	0-5	East	District 1
16	Female	White	Non-Hispanic	35-44	11-15	Central	District 5
17	Female	White	Non-Hispanic	45-54	30+	West	District 6
18	Female	White	Non-Hispanic	55-64	0-5	East	District 1
19	Male	White	Non-Hispanic	45-54	16-20	Central	District 4
20	Female	White	Non-Hispanic	25-34	6-10	West	District 7
21	Male	White	Non-Hispanic	45-54	6-10	East	District 5
22	Female	White	Non-Hispanic	45-54	21-25	West	District 6
23	Female	White	Non-Hispanic	25-34	0-5	East	District 2
24	Female	White	Non-Hispanic	65+	21-25	West	District 5

25	Male	Black or African American	Non-Hispanic	35-44	0-5	Central	District 3
26	Female	White	Non-Hispanic	35-44	11-15	West	District 6
27	Female	White	Non-Hispanic	45-54	11-15	Central	District 6
28	Female	White	Non-Hispanic	45-54	21-25	West	District 5
29	Female	White	Non-Hispanic	45-54	21-25	Central	District 5
30	Male	Black or African American	Non-Hispanic	45-54	21-25	Central	District 4
31	Female	White	Non-Hispanic	Under 25	0-5	Central	District 5
32	Female	White	Non-Hispanic	65+	21-25	Central	District 3
33	Male	White	Non-Hispanic	Under 25	0-5	Central	District 3
34	Female	White	Non-Hispanic	35-44	0-5	East	District 5
35	Female	White	Non-Hispanic	35-44	0-5	East	District 2
36	Female	White	Non-Hispanic	35-44	21-25	East	District 5
37	Male	White	Non-Hispanic	55-64	30+	East	District 1
38	Female	White	Non-Hispanic	25-34	0-5	East	District 5
39	Male	White	Non-Hispanic	35-44	11-15	East	District 5
40	Male	White	Non-Hispanic	55-64	30+	Central	District 3
41	Female	White	Non-Hispanic	45-54	16-20	West	District 6
42	Female	White	Non-Hispanic	35-44	16-20	East	District 1
43	Female	White	Non-Hispanic	25-34	6-10	West	District 7
44	Female	White	Non-Hispanic	35-44	11-15	West	District 5
45	Female	White	Non-Hispanic	45-54	21-25	West	District 7
46	Male	White	Non-Hispanic	35-44	11-15	Central	District 4
47	Female	White	Non-Hispanic	65+	16-20	Central	District 3
48	Female	White	Non-Hispanic	35-44	11-15	Central	District 3

49	Female	White	Non-Hispanic	35-44	11-15	West	District 5
50	Female	White	Non-Hispanic	25-34	0-5	East	District 2
51	Female	White	Non-Hispanic	45-54	21-25	Central	District 3
52	Female	White	Non-Hispanic	45-54	21-25	West	District 6
53	Male	White	Non-Hispanic	25-34	0-5	West	District 7
54	Female	White	Non-Hispanic	45-54	26-30	Central	District 4
55	Female	White	Non-Hispanic	55-64	30+	Central	District 4
56	Female	White	Non-Hispanic	25-34	6-10	Central	District 4
57	Female	White	Non-Hispanic	35-44	21-25	West	District 6
58	Female	White	Non-Hispanic	55-64	26-30	Central	District 3
59	Female	White	Non-Hispanic	25-34	0-5	West	District 6
60	Female	White	Non-Hispanic	25-34	0-5	West	District 7
61	Female	White	Non-Hispanic	25-34	0-5	East	District 2
62	Female	White	Non-Hispanic	45-54	26-30	West	District 7
63	Female	White	Non-Hispanic	25-34	0-5	Central	District 4
64	Female	White	Non-Hispanic	35-44	6-10	East	District 5
65	Female	White	Non-Hispanic	35-44	11-15	East	District 1
66	Female	White	Non-Hispanic	45-54	6-10	West	District 7
67	Female	White	Non-Hispanic	45-54	30+	Central	District 3
68	Female	White	Non-Hispanic	25-34	0-5	Central	District 5
69	Female	Black or African American	Non-Hispanic	35-44	16-20	East	District 1
70	Female	White	Non-Hispanic	35-44	11-15	West	District 7
71	Female	White	Non-Hispanic	45-54	16-20	East	District 1
72	Male	White	Non-Hispanic	25-34	0-5	Central	District 3

