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The Design and Development of an Online Education Program for Families of Trans Young People

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Introduction

When learning a family member is trans(gender), many families report having little knowledge or understanding of trans-related issues (Field and Mattson, 2016). Such a lack of understanding may compound challenging feelings such as confusion, shock, and grief and may make it difficult for families to support a trans young person. Internationally, it has been shown that education and information can help families of trans young people understand their own and their trans family member's experience (Hill and Menvielle, 2009; Sharek, Huntley-Moore, & McCann, 2018), with the internet in particular considered a beneficial source of information for families (Pullen Sansfaçon, Robichaud, & Dumais-Michaud, 2015). This increased understanding can lead to a greater acceptance of their trans family member and benefit the emotional and practical support that families may provide, impacting positively on the mental health and wellbeing of trans young people (Simons, Schrager, Clark, Belzer, & Olson, 2013; Yadegarfar, Meinhold-Bergmann, & Ho, 2014).

While education and information are likely to be of benefit to these families, there is a lack of available online educational resources to support them in their caregiving role (Riley, Sitharthan, Clemson, & Diamond, 2011). To address this gap in educational resources, *GenderEd.ie*, an online education program was developed to provide basic information to families of trans young people. A mixed-methods evaluation showed that this program has a positive impact on families, helping them gain trans-related knowledge (Sharek, McCann, & Huntley-Moore, 2019). The results of the mixed-methods evaluation have been recently published, providing a brief snapshot of the design and development process (Sharek, et al.,

2019). However, to date, little has been written in-depth about the process of designing and developing an education program that addresses the unique needs of families of trans young people. This article seeks to fill this gap by detailing the design and development process and in particular highlighting the contributions made by professionals, families, and trans young people to the educational resource.

Methods

Program Design

A learner-centered outcomes-based approach to program design guided the development of the program (Huntley-Moore and Panter, 2015). The strength of this model is that the curriculum design process begins with an exploration of the characteristics of the learners and their needs. On that basis, the learning outcomes are identified. The learning outcomes then provide the organizing principle for decisions about content selection, teaching and learning methods, and assessment. This arrangement of elements within the curriculum design process is known as constructive alignment, which is understood as the process of specifying learning outcomes and choosing the teaching and learning methods most likely to encourage attainment of these outcome (Biggs and Tang, 2011). In addition, it requires identifying assessment tasks that are most likely to encourage learners to demonstrate their achievement of the specified learning outcomes. Thus, the learning outcomes, teaching and learning methods, and assessment are all in alignment. The seven-step approach provides the key elements in module design within a circular model (Huntley-Moore and Panter, 2015). The key components are depicted in Figure 1. Within the model, evaluation is featured centrally, as it is an activity which is undertaken continuously as a means of revising each stage of the process in relation to the others. It is important to note that while the steps are presented sequentially in the following sections, the design process was much more iterative, with some

steps occurring concurrently, and with movement forwards and backwards between them. Ethical approval to design and develop the program was granted by the authors' institution.

INSERT FIGURE 1 HERE

Applying the Model

Step 1. Assess the Learners and the Learning Context

Step one occurred as part of the consultation during Phase 1 of the overall study. This phase explored families' trans-related education and information needs from the perspectives of professionals, family members, and trans young people. The target audience for the education program was identified as adult family members (18+ years of age) of trans children and young people (17 years of age or younger) in the Republic of Ireland. The findings from the consultation provided a crucial context for understanding both the practical education needs of families, as well as the emotional context in which they may be accessing the education program (Laurillard, 2002). The findings indicated that when families seek information related to trans issues and identities they may often be confused, feeling overwhelmed or grieving. Mortiboys (2012) proposed that learning is an emotional process as well as a cognitive one, and suggested that an effective learning environment seeks to create a positive emotional climate for learning. Therefore, it was also important to ensure that the emotional needs of the learners were respected, recognized, and understood, and that engagement with the educational resource did not contribute or add to any challenging feelings families may be experiencing.

