

Educating the Future of Agriculture: A Focus Group Analysis of the Programming Needs and Preferences of Montana Young and Beginning Farmers and Ranchers

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Abstract

The average age of farmers and ranchers is rising and each year, there are fewer young and beginning farmers and ranchers (YBFR). Therefore, it is critical that agricultural educators and programmers provide learning opportunities that develop the knowledge and competencies YBFR need to be successful. The purpose of this study was to develop a grounded theory to identify and explain the interaction between educational drivers, educational needs, and programming preferences of YBFR in Montana, in order to develop future programming recommendations. Focus groups were utilized to gather data from a purposive sample of YBFR. A grounded theory was developed using constant comparison analysis. YBFR identified business management skills, legal knowledge, communication skills, and skills associated with technologies as educational needs. Barriers such as distance, time, and lack of awareness prevented educational event attendance. Programs were considered successful if they provided networking opportunities, relevant content, and a positive, interactive environment. YBFR utilized different delivery formats ranging from email to face-to-face. Preference was placed on longer duration events featuring a variety of information. Agricultural educators need to decrease barriers and increase positive elements to reach this audience. Agricultural organizations must collaborate to create comprehensive, impactful programs focused on developing the skills and knowledge of YBFR.

Key Words: young and beginning farmers and ranchers, grounded theory, educational needs, educational programming preferences, focus groups

Agriculture is an ever changing industry; the agriculture of today looks very different than the agriculture of thirty years ago. The farmers and ranchers in the field are also changing. Farmers in the United States on average are getting older and the young producers are becoming fewer and fewer (USDA, 2007a). According to the USDA (2007a), since 1978, the average age of American farmers has continued to rise; the 2007 agriculture census reported an average age of 57.1 years (Toossi, 2012; USDA, 2007a). The farmer age group undergoing the most rapid growth is the group of farmers above 65 years old. Of that group, there are 289,147 farmers over the age of 75 and nearing retirement. On the other end of the spectrum, there are only 54,147 young adults listed in the less than 25 age group category (USDA, 2007a). In 2007, the number of farmers in the young farmer category (under 45 years) decreased 14% between 2002 and 2007 (USDA, 2007a). Montana is no exception to this increase in age of farmers and ranchers; in 2007, the average age of Montana farmers and ranchers was 55.7 years. Among the subdivided group of principal farm operators, 6.7% of farmers and ranchers in Montana were under 35 years old, and 25.2%, were over 65 years old (USDA, 2007b).

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Young and beginning farmers and ranchers (YBFR) are found in every area of agricultural production and have a presence in every commodity produced in the USA. For the purpose of this study, beginning farmers and ranchers are defined as “those who have operated a farm or ranch for 10 years or less” (Ahearn & Newton, 2009, p. 1) and young farmers and ranchers are defined as individuals 18-35 years in age (Montana Farm Bureau, 2012a). YBFR produce a wide variety of commodities including the leading commodities of cattle, cash grains, poultry, and dairy (Ahearn & Newton, 2009; USDA, 2007a). YBFR face many barriers to entering agriculture that have contributed to the decline in the number of YBFR including high startup costs, lack of available land, and low commodity prices (Ahearn & Newton, 2009). Different barriers and experience levels result in YBFR seeking educational programs to meet their specific educational needs and interests. Multiple researchers have indicated that younger farmers and ranchers, in multiple facets of the agricultural industry, attend more hours at educational programs than older producers. The YBFR age group was significantly more likely to attend programs on topics of future options, contracts, and animal health than older producer groups. Researchers recommended that educational programs focused on a specific need increased attendance and effectiveness of outreach programs (Hall, Knight, Coble, Baquet, & Patrick, 2003; Patrick, Peiter, Knight, Coble, & Baquet, 2007).

YBFR also have a different set of interests and priorities than older agricultural producers. Adhikari, Mishra, and Chintawar (2009) found younger producers were more likely to embrace genetically modified (GM) crops and other newer technologies than older producers. Trede and Whitaker (1998) recommended that educators focus on providing programs to YBFR that address the “business of farming”. Nelson and Trede (2004) indicated that “financial management, record, budgets, and analysis; farm markets, marketing strategies, and pricing; and whole farm planning, long-term decision making, and strategic planning” (p. 5) were the top three most important topics for YBFR education.

Dollisso and Martin (1999) advised future program planners to involve young farmers in the program planning process to more successfully identify educational needs and motivations. Trede and Whitaker (2000) concluded that beginning farmers also preferred to learn through experimental and hands-on learning and placed strong emphasis on continuing education through face-to-face outreach programs. A recent focus group study of Florida Farm Bureau Young Farmers and Ranchers found that the participants frequently used the internet and cell phones as communication channels, as well as email and social media (Telg & Barnes, 2012). The authors recommended, “Social media used by the organization should supplement existing communication channels... social media is not a fad, but a communication channel that needs to be evaluated and...utilized by the organization” (Telg & Barnes, 2012, pg. 63).

The demographics and barriers discussed above have sparked awareness in areas such as adult education and outreach, legislation, and agricultural organizations to meet the needs of YBFR. Governmental organizations, such as the USDA Farm Service Agency (FSA) and Farm Credit System (FCS), have portions of allocated moneys reserved for the purpose of supporting beginning farmers and ranchers (Ahearn & Newton, 2009). One unique program within the American Farm Bureau Federation (AFBF) is the Young Farmers and Ranchers program, which was established to provide a voice and source of education to young farmers and ranchers. As part of the Young Farm and Rancher Program, the Montana Farm Bureau Federation leads the planning and implementation of the Young Ag Leadership Conference (YALC) in Montana each year in conjunction with seven other agricultural organizations (Montana Farm Bureau, 2012a).

