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A Conceptual Framework for Infusing Behavior Change Theories into Program Design, Delivery, and Evaluation: A Financial Education Example

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Abstract

There is an old adage that says "knowing and not doing is equal to not knowing." The aim of educational programs is to equip clientele with knowledge, skills and tools needed to make lasting changes that positively impact their lives. Thus, educators must focus their change strategies and educational activities on intentionally facilitating behavior change among their clientele. Behavior change and practice adoption are complex, multi-layered and multifaceted. Several decades of research have resulted in refined theories and conceptual models of behavior change/practice adoption. In the current literature, most programs adopt one theory of change. This article is unique in that it synergistically draws from several theories to provide a more comprehensive understanding of how educators can promote behavior change among their clientele, which includes the Transtheoretical Model of Behavior Change, Diffusion of Innovation Theory, and Ecological Systems Theory. The Targeting Outcomes of Programs provides the evaluation model. In essence, this article builds upon leading theories and models by infusing change strategies that educators can employ to increase the likelihood that change will occur, and providing general evaluation indicators for each stage of behavior change. While grounded in theory, this article provides practical insights into designing and evaluating high-impact educational programs that produce behavior change.

Keyword List- Behavior Change, Practice Adoption, Financial Management, Program Strategies

Introduction

America today is burdened with deeply rooted economic challenges and instability within the financial market. The ailing economy has resulted in over one million bankruptcy filings for the 2008 fiscal year (Schwartz 2008). Panic and uncertainty has caused many Americans to change the way they think about their financial situation (Redmond 2008). The current trend shows that every three months 250,000 new families enter into foreclosure (Schwartz 2008). The number of homes threatened with foreclosure jumped 24% in the first quarter of 2009 (Zibel 2009). Consumer debt is at a record high while savings rates are low (Fetterman 2005). Financial education is not only an urgent need for many families, but a necessity for their mere survival. Providing money management strategies will not only give families the confidence they need to meet the challenges during an economic decline but, also the wisdom to make sound decisions in times of economic stability.

Education is essential in helping people make better decisions for their families and their future. Families need to apply basic financial principles that allow them to pay off debt, build savings and invest for the future. Educators can help transform the way people think about and manage their personal finances. It must be the aim of financial education that real behavior change occur as a result of individuals gaining knowledge on financial topics such as budgeting, spending, the costs of credit, the present value of money, and saving for retirement (Seiling and Shockey 2006; Braunstein and Welch 2002). When families truly understand how changing specific behaviors/practices can place them in a positive financial position it allows them to face the challenges, develop a realistic plan of action, and become better prepared for the future. Likewise, as agents of change, financial educators must employ educational strategies that will increase the likelihood that behavior change will occur.

To support financial educators, the lead author developed a conceptual framework based upon the Transtheoretical Model of Behavior Change, Diffusion of Innovation Theory, and Ecological Systems Theory. The Targeting Outcomes of Programs provides the evaluation model for the framework. The next section of this paper (Theoretical Foundation) provides an overview of those three behavior change theories and the evaluation model. This is followed by the heart of the paper which is the discussion and examples of how the conceptual framework: 1) builds upon those leading behavior change/practice adoption theories by infusing change strategies educators can employ during program design and implementation to increase the likelihood that change will occur; and 2) links evaluation strategies that educators can use during each stage of behavior change to document program outputs, outcomes, and impacts. This framework builds a solid foundation for educators in using behavior change focused educational strategies for more effective program development. However, the framework does have potential limitations/weaknesses as well as strengths. Therefore, the last section of the body of the paper discusses the implications, limitations and significance of the conceptual framework in order to guide educators on its optimal use.

Theoretical Foundation for the Conceptual Framework

The Transtheoretical Model of Behavior Change (TTM also referred to as stages of change) was developed by James O. Prochaska and colleagues in the late 1970's. After nearly 25 years of use, the TTM model was refined by Prochaska, Norcross and DiClemente (1994) to include processes that help predict and motivate movement across the stages of change. The TTM, one of the most widely used behavior change models, has been tested and validated. For example, in a meta-analysis of health behavior change interventions, researchers found that the number and type of theoretical concepts tailored to stage and processes of change were associated with positive behavior change (Noar et al. 2007). Additionally, a scan of the literature will demonstrate that the TTM has been used to empirically explore a variety of behaviors such as smoking cessation, weight control efforts, mammography screening and condom use, as well as other family and consumer science related disciplines, including financial and consumer education (Lown, 2007; Seiling and Shockey, 2006). The TTM's five stages of change will provide the foundation for the conceptual framework presented here.