In the context of this program, a number of strategies were used to help contribute to a positive emotional climate within the learning environment. For example, to ease any anxiety or worry about engaging with the program, clear sign posting was provided about how to use the program (a 'Before You Begin' video), what learners could realistically expect to learn from each module (learning outcomes), the content which was included in each module

(introduction videos), and learner maps detailing the learner's position within the program (described further in Step 4). It was also important to ensure learners felt a sense of control by giving them choice over when and how much of the program they accessed at any time. Furthermore, it was important that the program not overwhelm or frustrate learners. Hence, all content included in the program was pitched at an appropriate level, in small learning units, using appropriate and accessible language (described further in Step 4). In addition, throughout the program, the potential emotional difficulties learners may be experiencing were explicitly acknowledged, rather than sidestepped. It was hoped that by acknowledging learners' potential emotional concerns it would help them to feel recognized, respected, and understood (Mortiboys, 2012). Finally, learners were encouraged to seek additional emotional support by linking in with family support groups or other means of support.

Step 2. Identify Program Goals

Having assessed the learners' characteristics and needs, it was possible to formulate appropriate program goals that provided an overarching framework for the modules. The program goals are presented in Table 1.

INSERT TABLE 1 HERE

Step 3. Define Learning Outcomes for Each Module

The education program was divided into eight modules, with each module defined as "*the basic building block of a program of study*" (Huntley-Moore and Panter, 2015: p.7). The learning needs identified during the Phase 1 consultation were grouped into broad topics which formed the titles of each module (see Table 2).

INSERT TABLE 2 HERE

The next step was to develop a set of learning outcomes for each module. A learning outcome can be considered a statement specifying a desired change in a learner's knowledge, attitudes or behavior, or what a learner should know, feel or be able to do upon successful completion of the module (Huntley-Moore and Panter, 2015). According to Gagné (1985), establishing learning outcomes can also help motivate learners and enhance their interest in the module. For example, Table 3 presents the learning outcomes for Module 1 'Gender Identity Basics'.

INSERT TABLE 3 HERE

The first three learning outcomes are focused on the cognitive domain, specifying knowledge outcomes for learners. The fourth learning outcome ('understand why it is important to use appropriate language when talking to, with, or about your transgender family member') is concerned with impacting on learners' attitudes towards language related to gender identity. Other modules included behavior-focused learning outcomes, such as 'By the end of this module, you should be able to communicate with others about your transgender family member'.

Step 4. Select Module Content and Sequencing

Next, content for each module was selected and sequenced. In keeping with the constructive alignment approach, the learning outcomes for each module determined the selection of content. This was an iterative process, requiring drafting and re-drafting of both the learning outcomes and associated content to ensure alignment between them. Accessibility of the content was also an important consideration. Content needed to be easy-to-understand, jargon-free, and clear in order to meet the learning needs identified during the consultation. This reflects Clark and Mayer's (2003) personalization principle which asserts that people learn

better when words and text are in a conversational, rather than formal style, emphasizing the need for accessible, colloquial content.

Ensuring accessibility of content was a very time-intensive process as it often required synthesizing significant amounts of literature into clear, “*bite size chunks*” of information sufficient for the learner to easily process (Gagné, 1985; Gagné, Wager, Golas, & Keller, 2005). Clark and Mayer’s (2003) segmenting principle was applied during this step by separating the program content into eight individual modules and dividing the content within each module into individual sections or learning units. Where relevant information was not publicly available about a certain topic, for instance trans-related health or legal issues in the Republic of Ireland, the information was provided by TENI, a non-profit organization supporting the trans community in the Republic of Ireland.

The selection of content was also informed by the theoretical approaches underpinning the study. For instance, throughout the program, learners were presented with an understanding of gender based on the gender affirmative theory and model (Edwards-Leeper, Leibowitz, & Sangganjanavanich, 2016; Hidalgo et al., 2013). Learners were encouraged to view gender through the lens of this theory, which suggests that gender may be fluid and diverse, that gender development is complex, and that this is a natural, not pathological, phenomenon. Furthermore, in line with this theory, family members were encouraged to support their trans family member throughout the education program (Ehrensaft, 2011). It was hoped that the inclusion of gender affirmative content might facilitate participants’ development of their understanding in relation to gender, reflecting a transformative learning approach (Mezirow, 1991, 1994).