The American Association of Agricultural Education National Research Agenda 2011-2015 Research Priority Area 5 states that, “Highly effective educational programs will meet the academic, career, and developmental needs of diverse learners in all settings and at all levels” (Doerfert, 2011, p. 9). The literature has established that YBFR have different needs, barriers, and attitudes toward education. As the age of the average farmer increases, YBFR need to be available, willing, and capable of replacing the aging farmers’ place upon retirement. It is pivotal

that when the older generation of farmers and ranchers retire, there is a new, younger generation of knowledgeable agriculture producers to maintain the agriculture productivity of the nation. Agriculture educators and program planners must ensure that YBFR have access to the educational material that they view as important and valuable. To successfully reach and impact this demographic, it is critical that educators and researchers understand what drives YBFR to seek and attend educational programs. Research and educational efforts need to support existing young farmers and provide them with the skills to be successful in the future. Education programs need to take into account adult learning principles, programing steps, and learner needs when planning programs for YBFR.

Theoretical Framework

In order to focus educational programs on the needs and preferences of YBFR, a look must first be taken into the study of adult learning and education. Knowles (1984) used the word “andragogy” to describe the “art and science of helping adults learn” (p. 52). Knowles outlined six assumptions that need to be considered when planning programs and educational events for adults. In these six assumptions, he addressed the fact that adults need to understand how the information directly impacts them and that they will place highest value on education that can directly help them or their situation. Topics and information presented to adults must also be appropriate for their current stage of life and taught to their level (Knowles, 1984). In a separate book, Knowles (1980) pointed out that adulthood is very much like childhood in the fact that individuals are not in one constant developmental state but rather develop and change throughout adulthood. Many adult learning models and theories align with and support Knowles’ assumptions of adult learning and development. Havighurst, in 1972, identified the need for adult education to fit the developmental stage of life of the adult. Havighurst stated that “teachable moments” (p. 5) occur when the educational topic aligns with the life stage of the individual. Havighurst considered “of all the periods of life, early adulthood is the fullest of teachable moments” (p. 72). Erikson (1963) argued that adult developmental stages were not tied to age, but were achieved by the accumulation of life experiences and decisions. Levinson, Darrow, Klein, Levinson, and McKee (1978) proposed that adults develop through a series of stable and transitional phases throughout life. In Levinson’s Age-Graded Model, adults transition into adulthood between the ages of seventeen and twenty-two; followed by a period of establishing knowledge and stability from the ages of twenty-two to twenty-eight defined as young adulthood. Levinson et al. (1978) referred to the “twenties and thirties” as “perhaps the most abundant and most stressful decades in the life cycle” (p. 337). Through the lens of these theories and studies, YBFR are classified at a different developmental stage in both their work lives and personal lives than older farmers and ranchers and have different education needs than the later in life, older demographic (Erikson, 1963; Havighurst, 1972; Knowles 1980; Levinson et al., 1978; Levinson & Levinson, 1996).

Maslow (1954) developed a hierarchy of need to describe what people need to achieve satisfaction. Maslow’s Hierarchy of Needs served as the theoretical framework for this study. Maslow’s Hierarchy of Needs was utilized to critically analyze the results and in the synthesis of the conclusions and recommendations of the study. Concepts of adult learning, program planning, and needs assessments were also used to analyze the data collected from this research. The lowest level established by Maslow (1954) was the physiological level. These needs included the basic human survival needs, such as food and breathing. When a person’s physiological needs are met, they move up the hierarchy to the safety level, which includes needs such as freedom to express opinions, financial safety, and job security (Maslow, 1954). At the next level, love and belonging, individuals seek relationships and connections with other people. Good relationships with family, social acceptance, and networking were identified by multiple researchers as important needs of YBFR (Gasson, 1973; Fetsch, Bastian, Kaan, & Koontz, 2001;

Franz, Peirce, Donaldson, Richard, & Westbrook, 2010; Trede & Whitaker, 2000). Once an individual has reached satisfaction of love and belonging, they move up the hierarchy and begin to seek esteem and respect from others. Individuals view esteem as confidence and a sense of independence (Maslow, 1954). The highest level is self-actualization. Achieving satisfaction at this level means that a person has reached his/her potential and has the skills to help the world on some greater level (Maslow, 1954). Gasson (1973) found that farmers strive to achieve success through business success, personal achievement, and internal pleasure (Gasson, 1973). Maslow (1954) explained that individuals fluctuate up and down on this hierarchy depending on their needs, the period of their life, and their personal security at that time. Variation and fluctuation of need changes on a daily basis and in all aspects of life (Maslow, 1954). Birkenholz (1999) encouraged adult education programmers to be aware of what level the adult learners are presently at in order to reach them at their lowest needs level.

Purpose and Objectives

The purpose of this study was to develop a grounded theory to identify and explain the interaction between educational drivers, educational needs, and programming preferences of YBFR in Montana, in order to develop future programming recommendations. The specific objectives of the study were to: (1) assess the educational skills, competencies, and needs of young and beginning farmers and ranchers in Montana, (2) assess the educational programming preferences of young and beginning farmers and ranchers in Montana, and (3) identify the information delivery formats preferred by the young and beginning farmers and ranchers in Montana.