The five stages of change in the process of behavior change include: 1) precontemplation, 2) contemplation, 3) preparation, 4) action and 5) maintenance (Prochaska et al. 1994). During the pre-contemplation stage, an individual has no intention of changing his/her behavior in the near future. This theory views change as a process rather than a single event. In attempting to change behavior a person typically cycles through different stages of change. Each stage of change describes a person's emotional/motivational readiness to change or progress towards changing the problem behavior. The stages are not linear in that a person can start at any stage of change. Also, people can revert back to an earlier stage or skip forward based on internal and external factors. This is referred to as a spiral pathway (Prochaska et al. 1994). The stages represent a cyclical process that can vary for each individual.

In addition, TTM incorporates ten processes at different stages of change that help motivate individual movement across stages which include: 1) consciousness raising, 2) dramatic relief, 3) environmental reevaluation, 4) self-reevaluation, 5) self-liberation, 6) social liberation, 7) reinforcement management, 8) helping relationships, 9) counterconditioning, and 10) stimulus control.

Each stage of change and processes will be discussed further within the conceptual framework along with specific educational change strategies that can be used to increase the likelihood that clientele will change their behavior/adopt practice.

The Diffusion of Innovation Theory (Diffusion Theory), developed over a century ago by French sociologist Gabriel Tarde, is also embedded in this conceptual framework. The Diffusion Theory provides a theoretical explanation of how, why and at what rate new ideas and technologies are spread and adopted in communities. Everett Rogers expanded on this theory and applied it to work in agricultural and medical fields in 1962. Hence, it has been used, albeit to a relatively small degree, in Cooperative Extension program planning for more than 30 years. However, the focus on program accountability has created a resurgence of interest in Diffusion Theory in Cooperative Extension (Hubbard and Sandmann, 2007). Rogers (2003) asserts that diffusion research centers on the conditions which increase or decrease the likelihood that a new idea, product or practice will be adopted by members of a given community. There are four subcomponents of the Diffusion Theory which include the: 1) innovation-decision theory, 2) individual innovativeness theory, 3) theory of rate adoption, and 4) theory of perceived attributes. Only the theory of perceived attributes has been incorporated into this framework as it addresses "how" change is adopted and what can promote adoption. The theory of perceived attributes involves five key concepts: 1) complexity, 2) compatibility, 3) trialability, 4) relative advantage and 5) observability. The authors will discuss these concepts within the conceptual framework and provide educators with examples of how to incorporate perceived attributes into their program design and delivery.

Also, paramount to this framework is the interaction between the individual implementing the change and his/her environment. One main criticism of most behavior change theories and models is the emphasis placed primarily on the individual. One of the leading ecologically based conceptual frameworks was developed over thirty years ago by Urie Bronfenbrenner. In Bronfenbrenner's Ecological Systems Theory, the underlying premise is that behavior change occurs at multiple levels of influence within the individual's immediate environment, community, as well as the larger social system and sociocultural contexts. In recent years several researchers, mainly in health and human development related disciplines, have refined Bronfenbrenner's theory to develop an ecological approach to behavior change which assumes that one cannot understand a person's behavior apart from the environment in which he/she lives and interacts. Behavior change is most likely to occur when an educator addresses multiple individual and environmental influences or factors. The ecological approach to behavior change includes intrapersonal factors, interpersonal relationships, organizational factors, community factors and public policy (Shumaker et al. 2008; Stokols 1996; McLeroy et al 1988). Not all factors are equally important or carry equal influence for each individual. Factors that are most important to any given individual are called keystone factors. Just as it is important to assess and design educational strategies based upon clienteles' readiness for change (TTM) and what promotes adoption of behaviors/practices (Diffusion Theory); it is equally important to identify and utilize keystone factors that influence behavior change. Therefore, the ecological approach to behavior change is infused in the framework to address the importance of the individual's sociocultural and physical environments.