Reflecting the family systems theory, learners were encouraged to take a holistic view of the family and the trans young person, with content emphasizing a family-focused approach (Bowen, 1976, 1993). The importance of considering the impact that a young person’s trans identity may have on each member of the family, including the trans young person, their

siblings, and their parents was also highlighted. The human ecological theory was also reflected by program content highlighting the various systems in which the trans young person and their family may interact, such as education, healthcare, and the wider community (Bronfenbrenner, 1979, 2005).

In terms of content sequencing, some information was logically a pre-requisite for understanding other information. That is, it would be challenging for a learner to understand some of the information in certain modules without first understanding the information in other modules. As a result of this reasoning, a numbered sequence of the modules from one to eight emerged (see Table 2). A similar pattern emerged within each module itself, with the earlier module content scaffolding later content, reflecting the associative learning perspective which contends that learning is the result of building information, concepts, and competencies through a step-by-step logical process (Gagné, 1985; Gagné, et al., 2005).

According to Ebata and Dennis (2011), it is important to provide clear learner maps, signposting to the learner as to where they are in the program at a given time and to where they will be progressing. Helping the learner to situate themselves within the program was accomplished by numbering the modules one through eight and by including learner maps within each module which visually indicated where the learner was within the module. The learner map also allowed the learner to click ahead or back within the module depending upon their needs.

Complementing the learner maps, Clark and Mayer's (2003) signaling principle was applied by including cues about the organization of the program, such as introductions explaining the module layout and by using signaling words such as 'next' and 'final'. The program also included a 'Before You Begin' video which provided information to learners about how to use the program and progress through it. In addition to the eight modules, the website also had three separate pages, including 'Further Resources', a 'Support Services'

section, and an ‘About’ page. Providing opportunities for participants to gather additional information and support was considered essential in supporting the participants (Ebata and Dennis, 2011).

Within this step, a final synthesis and refinement of the modules occurred. Only content necessary to meet the learning outcomes was included and learning outcomes were added or modified as required. Finally, the modules were reviewed for accuracy, language, and tone. Having identified and sequenced the content and ensured that only that content which was necessary to achieve the learning outcomes was included, the next step was to select appropriate teaching and learning methods and identify available resources.

Step 5. Select Teaching and Learning Methods

In step five, the teaching and learning methods that were most likely to help learners achieve the learning outcomes were selected. In making these selections, two factors were considered paramount. Firstly, the extent to which a certain method may be likely to encourage a deep approach to learning and secondly, the extent to which it would promote active engagement (Anderson and Krathwohl, 2001; Hidalgo, et al., 2013). In developing the education program, the availability of resources also had to be considered. While it was relatively low-cost and simple to develop text content, the production of videos was far more resource-intensive. Furthermore, while the inclusion of more interactive elements (such as quizzes) was considered, the development was limited by financial constraints. Thus, it was essential that the selection of methods be considered within this specific resource context.

In keeping with the constructive alignment approach, the learning outcomes determined the selection of teaching and learning methods. For instance, the first three learning outcomes in Module 1 require the learner to have achieved a basic comprehension of the content (Table 3). The informational video was selected as the teaching method, which is comparable to a

traditional lecture format, and therefore appropriate for a learning outcome that only requires basic comprehension, rather than analysis, application or evaluation of information (Anderson and Krathwohl, 2001; Bloom, Englehart, Furst, Hill, & Krathwohl, 1956). Clark and Mayer's (2003) multimedia principles suggest that text combined with visual elements may enhance online learning, thus supporting the use of an informational video with subtitles (as compared to solely text on the screen). The information videos were further enhanced by implementing a number of Clark and Mayer's (2003) online learning principles, by the following methods:

- providing information about key terms in advance of videos (pre-training principle);
- including videos with a visual element, narration, and subtitles (modality principle);
- including only necessary visual elements, narration, and on-screen text (coherence principle);
- presenting text next to its corresponding visual element, rather than further away from it (spatial contiguity principle); and
- presenting text simultaneously with its corresponding visual element, rather than successively (temporal contiguity principle).

The informational videos included presenters from the trans community and personal stories from family members and trans young people were included throughout the modules. It was hoped that these personal elements would contribute to the program's sense of authenticity and relatability for participants, fostering engagement and reflection (Taylor, 2007).