Methods and Procedures

Focus groups were used to gather the qualitative data for this study and the data were analyzed to form a grounded theory. According to Krueger and Casey (2000), at least three focus groups must be conducted to increase the accuracy of the information gathered. Morgan (1998) stated that focus groups give participants an opportunity to interact and share opinions. When participants share information with the group, it gives them the opportunity to engage in feedback with others; this promotes discussion and deeper thought into the issue being presented to the group. Focus groups were conducted at the 2012 Young Ag Leaders Conference (YALC) in Montana. YALC is an annual educational conference for people ages 18-35 involved in agriculture; eight agriculture organizations from across Montana collaborate in the planning and implementation of the conference. YALC strives to provide an educational opportunity for young people in the agriculture industry (YALC Planning Committee, 2012). Focus group participants were selected from a pool of YALC attendees who upon registration for the conference marked a box on their form indicating that they were currently involved in production agriculture. From this group of attendees, a purposeful sample was taken. Patton (2002) described purposeful sampling as “select information-rich cases strategically and purposefully” (p. 243) to assist in the transferability of data commonly used in grounded theory research.

A key administrator of the YALC with insight and knowledge of the conference attendees was utilized to identify individuals from the original list who met the following research criteria: they were currently involved in production agriculture, either under thirty-five years of age or had been farming or ranching for less than ten years, were from diverse geographical regions, would provide valuable contributions to the focus group discussion, and represented diverse forms of Montana agriculture production. A total of 30 participants were recruited, 10 per focus group. Selection followed Morgan’s (1997) guidelines to focus groups: all were YBFR; participants were not in business partnerships with one another; and, all participants were considered homogeneous strangers, although they were members of the same conference, they

had no direct ties to each other that would influence their responses during the focus groups. Each participant received an invitation phone call and, upon agreement, was sent a profile page.

The instrument was developed and peer-reviewed by members of the College of Agriculture faculty and MFBF administrators to increase the validity and quality of the questions prior to the focus groups. A pilot test of the questions was also performed using the MSU Collegiate Young Farmers and Ranchers. According to Krueger and Casey (2000), a pilot test should gather the group's opinions of the questions and use that feedback to improve the instrument.

Three, hour long focus groups, one per region, were held at three specific times during the three-day YALC. Out of the 30 recruited, 24 participated in the focus groups (9, 6, and 9 respectively). To ensure voluntary participation, an informed consent form was given to each participant before the focus groups began. During each focus group, the moderator followed the questions and promoted discussion based on the develop instrument. The first question was asked to both make the participants feel comfortable in the group and initiate discussion. The second question was designed to gather an initial impression of the educational needs of the group and utilized the nominal group technique to foster individual thinking and group collaboration. Carter and Beaulieu (1992) explained that the nominal group process is a procedure designed to gather individual opinions and group consensus and "is intended to maximize creative participation of group members" (p. 5). Subsequent questions were asked over the remaining hour; topics aimed to gather the perceptions of the group about what makes an educational program successful and how they would like to see a program organized. Each focus group was concluded with a brief summary by the researcher. As instructed by Krueger (1998), to increase validity, the moderator gathered consensus among the participants in the group by asking if they agreed with the summary, its accuracy, and if they had anything else to add. After each focus group, the moderator and the two assistant moderators met for a debriefing led by the researcher to improve credibility as recommended by Guba and Lincoln (1989). During this debriefing, the main points and themes reached during the focus group were discussed and recorded. The researcher collected the notes from each focus group and then compared and contrasted results and notes collected from other focus groups. As recommend by Krueger and Casey (2000), data were collected with audio, video, and field notes. A summary of the field notes was presented at the conclusion of each focus group and the participants came to a consensus on the summary. All forms of data were utilized to address credibility and confirmability. Data and investigator triangulation was used to balance predispositions and reflect the true meaning of the data (Patton, 1990). To further increase validity and dependability, the researcher transcribed all focus groups. Data were analyzed using a constant comparative coding process to construct a grounded theory. Grounded theory is defined as "a theory that was derived from data systematically gathered and analyzed through the research process." (Strauss & Corbin, 1998, p. 12) As described by Glaser and Strauss (1967), open, axial, and selective codes were used to organize and analyze the data. This technique allows for researchers to develop common themes and a consensus with a large volume of qualitative data (Glaser & Strauss, 1967). Ultimately, a grounded theory emerged from the focus group findings (Charmaz, 2006, Glaser & Strauss, 1967; Lincoln & Guba, 1985; Strauss & Corbin, 1998). Each focus group transcript was individually analyzed through the constant comparative technique and then, as instructed by several focus group researchers, the data across all focus groups were compared (Krueger & Casey, 2000; Morgan, 1998; Vaughn, Schumm, & Sinagub, 1996).

Results and Findings

All participants were either under the age of 35 or had been farming or ranching for less than 10 years. At least one participant in each focus group worked another job away from the farm. These careers were all connected to agriculture in some way. Many of the participants

were involved in family owned and operated operations. Several were working for other producers or working into agriculture operations. The YBFR were involved in multiple areas of agriculture from cattle to small grains as well as bison to pulse crops. The education level of the participants ranged from high school graduates to bachelor degrees and one participant with a master's degree. Educational degrees primarily focused around agribusiness, animal science, and agricultural operation technologies. To protect the identities of the participants, all names were changed and identifying characteristics were removed from the transcripts. The overarching themes from the focus groups developed through constant comparative coding are described in the following pages.