Also, Rogers' Diffusion Theory recognizes that it is important that educators address the communication channel, social networks, cultural influences and external factors that affect the adoption decision (Rogers 2003). Communication channels are critical in that the way the information about the change is disseminated and by whom can be a determining factor as to whether the change is adopted or rejected. Social networks and systems include the type and amount of social support provided at the family, community and/or institutional level that promote adoption. Cultural influences include norms, practices, and beliefs that can encourage or discourage adoption. There may also be other factors external to the individual that can promote or impede adoption that should be taken into consideration by the educator as he/she designs an educational program strategy.

The focus on the sociocultural, physical and other external environments outlined in the Diffusions Theory, coupled with that of the ecological approach, strengthens and adds another element to the more individual-based TTM theory and will be discussed within the conceptual framework.

In terms of evaluation, the Targeting Outcomes of Programs (TOP) Model provides the theoretical undergirding for recommendations on evaluation measures at different stages of change. The TOP model is based on a theoretically sound framework that has been revised and refined, and widely used over the past 25 years in extension and other non-formal educational organizations (Bennett and Rockwell 1995; Bennett 1975). The model includes seven levels of evidence that can be measured during program evaluation that creates a hierarchy from the lowest level of evidence to the highest. Level one, the lowest level of evidence, include inputs or resources that were expended to plan and conduct the program such as time, money and staff. Process or formative evaluations at this level typically measure the types of resources, how they were used as well as whether they were leveraged to bring in additional resources. Level two are activities or outputs of the program such as workshops, classes, demonstrations or other learning opportunities. An evaluation at that level would primarily assess the number and types of learning experiences offered, delivery methods used, and the like. Level three is the participation from the targeted audience in which evaluation measures would include the number, and demographic characteristics, of the participants. Level four are the reactions of the participants to the learning opportunities specifically and the overall program generally. This type of evaluation would assess level of satisfaction and the extent to which participants felt the program met their needs. The fifth level of the hierarchy is known as KASA which represents changes in knowledge, attitudes, skills and/or aspirations experienced by the target audience as a result of the program. The sixth level is behavior change/practice adoption where evaluations are focused on the type of behavior/practice changed, as well as the frequency, consistency and longevity of the change. The seventh and highest level of evidence is social, economic and environmental changes that result from the program. The different stages of change present unique opportunities to focus in on specific measures embedded in the levels of the evaluation hierarchy.

Conceptual Framework for Designing and Evaluating Behavior Change Focused Educational Strategies

Behavior change and implementation of new practices has become a more desirable outcome of consumer education programs than knowledge acquisition or skill development (Lown 2007). It is only through changing behaviors and practices that individuals can change their financial circumstances. Applying the Transtheoretical Model of Behavior Change (TTM or stages of change), Diffusion of Innovations Theory (Diffusion Theory), and ecological approach assists educators in focusing their change strategies and educational activities on intentionally facilitating behavior change among their clientele. Having information on participants' stage of change is useful to educators in fine tuning their programs to meet the needs of clientele (Lown 2007). Measurement indicators, based upon the Targeting Outcomes of Performance (TOP) Model, are needed at each level of change so that educators can collect data relevant for each stage. Table 1 provides an overview and user-friendly reference of the conceptual framework that is discussed in detail below.

Precontemplation Stage- People at this stage have financial problems but have no intentions of changing their behavior or adopting a new practice that could improve their condition. They often times feel that they cannot change or do not know how to change. They may also feel that they do not have a problem and therefore there is no reason to change, even if they are being encouraged by external influences to do so. The literature is clear that at this stage individuals need to undergo consciousness-raising (Prochaska et.al. 1994) in which they become more aware of the consequences of their negative financial practices. For example, data can be shared about the increase in bankruptcies, foreclosures, rental evictions, depleted savings and other negative results of poor financial choices. Dramatic relief (Prochaska et al 1994) whereby they experience strong emotional reactions to their financial circumstances, coupled with environmental reevaluation (Prochaska et al 1994) in which they learn the impact that it has on those they care about can provoke people to want to change their behavior. For instance, the educator can share case histories of individuals who have lost a home due to poor financial management and were now homeless. The effects of homelessness on children can be shared (e.g. poor academic performance). Explaining the relative advantages of adopting certain practices/behaviors that can change their financial situation can motivate individuals to change (Rogers 2003). As an example, the educator can share examples of how previous clients who were in similar situations turned their lives around such as being able to increase their credit score which in turn helped them save money on finance charges. The key is to use practical examples that will have meaning to the target audience in an effort to personalize the potential benefits.