Step 6. Define the Assessment

The education program was not designed as an award-bearing course. Rather, it was assumed that people who accessed the program were intrinsically motivated by their own personal interest in the material and its relevance to their lives rather than by achievement of a formal qualification. Furthermore, during the consultation phase, participants described how families could feel overwhelmed and emotional when first attempting to access information related to trans issues. While assessment can serve a number of purposes, such as providing

feedback to learners and determining the extent to which learners have achieved the learning outcomes (Huntley-Moore and Panter, 2015), within the context of this particular education program, any formalized assessment would be counter to the program's intended purpose. In this context, formal assessment may have caused participants to skip over content or even avoid the education program all together. Therefore, formal summative assessments, such as a quizzes, tests or essays which provide a mark or a grade, were not deemed appropriate. Each module, however, did include informal self-assessment activities which were designed to help learners achieve the module learning outcomes. These activities included reflections, discussions, brainstorming, and journal activities. Gagné suggests that such activities can help learners apply, retain, and transfer learning into their own situations (Gagné, 1985; Gagné, et al., 2005), while Mezirow (1991) highlights how critical self-reflection is a central facet of transformative learning.

Step 7. Conduct an Evaluation

Once the draft education program was complete, a survey evaluation of each of the eight modules was conducted. Four versions of the survey were developed for each of the four participant groups: education specialists, professionals, family members of trans young people, and trans young people. Participants were given both a copy of the module in the form of a Word document and a survey evaluation form. The survey included both closed-ended and open-ended questions and asked participants their views on various areas related to the module design. It also included a space for participants to write-in additional comments. The questions included on the survey evaluation forms were generated from the module design literature (Gagné, et al., 2005; Huntley-Moore and Panter, 2015). Advice from an educational specialist was also sought to guide the development of the evaluation survey. Each module was evaluated by at least one participant from each of the four participant groups.

All survey evaluation responses were grouped into five categories: positive comments; minor recommendations; major recommendations; recommendations outside the scope of the education program; and challenging or complex recommendations. Positive comments were those in which the participants praised the module or the overall education program. For instance:

“This is very well written, respectful and true to our experiences. This is going to help a lot of people. Thank you! <3” (Trans young people)

“I think your information will be extremely helpful to trans kids, their families and my fellow healthcare professionals. So, congratulations and very well done.” (Family member)

Some of the recommendations for changes were classified as minor. These included suggestions for word substitution or phrasing or adding information about an additional resource or support service. These minor recommendations required minimal changes to the education program and could be made in a relatively straightforward way. Some examples of these suggestions included: *“Use they instead of he/she”* (Trans young people) and *“Change learning outcome language to 2nd person”* (Education specialists).

Major changes were also recommended. These included developing new content or revising the layout of content. For instance, entire new sections of content related to hormone blockers, passport applications, and siblings were added as a result of evaluation feedback. On occasion, these changes necessitated revision of the module learning outcomes. Some of the recommendations for content were outside the scope of the program. While at other times, participants made suggestions for adding content that was already covered in other modules. Some recommendations were more complex and, at times, the various participant groups disagreed about particular aspects of the modules. A major recommendation that emerged was the importance of using more inclusive, less patronizing language throughout the program. The

professionals, in particular, recommended using more gentle language and avoiding sweeping statements. For instance, using words like ‘may consider’ versus ‘should’, ‘might’ versus ‘will’, and ‘some’ versus ‘many’. Two important comments from the professionals included:

“Issues with language – sometimes too hard/harsh, needs to be softer. Sometimes comes off as patronizing or condescending.” (Professional)

“I think and similar to other [module] specifications, the language directed at the parent is a little patronizing. I found in my role if you use this tone you may lose them and then there may be no support for the child.” (Professional)

These findings were reflected in family members’ feedback which emphasized the importance of using language that recognized the diversity of family experiences. For instance, while some families may be struggling in adjusting to their trans family member’s identity, others may not be. One exemplar comment was:

“The information needs to be balanced to account for those families that are aware of transgender and don’t experience any surprise when their child tells them they are trans.” (Family member)

Similarly, another family member suggested: “I think some of the information could benefit from being more neutral”. While one family member highlighted how they wanted “more reassurance” around trans issues “as this discussion of gender identity is quite scary”, another family member expressed their views:

“I feel that the information presumes that parents and families will struggle to come to terms with the knowledge that they have a trans family member. While I know this is the experience for many families, this couldn’t be further from our experience.” (Family member)

These quotes highlight the diversity of family experiences and provided the impetus for revising the language within the program to reflect and acknowledge such diversity.