Skills, Competencies, and Needs of YBFR

The selective codes found that attribute to the skills, competencies, and needs identified in the focus groups were agriculture business management skills, legal knowledge, communication skills, and production technologies. Each selective category and the associated axial codes are described below.

Agriculture Business Management Skills. Emphasis was placed on accounting and record keeping skills needed to help manage expenses, incomes, taxes, and decision making on the farm and ranch. In the first focus group, Jerry supported this by saying,

The reality of it is most people who come into farming don't just walk off the street; they already know how to do the work. It's all the side stuff that you don't really realize happens when you're growing up on the farm and the record keeping to keep track of this... where does this go... is this tax deductible... all that stuff that dad sits in the house and does.

All focus groups placed a strong emphasis on the need for financial skills and the importance of financial management education. The groups focused on understanding loans, having a good relationship with the bank, and understanding financial analysis including profit and loss. Knowledge of marketing plans and opportunities was discussed across all three focus groups. A common phrase was "running the farm like a business." As defined by the participants, this meant developing a farm plan, managing liabilities, prioritizing, budgeting, employee law, and understanding business management techniques. Mark impressed upon the group that, "You have to understand where your operation has come from, where it has been, know where it is now, and where you want to take it... it didn't get to where it is today by somebody mismanaging it."

Legal Knowledge. Across the focus groups, the common emergent legal knowledge themes concentrated on tax laws, contract laws, leasing laws, property rights, water rights, government regulations, and environmental regulations. The importance of understanding government assistance programs and "not being late" was also emphasized. Participants mentioned that as members of the agricultural community, it was important to "keep track of current legislative issues". Nate stated that one reason he attended conferences, such as YALC, was to "see what's going on with politics because there is a lot of stuff that could make or break an operation." Another common topic was estate planning and farm transition information. John described a workshop that he viewed as successful on farm transition and estate planning. "He had some pretty terrible stories of the way farm transitions had went wrong...kind of horror stories that really make you go wow maybe we should actually talk about this with mom or dad."

Communication Skills. In every focus group, the importance of communication skills was heavily emphasized. Communication skills were divided into internal and external communication. All discussed internal communication with "family", "landowners", "employees", and "people that you work with". Communication skills were commonly discussed in conjunction with generational differences. Charles cited that communication was often the main problem on family agriculture operations:

It's usually a communication issue, whether or not the prior generation can communicate the skills to the next generation. And also it is whether or not the generation that is coming up can communicate new ideas to the prior generation.

External communication was defined by participants as communication with consumers, buyers, people outside the agricultural industry, and persons advocating for agriculture. John expressed the importance of advocating for agriculture, "We're the ones who are going to be in the focus, in the spotlight as the next generation of farmers and ranchers." Dan said that he would like to have the skills to "find my voice...get other people motivated... find a way to persuade other people to take a second look at agriculture." Bart impressed upon the group the importance of involving the younger generation in agriculture, "The more kids we can get into agricultural education in high school, the better chance we have of keeping them in the industry when they go to college."

Production Technologies. The desire for unbiased information on new technologies and for a greater awareness of new technologies was a common theme across groups. Bart stated, "Technology is driving agriculture now... it's a whole different ballgame than ten years ago." Mark was more reluctant about new technologies and stressed the importance of research, "I honestly believe that there is a fine line between chasing trends and actually trying stuff that is proven but it is new." Overall, the groups agreed that it was important for educational events to encompass new technologies in their topics so that YBFR can have the information to know if they are maintaining the cutting edge or if they are "chasing trends." Trade skills that supplement income were also discussed as a need, particularly in the third focus group. Lexie said, "Most of us have probably figured out that, especially if you're going to take over the family business, you have to have a second job and income." Trade skills, such as welding and mechanical skills, to supplement income and tie into agriculture were not only a luxury, but a necessity.

Educational Programing Preferences Designed for YBFR

The selective categories for the educational programing preferences designed for YBFR were: the need for a networking component; mentorship program; positive, interactive learning environment; nature of program content; external programing factors; and educational barriers. Each category and the respective axial codes are discussed below.

Need for a Networking Component. All groups viewed networking as a key component of successful educational programs. They enjoyed being able to talk to older producers, leaders in agriculture, and most importantly, peer producers. Aidan mentioned that through networking at events, "You might meet someone who can help you down the road." Alex discussed how networking with other producers can serve as a form of education,

If you want to try something new, but you just get the facts from the company, and then you come to these deals and talk to people who have tried it and you see how it worked and that gives you confidence to try it for yourself.

Beyond just the need for general networking, participants placed emphasis on meeting other young producers as a key element in programs designed for their demographic. John said networking with peers,

Helps give me a positive attitude to see other young people doing stuff, because where I am at there is me and maybe one other young guy... and you come here and see a lot of young faces and it's refreshing.

Mentorship Program. YBFR in the focus groups expressed an interest in older producer mentorship programs. Miranda stated that,

We should set up more producer mentoring type deals... in my county there's probably 3 to 4 people that I would love to sit down with and be like, tell me what you know... how did you get to where you are right now?... It would be nice to actually go to their place and have them show you around. And as a lot of these people who have such a wealth of

knowledge are starting to get to retirement age and leaving communities, we are losing a lot of resources there.

The groups all agreed with this proposed idea, possibly in the form of a mentorship program. Bart discussed the one-on-one mentorship that Derek was involved in with a farmer from his area, "For him [the older producer] to say come on let's work, I will show you how to run this thing, it's pretty cool."