At this stage of change, rarely will people look for help, seek information or attend educational activities related to their financial problems (Seiling and Shockey 2006). Therefore, the information must come to them using mediums and information channels they typically see, hear and/or utilize. There are a host of educational strategies that can be used at this stage to raise consciousness, induce dramatic relief and environmental reevaluation, and promote relative advantages. These include web sites, web blogs, podcasting, email alerts/blasts, exhibits/displays, fact sheets, newsletters, as well as radio, television, and/or newspaper ads. Banners, flyers and other social marketing tools can also be used on public transportation or in popular community locations (e.g. cantinas, barber shops, beauty parlor, bulletin boards at religious institutions, etc.). For example, social marketing has been used to put health messages on the side of city buses given that the target audience frequently rides public transportation. The educator must assess which mode of information is culturally relevant for his/her target audience (Guion et al. 2005). Regardless of which mode is used, through powerful messages, the educator must help the individual internalize the need to change, which in the program development literature is referred to as evoking a felt need among the clientele (Boone, Safrit & Jones 2002; Boone 1992). The change desired at this stage is more cognitive in that the goal of the educator is to change the way individuals think and feel about their financial situation. Given that the individuals are not likely to attend an educational workshop or seminar, educators must use communication channels that the participants already access.

Evaluations at this stage of change could measure increased awareness of the problems and negative consequences associated with the undesirable behaviors or practices. Assessing whether program participants perceive greater benefits in changing behaviors and/or express increased interest in making changes could also be evaluation indicators that demonstrate they understand the relative advantage of the changes. Also, other indicators appropriate for this stage include the amount and type of information distributed (TOP Level1) and the number of public service announcements delivered, brochures disseminated, or other methods used to create awareness (TOP Level 2). An example would be the number of traffic/hits on the educator's financial education website or the number of downloads of podcasts. Another example is the circulation for a newspaper in which the educator placed regular financial education news articles. Finally, the educator could track the number of people reached with that information (TOP Level 3).

Contemplation Stage- Persons at this stage of change have acknowledged that they need to change and are seriously considering changing their behavior, but have not made a commitment to do so. Often times, this is the information-gathering stage where individuals are seeking information and help (Seiling and Shockey 2006). Self-reevaluation is important at this stage (Prochaska et.al. 1994). The individual must be in touch with his/her feelings about the behavior. Educators can help individuals envision what their life would be like with and without financial stability. For example, during the financial management classes, educators could help clients reach a "decisional balance" of pros outweighing cons in order to move clientele to the next level wherein they are ready to make the necessary changes. All of this is done to give individuals a more positive attitude towards beginning the work necessary to change their lives. Rogers (2003) is clear that complexity must be reduced and compatibility enhanced. Complexity refers to the degree of difficulty in understanding and implementing the desired behavior or practice (Rogers 2003). As individuals contemplate making changes, educators can reduce complexity by increasing individual's knowledge of key financial management concepts through practical, interactive, experiential education. The financial management workshops could include examples and testimonials from people who were in similar situations but managed to overcome their financial problems. This will help individuals understand that making the necessary changes will be difficult but they can do it too. In essence, up to this point intrapersonal factors have been addressed namely the individuals knowledge, skill, and attitude. This is where educators typically stop. Compatibility refers to the degree to which the desired practices or behaviors fit into the individual's objectives, philosophy and way of life (Rogers 2003). The ecological approach teaches us that interpersonal relationship factors can determine the level of compatibility. Thus, compatibility can be enhanced by helping individuals identify family, friends and/or other significant persons in their lives that can help them move from thinking about changing to actually making the changes. In this case, individuals are identifying a network of positive influences and support that will be needed as they make the changes.