Perhaps unsurprisingly, the trans young people in the evaluation were outspoken about the need for unconditional family support:

“Stress how as a family member you should support the trans individual and it's not a choice to support them.” (Trans young people)

While their concerns were acknowledged and valued, adding content that suggested to family members that they did not have a choice in supporting their trans family member directly contradicted recommendations from professionals and family members, with one professional suggesting the use of even *“softer language”*. In order to address this recommendation, it was necessary to consider the target audience for the education program: families of trans young people (as compared to young people themselves). Therefore, no changes were made as a result of this recommendation.

A number of trans young people also wrote that they felt *“very uncomfortable”* with the inclusion of the loss and grief model (Kübler-Ross, 1969), as they suggested this can be used by parents *“as an excuse to be unsupportive”*. While the young people’s concerns and their experiences were appreciated, the findings from the current study and international research suggest that some, although not all, families will experience feelings of loss and grief (Gregor, Davidson, & Hingley-Jones, 2016). Therefore, it was important to include evidence-based research and content, even if the young people did find it uncomfortable or challenging to their own experiences. Given consideration of these findings, content on loss and grief was included in the program.

Other trans young people made recommendations in relation to young children and gender identity: *“Just remind parents that young children can know they're transgender. Children do know themselves”*. This recommendation was made in relation to Module 3 ‘Life Stage Issues’.

No changes were made to the module, as the module content already encouraged parents to affirm and support a young child who asserts their gender identity. However, research suggests that some of these children will change their gender identification, suggesting it is important for parents not to make assumptions about their child's gender identity or long-term outcomes (Coleman et al., 2011). This is also in line with the gender affirmative approach (Hidalgo, et al., 2013).

These more challenging or complex recommendations were reviewed in collaboration with the researcher's supervisors and in discussion with professionals in order to gain their insight and views. The decision to make or not to make changes to the module content in response to participant recommendations was not always an easy or straightforward decision, and sometimes could be quite complex. Inherently, the researcher wanted to honor all the participants' recommendations, however, it was also important to ensure:

- that the education program content reflected the program goals;
- that there was alignment between all aspects of the program, between the modules and within the modules;
- that the program reflected the gender affirmative theory and model underpinning the program; and
- that the proposed recommendations were supported by evidence and research.

Re-Evaluation

Having redesigned all the modules based on the survey findings, the professional participants were invited to review the revised modules. It was not possible to include an additional evaluation with family and young people due to time constraints. At this stage, the professionals only suggested very minor changes to the module content, which were given verbally over the phone and through email. Once these changes were made and approved by the professionals, the education program design was finalized.

Development Process

The first author (DS) met on an ongoing basis with a web developer who assisted with the website design and managed the development. The development process was driven by the need for the education program to be as accessible by as many participants as possible and was informed by the National Disability Authority's Centre for Excellence in Universal Design's (2014) web accessibility guidelines. At all times, the primary aim of the development process was to help the learners achieve the learning outcomes of the program, rather than, for instance, enhancing the website design.

The development process also included a request for personal stories from families and trans young people about their experiences to include within the education program. Families and trans young people in local support groups were invited to participate. Several topics related to trans issues and life experiences for the stories were provided to participants. In order to contribute a written story, a participant had to be 18 years of age or over, living in the Republic of Ireland, and a family member of or a trans young person themselves. All participants were informed that excerpts from the written stories would be included on the education program website, and that no identifying details would be included. In total, eight adult family members and six trans young people provided personal stories.

A number of videos were also filmed for inclusion in the online education program. All presenters in the videos were volunteers aged 18 years of age and over who provided written informed consent for their video to be included in the online education program.

The education program was officially launched in May 2017 and is available at www.GenderEd.ie.