Positive, Interactive Learning Environment. Participants preferred an interactive environment that allowed them to interact and learn from other producers and presenters through small group learning. Miranda mentioned she enjoyed workshops where there was "one-on-one communication between the speaker and [the group]." Lexie thought that face to face education was important as well as "opportunities like right here, to feed off of one another, to come up with a question that maybe I wouldn't have thought of someone else will." Providing an inspiring and positive learning experience was also mentioned as critical to a productive learning environment. Harry stated that, "You're at home and it's easy to get mundane and run down and it's kind of nice to go get inspired again." All groups agreed on the importance of hands-on educational experiences. Dan expressed his view that "there is no substitution for hands-on experience." An effective hands-on educational technique was agricultural tours. Charles said, "The most effective format for education is field days... they would basically summarize all the research conducted in a whole year into that short little time frame." Bart expressed that, "Going on those tours helps you understand that agriculture is bigger than northeast Montana, it's bigger than Montana." The YBFR enjoyed speakers that were inspiring and knowledgeable, positive, and had practical field knowledge. Overall, the groups' ideal speaker was interactive, inspiring, and had reputable, practical knowledge on the topic.

Nature of Program Content. Each focus group discussed that they attended educational events to increase efficiencies, learn new ideas, and gather different ideas. Dan's motivation for attending educational events was the "challenge"; the challenge of learning new information to help agriculture be sustainable in the future. The YBFR agreed that they liked variety in both the information presented at educational programs and the teaching formats used. Jerry advised that educational events must "Have enough information to make it worthwhile... if it was just a finance thing I wouldn't come." Charles stated that he preferred "multiple formats" and he found events particularly useful when they "sent you emails or readings like a month or two in advance and it lets you build up all your thoughts and ... then you come to your thing prepped and all ready to go." In terms of presenters, the YBFR enjoyed programs that had many different topics related to agriculture taught in different seminars. YBFR also stressed they preferred to learn about topics that were relevant to their situation and that they could actually take home and implement. The participants preferred educational content that was intense, in-depth, tailored to their needs, allowed them to formulate their own opinions, and included specific examples of real-life application. The YBFR preferred to have contact information to follow up with speakers and archived educational information for reference later. When discussing webinars, the groups found them more beneficial if they were archived. Blair stated that she preferred when presenters, "Send us home with a flash drive with some of the information...I have at least the talking points of what the speaker said."

External Programing Factors. Each focus group stressed that they had different opinions, different practices, different concerns, and ultimately, different educational needs than previous generations. Jerry stated that when discussing ideas with previous generations, their generation (YBFR) often does not want to listen to the previous generations, "I'm not going to do it your way, I am smarter, that's just the reality of it and every generation has been like that." Others expressed a desire to change and improve upon what previous generations have accomplished. Bart said, "We are bigger risk takers... we aren't as reluctant to go out and take that risk, ...we are more so than past generations willing to spend money to make money." Overall, the YBFR categorized themselves as larger risk takers, more open to change, less loyal,

and seeking more constant improvement than older farmers and ranchers. Each focus group discussed that the one major factor that prompted them to attend educational events was to build on their own knowledge base and improve their agricultural operation. One major reason to attend educational programs was to increase their knowledge, skills, and abilities to protect not only themselves, but the family ranch. Nate mentioned the importance of staying current on political issues because, "There is a lot of stuff out there that could make or break your operation." Charles, a third generation rancher, expressed,

They say the third generation is the one that makes or breaks a place...usually it is because the first generation built it up from scratch so they know what it was worth, the second generation ... they saw it come up so they knew what it was, the third generation had it handed to them to a degree, they didn't see the build-up to get there, so they are the ones who have to make it or break it.

Educational Barriers. Several educational barriers, such as time and distance, were discussed across all the focus groups. YBFR preferred educational events that fit into their schedules and provided the least amount of time restrictions. Steve mentioned that the time at the event needs to be worth the driving time to the event, "[YALC] is only a two hour drive and we're able to plan for it, but if you're going to a 2 or 3 hour deal and driving two hours, that pretty well kills your day." He also commented on the importance of the time of year, "During your season, you don't have a half a day or day generally to drop to get educated." Charles mentioned inefficiency of the information as a negative aspect of Facebook, "I spend more time wading through the stuff I don't want than I do reading what I want." The participants also discussed other barriers to education. John noted that a general lack of awareness of educational programs was often a barrier, "They didn't always get a flyer up in [outlying rural communities]; there would be stuff going on that we would never know about". All three focus groups discussed several negative aspects of educational programs as barriers to their education that affected their overall impression of program success. These pitfalls included not having the opportunity to discuss the content with the speaker, no interaction with peers, not keeping their interest, and inefficiencies of the informational source. Overall, the information needed to be practical, relevant, and current.

Delivery Formats Preferred by YBFR

Across the focus groups, day today information sources, social media for program promotion, and extended producer educational events emerged as selective categories. Each selective category and the respective axial codes are described below.

Day to Day Information Sources. All focus groups discussed the importance of electronic sources of information including websites, video links, and webinars. Miranda discussed that she found emails with links to more information helpful:

Send out a brief newsletter with hyperlinks to stuff that's more in-depth but at a quick glance, you can read a whole bunch of stuff...an overview... later down the road you can be like, oh yeah, there was that article and then you go back and read the whole thing.