73	Female	White	Non-Hispanic	45-54	16-20	Central	District 4
74	Female	White	Non-Hispanic	25-34	0-5	Central	District 4
75	Female	White	Non-Hispanic	25-34	6-10	East	District 2
76	Female	White	Non-Hispanic	35-44	11-15	Central	District 3
77	Female	White	Non-Hispanic	55-64	21-25	East	District 1
78	Male	White	Non-Hispanic	25-34	0-5	Central	District 4
79	Female	White	Non-Hispanic	55-64	30+	Central	District 3
80	Female	White	Non-Hispanic	Under 25	0-5	East	District 1
81	Female	White	Non-Hispanic	55-64	30+	West	District 7
82	Female	White	Non-Hispanic	35-44	16-20	East	District 1
83	Female	White	Non-Hispanic	55-64	26-30	West	District 7
84	Female	White	Non-Hispanic	25-34	0-5	West	District 6
85							
86	Female	White	Non-Hispanic	55-64	16-20	Central	District 3
87	Female	Other	Non-Hispanic	35-44	11-15	West	District 7
88	Female	White	Non-Hispanic	35-44	11-15	East	District 2
89	Female	White	Non-Hispanic	35-44	16-20	Central	District 5
90	Male	White	Non-Hispanic	25-34			
91							
92	Female	White	Non-Hispanic	25-34	0-5	East	District 1
93	Female	White	Non-Hispanic	35-44	16-20	West	District 6

## APPENDIX I

## ANOVA of Social Media Tools Used

ANOVA: Single  
Factor

## SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Facebook	92	110	1.195652	0.554706
Instagram	92	369	4.01087	2.692188
Twitter	92	504	5.478261	1.922599
YouTube	92	384	4.173913	1.397993
Remind	92	399	4.336957	3.632465
Google	92	526	5.717391	1.985189
Zoom	92	299	3.25	2.980769

## ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	1260.552795	6	210.0921	96.97044	2.07E-86	2.112795
Within Groups	1380.097826	637	2.166559			
Total	2640.650621	643				



## APPENDIX J

## ANOVA of Barriers

SUMMARY				
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
not everyone uses	89	227	2.550561798	3.318437181
limited access	89	290	3.258426966	3.807456588
struggle with which platform	89	463	5.202247191	4.344994893
preference of face-to-face	89	419	4.707865169	3.550051073
time consuming	89	540	6.06741573	4.109039837
grandparents raising grands	89	577	6.483146067	4.229826353
not comfortable on video	89	653	7.337078652	4.77145046
lack of knowledge	89	677	7.606741573	6.809499489
difficult to engage	89	560	6.292134831	9.663687436
increased screen time	89	489	5.494382022	14.38917263

## ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-Value</i>	<i>F crit</i>
Between Groups	2151.061798	9	239.0068664	40.51402218	1.23485E-60	1.890502659
Within Groups	5191.438202	880	5.899361593			
Total	7342.5	889				

## APPENDIX K

## t-Tests for Social Media Tools

## t-Test: Paired Two Sample for Means

	<i>Facebook</i>	<i>Zoom</i>
Mean	1.195652	3.25
Variance	0.554706	2.980769
Observations	92	92
Pearson Correlation	-0.08973	
Hypothesized Mean Difference	0	
df	91	
t Stat	-10.1534	
P(T<=t) one-tail	6.1E-17	
t Critical one-tail	1.661771	
P(T<=t) two-tail	1.22E-16	
t Critical two-tail	1.986377	

## t-Test: Paired Two Sample for Means

	<i>Zoom</i>	<i>Instagram</i>
Mean	3.25	4.01087
Variance	2.980769	2.692188
Observations	92	92
Pearson Correlation	-0.4432	
Hypothesized Mean Difference	0	
df	91	
t Stat	-2.55107	
P(T<=t) one-tail	0.006204	
t Critical one-tail	1.661771	
P(T<=t) two-tail	0.012408	
t Critical two-tail	1.986377	