Measurement at this stage could focus on perceived or actual knowledge gained about a host of financial management concepts (TOP Level 5). Perceived knowledge could be derived by self-report evaluation instruments in which the learner tells you whether they felt they gained knowledge. Actual knowledge gain could be assessed using a pre and post test wherein learners are asked questions about the content and must provide the correct response. Their answers are scored and pre and post test scores are compared. Assessment of actual knowledge gain is suggested as it prevents the "halo effect" in which participants want to please the educator because they like her/him. It also prevents participants from providing "socially acceptable responses." An educator could also measure changes in attitudes towards the management of their finances. Depending upon the focus of the education, evaluations could focus on attitude change such as the importance of: saving, paying bills on time, developing and using a budget, paying off credit card balance(s) each month, avoiding impulse purchases, and other financial principles that were taught during the classes. Also, educators could assess the extent to which learners feel they have the right information, are confident they can implement the changes and/or can overcome the difficulties involved with making the changes (complexity). Lastly, educators could assess whether they feel they have the resources and support systems necessary to implement the changes (compatibility).

Preparation Stage- At this stage, an individual intends to make the necessary behavioral changes or adopt the recommended practices. It is clear from decades of research on TTM theory that individuals at this stage must believe in their ability to make the changes (self liberation). It is necessary that the educator provides opportunities for the clientele to develop or enhance skills that gives them the critical competencies needed to make the changes. The educator should provide opportunities for the program participant to test or try out their skills as a part of the program (triability). Thus, the participant can be coached on ways by which he/she can improve or enhance the skill under the supportive guidance of his/her educator. For example, educators could offer a series of classes that give participants an opportunity to try out a skill in between the sessions such as creating and living within a budget, tracking spending, or other skills. An example of another effective educational strategy would be to have program participants develop what the authors call a "personal roadmap to achieving financial wellness." In this plan of action, guided by educators, individuals will outline the necessary steps that they can and will take as well as any "road blocks" or "bumps in the road" that can be predicted. Strategies will be developed for addressing those impediments to change. This proactive problem solving empowers individuals to prepare themselves to affect positive changes in their lives as they plan for the inevitable challenges that most likely will arise.

Social liberation is also important at this stage (Prochaska et al 1994). It involves constructively helpful relationships with others who will support the individuals' efforts to change. For example, the educator can identify past program participants who have applied the skills they learned and changed their financial situation for the better to serve as role models or mentors for current program participants. This can help individuals gain the confidence to take action in their own lives.

Evaluation at this stage could focus on the type of new skills that were developed or existing skills that were improved/enhanced (TOP Level 5). Developing a budget and learning to use financial management software are two examples of skills that could be measured. A more exhaustive evaluation could use pre and post skill tests and evaluate the level of mastery of the skill. This more objective measure of skill attainment and/or improvement would also eliminate the risk of the "halo effect" and "social acceptable responses" from participants.

Action Stage- At this stage, individuals are changing their behavior to better manage their finances. The TTM literature highlights the importance of individuals having "helping relationships" that provide support and encouragement which was discussed in the previous stage. It is also clear that educators should help individuals replace negative behaviors with more positive behaviors (counter conditioning). For example, if the individual deals with stress by shopping then the educator can help him/her identify other coping strategies. The educator should also provide recognition to individuals for making behavioral changes that can lead to a brighter financial outlook (positive reinforcement). This could include certificates of completion, awards, prizes, and the like.

The Diffusion Theory stresses the importance of observabilty which involves the individual seeing the practice implemented or viewing results of the practice. In addition to using past program participants as role models and mentors, educators can also have them share real life stories, and pre and post financial documents if appropriate, to show the brighter financial future they have as a result of implementing the recommended behaviors/practices.

Also, as promoted in the ecological approach, the educator should work with individuals to assess any institutional, organizational, cultural, community or policy barriers that impede or hinder behavior change. If barriers are identified then the educator can assist individuals in identifying strategies, link indiiduals to other resources, or in some cases, assume an advocacy role on behalf of individuals.