The majority of participants preferred emailed newsletters to printed newsletters for "the constant kind of changes." Alex stated, "If you're looking for what's going on today, what's new with stuff, hop online and go out and get on the ag website". The third focus group also noted they watched online educational videos as a day-to-day information source. They utilize online videos as problem-solving tools. Owen said he "uses that YouTube a lot... the other day I was trying to figure out how to use a volt meter to test a well... so I went on to the YouTube to try and figure all that out." YBFR had mixed feelings on webinars. Miranda disliked webinars because they lacked "personal interaction with the speaker." John found webinars useful, "It's going to be different case by case... but I enjoyed it... I was comfortable; I was home sitting at my computer... I was in my element on a snowy day because I didn't have to leave." As discussed

earlier in the section, the groups agreed that archiving webinars increased their utility as a delivery format. A major barrier to webinars was lack of adequate internet connection speed. Each focus group mentioned using print sources such as magazines and books as a source of information. Mark stated that “literature is priceless.” Other informational sources included Extension, farm service agencies, research stations, breed associations, and local producers.

Social Media for Program Promotion. Social media was highly utilized by participants as a way to stay current on educational events and information. YBFR recommended that social media be used for program promotion and marketing rather than delivering educational information. John said, “I follow all sorts of stuff and that’s how I know what’s going on.” The participants viewed social media tools as a great way to reach out to younger people, but could also be harmful if not used with caution. Blair cautioned that, “Facebook and social media in general is really powerful, it can also be really dangerous.” Louis stated, “I am going to see something on Facebook and ... open up the website it links to or something and kind of read up on it.” Bart added, “It entices you more than anything.” Overall, the YBFR preferred using social media as a means of discovering educational events and as a way to get a quick burst of new information as a starting point for further research on agricultural topics and issues.

Extended Producer Educational Events. All focus groups discussed the preference for longer duration producer events as a delivery format. They liked events that were one and half days to a weeklong in format. Miranda suggested, “Have one big event that you can get a lot of information in and then do a couple quick ones throughout the year.” Jerry recommended, to increase the success of educational programs for YBFR, “Instead of doing a one day thing, make it a three day deal. People can get away from the farm or kids and have some fun and learn something.” Many listed conferences, seminars, trade shows, and conventions as educational events they attend for current information. When asked by the moderator to vote if they preferred an event to a one or two hour workshop, the majority voted for a longer event.

Several motivators influenced the educational information seeking habits of YBFR. Educational information seeking motivators trigger the information seeking process. When choosing an information delivery format, YBFR must overcome several barriers. These primary barriers either denied access to delivery formats and/or make specific information delivery formats less desirable to YBFR. Once these barriers were surpassed, the preferred educational delivery format is chosen. Preferred educational delivery formats of YBFR were email, electronic sources such as websites, webinars, video, print, people, social media, and conferences. The overall preference and perception of these delivery formats was directed by the information seeking motivators and primary barriers. Once the delivery format is chosen, several factors influence the YBFR’s perception of that delivery format. These factors were considered drivers of educational program success. The motivators were split into two categories: positive drivers and negative drivers. Each YBFR formed a mental composite of positive drivers and negative drivers of program success for each educational program they attend or delivery format utilized. This composite of the drivers formed the YBFR’s overarching perception of the educational program. This perception then in turn impacted the desire for future education. A positive perception of the program will result in using this program again and the continued seeking of information. A negative perception of the program will cause the YBFR to be less motivated to seek additional information or cause them to search elsewhere. The desire for future education influenced the educational information seeking motivators bringing the perceptions of educational delivery formats and program success full circle and the process begins again.

Conclusions

This qualitative study aimed to develop a grounded theory to identify and explain the interaction between educational drivers, educational needs, and programming preferences of YBFR in Montana, in order to develop future programming recommendations.

Grounded Theory

A grounded theory was developed from the data analysis by the researcher to explain YBFR perceptions of preferred educational delivery formats and program success. A conceptual model of the grounded theory (Figure 1) diagrams the process and factors that influence YBFR’s perceptions of educational needs and programs including the motivators to seek information, the barriers that impact deliver formats, preferred delivery formats, drivers of program success, and the impact of this process on program perception and the desire for future education.