Discussion

This paper aimed to fill a significant gap in the literature by detailing the design and development process of an online education program, *GenderEd.ie*, which provides basic information to families of trans young people. The process was guided by a learner-centered, outcomes-based approach which kept the learners and their needs central to the design. Furthermore, design process was participatory throughout, involving professionals, families, and trans young people. Such participation was considered essential in ensuring that the program reflected the needs, views, and experiences of families and trans young people, allowing it to be more “*culturally responsive*” (Mertens, 2012: p.808). It was also important to ensure that a learning environment was created that encouraged participants to take a deep approach to their learning; that is, to create a learning environment that encouraged them to understand, apply and use the information in their own lives (Marton and Säljö, 1976). A variety of strategies were undertaken in terms of curriculum development to encourage deeper learning, such as:

- using a constructivist approach to encourage active engagement;
- ensuring constructive alignment of learning outcomes, content and activities;
- pitching content at a level appropriate to learner needs;
- not overloading learners with too much content but allowing learners the opportunity to choose the information they access and the pace at which they access it;
- giving opportunities for further reading in the area; and
- wherever possible, incorporating real-world assessments (Biggs, 1999; Gibbs, 1992; Meyers and Nulty, 2009; Ramsden, 2003).

The findings from this paper may be useful for those working in a number of areas, including healthcare, education, government, and community organizations that support trans young people and their families. It will be of particular interest to those who may be interested in developing a similar resource within their own area. Based on the experience of developing *GenderEd.ie* , it would be recommended for others to consider whether a learner-centered,

outcomes-based approach may be suitable for developing an education program in their area. It would be recommended to consider how such an approach could be applied, particularly how families and trans young people could participate in the design and development process. Based on the researchers' experience, it is also important to consider both the resources available to support the development of a program, as well as any restrictions. The development of this program relied on the good will, participation, and involvement of various stakeholders throughout the process. The vast majority were volunteers willing to share their expertise, experience, and feedback. It is recommended for others who are considered developing a program to capitalize on the resources, creativity, and willingness of those within the community in creating a program.

The design and development process was limited by the use of one approach to the education program creation and it is not possible to conclude how another approach may have impacted on the final program. The survey evaluations were also limited by a small sample size drawn from family and youth support groups. The greatest strength of the process was that it relied on a learner-centered, outcomes-based approach which allowed for the design and development to be driven first and foremost by the learners and their needs.

Conclusion

In this article, the design and development process of GenderEd.ie, an online education program for families of trans young people has been presented in detail. The design followed a seven-step process which involved a participatory evaluation including educational specialists, professionals, family members, and trans young people. This helped ensure that the program design was based on the needs, views, and experiences of the families and young people it aimed to support. The development of the online education program was highly collaborative and iterative, driven at all times by the need for accessibility. This article adds to

the literature by providing evidence of the design and development process of an education program for families – a process guided by families and young people themselves, adding their voices to this often overlooked area.

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Disclosure statement

The authors declare no conflicts of interest.

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Table 1. Goals of the education program

By the end of this program, the learner should be able to:

- identify and discuss key issues related to their trans family member;
- identify and discuss key issues related to being a family member of a trans person;
- reflect on their own and their family's experiences;
- communicate within the family about issues related to being/having a trans family member;
- address any challenges which themselves, their family, and trans family member may be facing; and
- know where to access additional supports and further resources.

Table 2. Modules within the education program

Module number and name	Broad module topics
Module 1. Gender Identity Basics	Gender identity issues generally, including terminology and the differences between gender identity and sexual orientation
Module 2. Family Basics	Family issues, including how families feel upon learning they have a trans family member and what they can do to support themselves and their family members
Module 3. Life Stage Issues	Specific issues for pre-pubescent children and trans adolescents
Module 4. Social Transitioning	Social issues, specifically around how to ‘come out’ to others in the community and what ‘social transitioning’ means
Module 5. Health and Wellbeing	Issues around both mental and physical health and how to access healthcare supports
Module 6. Schools and Other Educational Settings	Educational issues, including how trans children and young people can transition in school
Module 7. Legal and Administrative Issues	Legal and administrative issues, including what the important legal documents are for trans young people and how to apply for them
Module 8. The Future	Issues around the future and how a trans child or young person can have a happy and fulfilling life

Table 3. Learning outcomes for Module 1 ‘Gender Identity Basics’

By the end of this module, you should be able to:

- understand key terminology around gender identity, including the term ‘transgender’;
- distinguish between gender identity and sexual orientation;
- identify how many people in society may be transgender; and
- understand why it is important to use appropriate language when talking to, with, or about your transgender family member.

Figure 1. Seven-step approach to program design