Evaluations at this stage could measure indicators such as the type and frequency of positive behaviors that were adopted or negative behaviors that were discontinued (TOP Level 6). For example, the educator can evaluate the extent to which the client is increasing savings, using a budget, paying down credit card debt, reducing spending, or a host of other desirable behaviors. Also, an educator can evaluate whether the individuals are consistently making the recommended deposits into their savings each month.

Maintenance Stage- The maintenance stage begins after individuals have put the changes into practice for at least six months. During this stage the educator is trying to help clientele prevent lapse and relapses. A lapse is an isolated mistake or a temporary slip back into old behaviors whereas a relapse is a complete setback that is longer term (Watson and Tharp 2006). It is important that the educator assist clientele in identifying the factor(s) that can trigger or precede a lapse or relapse (stimulus control). For example, one trigger for some is the gift giving holiday season because they grossly overspend using credit cards that place them deeper in debt. The educator must assist clientele in not only identifying the triggers, but also developing strategies to counter those triggers. One strategy could be the client setting up a holiday savings account with his/her bank to put aside a small amount of money throughout the year to cover gift giving expenses.

Also, the educator must provide periodic follow-up and additional support to the participant during this stage. For instance, the educator could build in an "accountability check-up" in which he/she, his/her program assistant and/or the assigned role model/mentor will contact the individual every three to six months during the first year to see how he/she is maintaining the desired behaviors and whether additional assistance is needed to avoid lapse or relapse.

Evaluation at this stage could examine consistency and longevity of behaviors that were adopted, modified or discontinued (TOP Level 6). Also, impact evaluations could measure the economic impact on the individual program participant and his/her family (TOP Level 7). For example, the educator could evaluate the increased saving, decreased spending as well as the dollar value of lowering interest rates, reducing debt or increased credit scores over time.

Table 1. A framework for designing, delivering, and evaluating behavior change focused educational strategies

Stages of Change	**Moving Clientele from one Stage of Change to Next**	**How Change is Adopted**	**Educational Strategies**	**Evaluation Strategies**
Pre-Contemplation	*Consciousness-raising Dramatic relief Environmental reevaluation*	Create awareness and interest Emphasize relative advantage Create awareness of how significant others might be affected	Exhibits/Displays Radio, television, and/or newspaper ad Fact sheets Newsletters Web sites Web blogs Podcasting Email Alerts/Blasts	Measure increased awareness, interest in changing, amount and type of info distributed, & number reached
Contemplation	*Self –re-evaluation*	Increase knowledge Reduce complexity Address compatibility Change Attitudes	Financial management classes, workshops, seminars that includes examples, testimonials, program results, alternatives	Measure perceived or actual knowledge gain, attitude and/or confidence change
Preparation	*Self-Liberation Social liberation*	Develop or increase skills Offer opportunities for trialability	Financial management skills training that include incentives, mentors & demonstrations	Measure skills & future intentions to change behavior

Action	*Reinforcement* *Helping relationship* *Counterconditioning*	Provide support and incentives Offer opportunities for observability	Develop goals and plans, provide tools, incentives, support	Measure increased support and perceived or actual changes
Maintenance	*Stimulus control*	Provide follow-up and support	Accountability check up & support	Measure long term impacts

Implications, Limitations, and Significance

The rationale undergirding the Transtheoretical Model of Behavior Change (TTM) Theory is that if educators can determine an individual's stage of change (technique called staging), then he/she can tailor education to the person's needs at his/her particular point in the change process. Combining this knowledge of their stage of change with the corresponding processes that help predict and motivate individual movement across stages, educators will be much more effective at facilitating behavior change among their clientele. The theory of perceived attributes component of Diffusions of Innovations (Diffusion) Theory provides insight into how change is adopted and what promotes adoption. The ecological approach brings in the environmental and societal factors that can influence an individual's behaviors. Taken together, all of these theories provide a more comprehensive understanding of behavior change. The conceptual framework outlined in this paper takes it one step further to incorporate examples of educational change strategies that relate to each of the processes and adoption promoting concepts at a given stage of change. Also, using the Targeting Outcomes of Performance (TOP) Model, the types of evaluation measures that would be most appropriate for the educational change strategies outlined for each stage of change is also provided. In this way, educators can not only select educational strategies that are most appropriate for a given stage of change but also determine the level of evaluation measures to use.