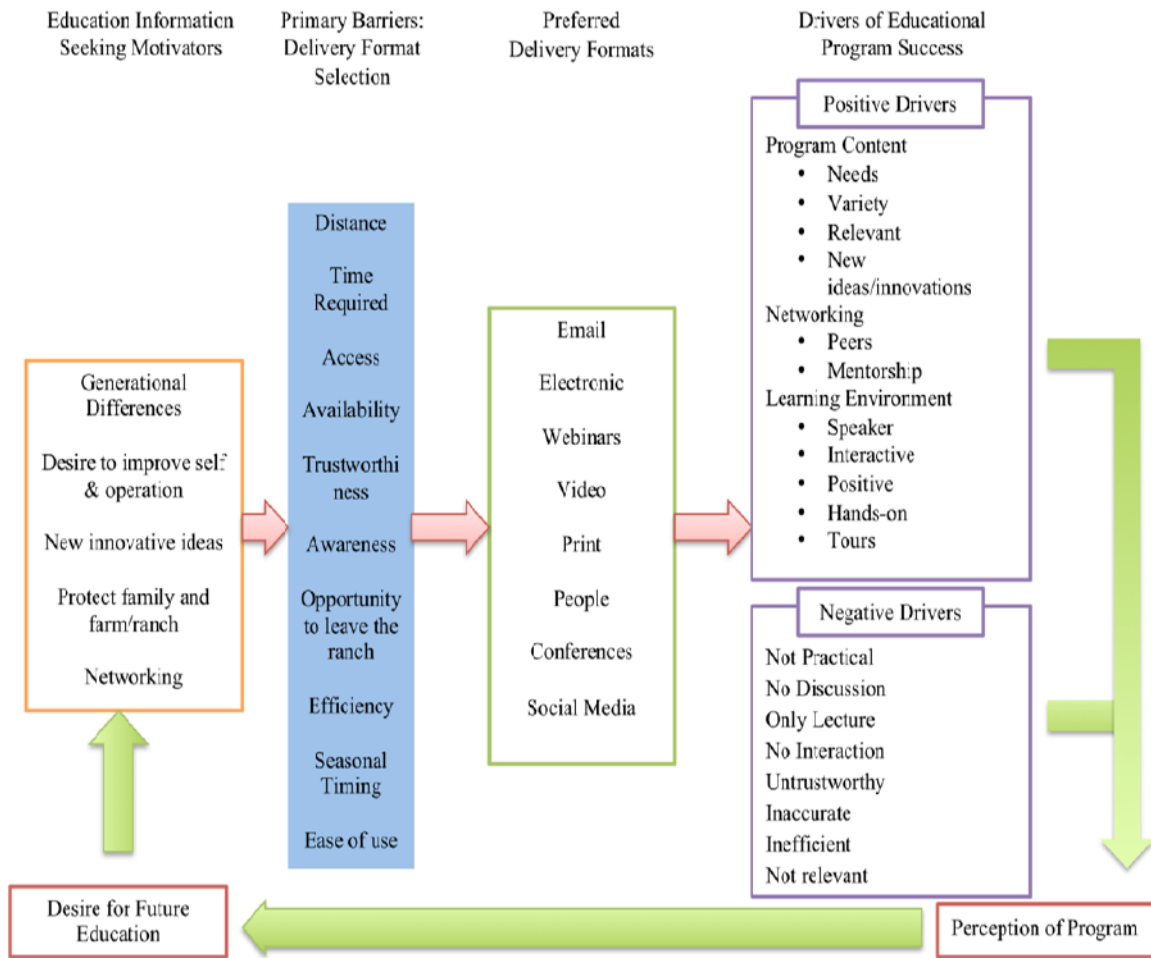


Figure 1. Grounded theory of Montana YBFR perceptions of educational delivery formats and program success.

The educational needs of the YBFR in this study were then applied to Maslow’s Hierarchy of Needs to provide more robust conclusions and implications. In this study, the YBFR identified the need for agriculture business management skills and legal knowledge in terms of a necessity to keep them safe and secure financially relating to Maslow’s (1954) second level of safety. This need stemmed from insecurities with their future and the need to feel safe within their family’s farm plan. YBFR need for communication skills relates to multiple levels of Maslow’s Hierarchy of Needs (1954). YBFR seek the security and comfort of family and others in their lives and hope to improve upon these relationships through communication, aligning with the love and belonging level of Maslow’s Hierarchy. Those who explicitly discussed advocating

for agriculture and teaching others about the business expressed needs that aligned with Maslow's fourth level of self-esteem.

The need discussed at the greatest length and in the greatest detail, during the focus group discussion, was the need for more education relating to agriculture business management skills. These findings align with Trede and Whitaker's (2000) and Nelson and Trede's (2004) studies. The YBFR also expressed interest in finding new marketing opportunities for their products as found by Hall et al (2003). The second major category of educational need was legal knowledge. The YBFR discussed a need for a more comprehensive understanding of government laws, regulations and restrictions on water and property rights, contracts, and programs. This included developing legal knowledge of farm transition and succession plans consistent with past research (Eberspacher & Jose, 2005; Fetsch et al, 2001; Trede & Whitaker, 2000). YBFR, in this study, expressed the desire to enhance their ability to communicate with family members, other people within their farm or ranch, and to develop the skills to communicate to a broader audience such as loan officers and the even the general public. These findings repeat Trede and Whitaker's (2000) results. Many of the participants agreed that building public communication and advocacy skills were important for the future. YBFR also sought information on new technologies to improve the efficiency of their operation and keep them on the "cutting edge" consistent with previous research (Adhikari, et al, 2009).

When planning educational programs for adult learners, it is important to take into account how the adults want to learn, what they want to learn, and within what environment adults want to learn (Knowles, 1984). Gasson (1973) reasoned that farmers have specific life goals and seek education and information in an attempt to satisfy these goals. The YBFR in this study supported those principles. The YBFR explained that they seek educational information to satisfy a desire to improve themselves and their agricultural operation as well as a desire to be different than previous generations. Three key components emerged from the focus groups as YBFR participants discussed components of a successful educational program: networking, content, and the learning environment. The YBFR also discussed the importance of having the opportunity to network and learn from older producers through the development of mentor relationships. Miranda viewed the retiring farmer and rancher age group as a "wealth of knowledge" and "resources that the community is losing." The second programing preference was a positive, interactive learning environment that incorporated small group learning that was hands-on. Thirdly, YBFR considered the nature of the program content and the variety of topics presented as critical determinants of program success. The participants in this study viewed content and information that related to their needs, increased operational efficiencies, and helped solve problems as beneficial which is consistent with preferences of all farmers as found by past researchers (Dollisso & Martin, 1999; Hall et al., 2003; Joerger, 2003; Patrick et al., 2007).