## t-Test: Paired Two Sample for Means

	<i>Instagram</i>	<i>YouTube</i>
Mean	4.010869565	4.173913
Variance	2.692188247	1.397993
Observations	92	92
	-	
Pearson Correlation	0.187910069	
Hypothesized Mean Difference	0	
df	91	
	-	
t Stat	0.712371163	
P(T<=t) one-tail	0.239028751	
t Critical one-tail	1.661771155	
P(T<=t) two-tail	0.478057501	
t Critical two-tail	1.986377154	

## t-Test: Paired Two Sample for Means

	<i>YouTube</i>	<i>Remind</i>
Mean	4.173913	4.336957
Variance	1.397993	3.632465
Observations	92	92
Pearson Correlation	-0.31888	
Hypothesized Mean Difference	0	
df	91	
t Stat	-0.61493	
P(T<=t) one-tail	0.270068	
t Critical one-tail	1.661771	
P(T<=t) two-tail	0.540136	
t Critical two-tail	1.986377	

## APPENDIX L

## t-Tests (Paired Two Sample for Means) for Barriers to Social Media Use

	<i>Variable1</i>	<i>Variable2</i>
Mean	2.550562	3.258427
Variance	3.318437	3.807457
Observations	89	89
Pearson Correlation	0.087395	
Hypothesized Mean Difference	0	
df	88	
t Stat	-2.6184	
P(T<=t) one-tail	0.005201	
t Critical one-tail	1.662354	
P(T<=t) two-tail	0.010401	
t Critical two-tail	1.98729	

variable 1 = not everyone uses social media

variable 2 = access to Internet or reliability

## t-Test: Paired Two Sample for Means

	<i>Variable1</i>	<i>Variable2</i>
Mean	3.258427	4.707865
Variance	3.807457	3.550051
Observations	89	89
Pearson Correlation	-0.09978	
Hypothesized Mean Difference	0	
df	88	
t Stat	-4.80717	
P(T<=t) one-tail	3.13E-06	
t Critical one-tail	1.662354	
P(T<=t) two-tail	6.27E-06	
t Critical two-tail	1.98729	

Variable 1 = limited access to Internet or reliability

Variable 2 = personal preference of face-to-face contact

## t-Test: Paired Two Sample for Means

	<i>Variable</i> <i>1</i>	<i>Variable</i> <i>2</i>
	4.70786	
Mean	5	5.202247
	3.55005	
Variance	1	4.344995
Observations	89	89
	0.10780	
Pearson Correlation	3	
Hypothesized Mean Difference	0	
df	88	
t Stat	-1.75678	
	0.04121	
P(T<=t) one-tail	7	
	1.66235	
t Critical one-tail	4	
	0.08243	
P(T<=t) two-tail	4	
t Critical two-tail	1.98729	

Variable 1 = Personal preference of face-to-face contact

Variable 2 = Struggle with which platform to use for intended audience

## VITA

MISTY D. WILMOTH

EDUCATION

May, 1998	Bachelor of Science University of Kentucky Lexington, Kentucky
May, 2002	Master of Science University of Kentucky Lexington, Kentucky
Pending	Doctor of Education Morehead State University Morehead, Kentucky

PROFESSIONAL EXPERIENCES

2003-Present	Extension Agent For 4-H Youth Development University of Kentucky Cooperative Extension Service Hodgenville, Kentucky
2018-Present	LaRue County Coordinator University of Kentucky Cooperative Extension Service Hodgenville, Kentucky
1999-2003	Extension Agent For 4-H Youth Development University of Kentucky Cooperative Extension Service Campbellsville, Kentucky
1998-1999	Extension Agent-In-Training University of Kentucky Cooperative Extension Service Hodgenville, Kentucky

HONORS

2016	Meritorious Service Award National Association of Extension 4-H Agents Raleigh, North Carolina
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2009	Outstanding Radio Program National Award Winner National Association of Extension 4-H Agents Raleigh, North Carolina
2007	Distinguished Service Award National Association of Extension 4-H Agents Raleigh, North Carolina
2005	Achievement in Service Award National Association of Extension 4-H Agents Raleigh, North Carolina

#### PUBLICATIONS

Wilmoth, M. (2019). Annual Proceedings of Selected Research and Development Papers Presented at the Annual Conference of the Association for Educational Communications and Technology (42<sup>nd</sup>, Las Vegas, Nevada, 2019). Volume 1.

ProQuest Number: 28490223

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