Financial education programs can vary by the setting, audience type, audience size, and the focus of the subject matter (Fox et al. 2005; Braunstein and Welch 2002). This conceptual framework can be used for educational programs that occur in any setting and with any type of audience. Fox et al (2005) further organized three categories of subject matter themes or topical areas for financial education which include educational programs directed at: 1) improving financial literacy by broadly addressing personal finance topics; 2) retirement saving and management; and 3) home buying and home ownership. The theoretical framework presented here can apply to any subject matter focus areas given that all require clientele to make behavioral changes/practice adoption to achieve ultimate outcomes.

The framework does have limitations in terms of the size of the audience. Some financial educators work one-on-one with clientele which is ideal for this framework. It would be relatively easy to identify the stage of change for a single individual then begin tailoring the educational strategy as outlined in the framework. However, in the event that educators work with small groups of individuals all at once, then conducting pre-assessments of readiness to change becomes more difficult, time consuming, and potentially more costly. One strategy to address this issue is for conversations (e.g. interviews) to be held with those individuals before the program is designed in order to assess their readiness for change. In an intentional behavior change framework such as the one outlined in this paper, this type of information becomes a critical piece of baseline data. These conversations also provide an opportunity for educators to learn more about the clientele their program will serve (e.g. learning style preferences, preferences for locations and time, etc.). It provides an opportunity to assess initial resistance or barriers to change as well. If interviewing is not feasible, then other data collection methodologies can be employed such as baseline data assessments using mail or web surveys. Of course, the methodology chosen must be available and accessible to the target clientele (Baugh and Guion, 2006). If the educator is working with large groups of individuals all at once, then another strategy would be to make sure he/she incorporates educational change strategies for all of the stages of change into his/her program design. Thus, regardless of an individuals' stage of change, the program will contain effective, targeted, research-based strategies that can help motivate and facilitate behavior change. Also, whether a certain size group is considered small or large is relative and situational. For example, an educator with a staff of program assistants may view 20 individuals as a small group given his/her ability to have staff assist with gathering the baseline information.

Another potential limitation of this conceptual framework is that it is not well suited for educational programs that occur in one session (e.g. one-day financial education course consisting of 6 hours). A multi-session program design would be best as it would allow the participants to practice behaviors, identify negative behavior triggers or barriers to adoption, and obtain some coaching, feedback and support. A multi-session design may not be feasible for certain populations such as highly transient individuals. There may also be an issue with attrition in multi-session programs for certain types of audiences. These are considerations that educators must address during program design.

In addition, this conceptual framework suggests follow-up after the program to determine if the behavior has been maintained. As with all follow-up assessments, it is always best to use personal versus impersonal follow-up techniques and objective evaluation measures of actual change instead of those that are self reported by participants. Each educator must weigh different follow-up strategies and evaluation methods to determine what is practical given his/her resources.

However, in the time of increased accountability for program outcomes and impacts, the significance of applying a theoretically sound conceptual framework can not be denied. This conceptual framework allows educators to tailor their prevention and intervention programs to an individual's readiness or stage of change. It further draws upon other theories to provide insights and strategies to educators on how to assist individuals in changing negative behaviors and adopting desired practices. All theories incorporated in this framework have been shown to increase the likelihood the behavior change and practice adoption will occur. Also embedded in the conceptual framework are evaluation strategies that educators can utilize to document their program outputs, outcomes and impacts in various ways.

As with any conceptual framework, there are strengths and weaknesses/limitations. Each educator must carefully weigh the pros and cons and make program design, delivery and evaluation decisions based on their target audience and available resources (i.e. time, money, expertise, collaborators/partners, etc.)

Conclusion

This article presented a research-based conceptual framework for understanding the: 1) process of behavior change/practice adoption, 2) types of change strategies and educational interventions that people need at different stages of change, and 3) evaluation indicators that corresponds to each stage of change. Using this conceptual framework, educators can apply four leading theories when designing and evaluating their programs. While this article examined behavior change in the context of financial management education, the conceptual framework presented can be adapted and applied broadly to entail many other subject areas within family and consumer sciences as well as other disciplinary fields of study.

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