The YBFR discussed factors considered as barriers and pitfalls of educational programing success. Barriers revolved around the excessive time and distance required to attend the program and a general lack of program awareness. As previous research has demonstrated and these results support, YBFR disliked environments that do not allow for discussion, interaction, and are purely lecture based (Eberspacher & Jose, 2005; Franz et al., 2010; Joerger, 2003; Trede & Whitaker, 2000). Farmers in general want information that is presented by trusted, unbiased speakers (Eberspacher & Jose, 2005). The last item emphasized was the concept of preferred delivery methods. In past research, this area has demonstrated the largest difference between older, traditional farmers and YBFR. Past research has recognized that YBFR tend to be more excepting of new technologies. Although some commonalities exist, past researchers have found that young producers prefer different delivery formats than older producers (Howell & Habron, 2004; Licht & Martin, 2006; Telg & Barnes, 2012;). In this study, for day-to-day information sources, the YBFR utilized electronic sources, print sources, personal communication, and organization communication. Face-to-face information was still preferred

whenever possible as previously reported in other studies (Hall et al., 2003; Patrick et al., 2007; Trede & Whitaker, 2000).

Recommendations and Implications

Although farmer education has been the focus of multiple research studies, research specific to the educational needs and preferences of YBFR must continue to expand. Much of the existing research was dated and does not take into account new communication technologies and their increasing presence in society today. Future researchers should explore the formal and informal educational opportunities that currently exist for YBFR. Research focusing on the difference between educational needs and preferences of YBFR and older, established farmers and ranchers is also needed. Although past researchers have considered the needs and preferences of both groups, little research actually compares the two groups. Long-term research that follows this group of YBFR through the life stages would provide insight into not only the educational needs of each age range, but also details of how education, age, and experience impacts needs and preferences.

This group of YBFR were enthusiastic and eager to learn new information and participate in networking opportunities. The YBFR are driven by the desire to improve themselves and their agriculture operation. As Lilly expressed, "I want to make sure I make that place a better ranch... I want to go back an asset." The YBFR in this study received information from multiple sources and entities; therefore, agriculture agencies and organizations need to work together to create educational programs that meet the needs of YBFR and develop materials that provide the detail and variety preferred by YBFR.

The overall perception of the program impacts the desire for future education. It is essential that educators take into account these needs and the corresponding level of Maslow's Hierarchy of Needs when constructing programs for this group. The actual content must be presented in a context that allows for application on the farm or ranch. YBFR must also be involved in the program planning process and continuous assessment must be conducted to insure that they can move up Maslow's Hierarchy of Needs (1954). The YBFR, in this study, identified educational needs within the realm of agriculture skills as well as communication and business skills, which can be related to industries outside of agriculture. Collaboration between educational institutions, private and public organizations, and government agencies within and beyond agriculture can provide programmers with additional resources and funding.

YBFR are busy and prefer information sources when they need it, at their discretion. Traditional educational sources, such as agriculture radio shows and television, were not mentioned by the YBFR. With advents of new online technologies, industry educators must investigate new dissemination avenues. Bart stated that he preferred to receive information electronically because, "It's instant, you don't have to wait for it...you don't have to wait for the ag magazine to come out." The majority of the group agreed that they use electronic information to stay current on agricultural information and education. Archiving traditional agriculture programs online in a common area would allow for easy access. Many others participants used YouTube and other online video mediums to learn new skills. Alex stated that when researching new agriculture machinery he uses YouTube to, "watch different videos on it to do the research before I buy something." Through developing this online agriculture channel of webinars, videos, and audio recordings, industry programmers will address several barriers discussed and provide efficient and easy access to educational information that fits into their daily lives. Emails with hyperlinks should be sent to promote initial use of the online service. Smart phone apps could be developed to provide instant, mobile access to online educational channels. Social media groups can be formed to promote these events and continuous networking among YBFR.

The majority of YBFR in this study indicated that longer duration producer events that incorporated networking with peers, other farmers, and industry professionals were most

beneficial. As Lexie stated, “When you’re the only young person [in your area] you feel completely and totally alone and coming to [young producer events] helps that.” . County, regional, state, and national YBFR events should be designed to encourage interaction and networking. Events should also mitigate as many barriers as possible; programmers should consider busy times of the year, providing a variety of high quality information, and providing support services, such as childcare and travel scholarships, to reduce barriers. Multiple forms of advertising should be used, including social media.

A major pitfall of educational workshops that emerged from the participants was lecture only learning environments. Hands-on activities and agriculture tours should be incorporated when possible. It is also important to remember that YBFR prefer positive, interactive environments as John and Charlotte, expressed they attend educational events because it “helps give me a positive attitude” and to “get excited... and inspired again.” By incorporating small group learning, discussion, role-playing, and scenarios into the event, the retention and understanding of the content improves; by the same token, the overall YBFR’s perception of the program also improves. Archiving presentation and the contact information of the presenter was critical. The distribution of a flash drive at a conference would be valuable. As Blair stated after the educational event, “if I need to look something up, at least have the talking points of what the speaker said.” Lastly, the YBFR discussed the desire to establish mentor relationships with successful, older farmers and ranchers. Agriculture organizations should utilize this interest and develop mentorship programs between older and younger members.

The conclusions of this qualitative study provide insight into the unique educational needs, barriers, and programing characteristics that impact YBFR perception of educational programs. Findings and conclusions must be acknowledged by organizations and agencies providing educational information to farmers and ranchers and utilized to create impactful educational programs for young and beginning farmers and ranchers. By reaching out to this demographic, agricultural educators will not only create more specific and comprehensive programs, but will also stimulate future utilization of educational resources, expand the knowledge of young and beginning farmers and ranchers, and ultimately build a more prosperous agriculture industry.

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