April 8th, 2011
Amanda Paul (1002647282)
Consultant Project

Dr. Shawn Bullock
Technology in Adult Education
UOIT – M.Ed
The Centre for Hope

Amanda Paul (100264782)

April 8th, 2011

Table of Contents

Current State of the Organization ........................................................................................................... 3
The ADDIE Model ..................................................................................................................................... 4
  Analysis .................................................................................................................................................. 4
  Design .................................................................................................................................................. 5
    Increase Independence ......................................................................................................................... 6
    Create Innovative Programs ............................................................................................................... 7
    Enhance Communication ................................................................................................................... 10
  Development .......................................................................................................................................... 11
  Implementation ........................................................................................................................................ 12
  Evaluation ............................................................................................................................................ 13
Future State of the Organization ............................................................................................................... 14
Academic References ............................................................................................................................... 16
Professional References ............................................................................................................................. 17

Current State of the Organization

The Centre for Hope is a day program for adults with all forms of cognitive and physical disabilities. When an individual turns 21 they are no longer allowed to stay in the publically funded school system. Those who are not able to work and require supervision during daytime hours will often end up in the care of programs similar to the Centre for Hope.
The program currently is able to meet the needs of 35-40 individuals on a daily basis. The cost incurred by the members ranges depending on level of need. The average member will pay $30 daily or $150/week to attend. The government does provide limited subsidization for supplies and special projects. There are also eight fully paid for government sponsored spots that qualifying members will compete for as they become available.

The Centre for Hope (Hope Inc.) is located in a central urban hub and currently rents space operating from inside a converted restaurant. The centre employs five full time salary paid staff, as well as three part time personal support workers (and many community volunteers). The current operating budget runs at $500,000 CND; the most significant expense is human capital followed by rent and costs associated with maintaining plant assets.

The reason that a consultant has been hired is because Hope feels as if their current level of technology use is not meeting the needs of the members, or reaching the organizational goals. As technology continues to progress Hope inc. understands that better and more valuable options are available; however, on their own they do not know how to go about making the changes or selecting the best values to meet their needs.

**The ADDIE Model**

I will utilize the ADDIE model in order to better understand the specific needs of Hope inc. Based on their perceived needs I will make suggestions of different tools and resources that can be used to enhance the organization’s effectiveness. This section will conclude with brief discussion of methods that can be used to test program effectiveness, and make ongoing changes as required.

**Analysis**

Due to the nature of the program, and the cliental served this organization faces much different challenges then the average small business. When analyzing the company the first element considered was the learners and the specific learning characteristics. Based on our initial consultation with program staff, we have found there to be a wide variance between learner’s cognitive and physical abilities. Hope Inc. is designed to support essentially any individual who post high school graduation requires additional support. This means that the demographic served ranges widely. It is important to note that some of the members as a byproduct of their primary challenges are highly resistant to change in circumstance. This will play a role in both the design and implementation of a new program.
The second factor considered as part of our analysis of the current state of technology. In terms of technology, the selection and utilization are limited. Hope Inc. does have a small computer lab with 8 functional computers available to members for daily use. Computers and technology are currently an “alternative” or one of the choices available to member during independent activity time. Occasionally volunteers from the community will come in and teach members new skills or programs; however, the knowledge is not practiced and is therefore not sustainable.

When considering adult learning it is critical in terms of our analysis to indicate the need for members to be treated at an age appropriate level. We need to be aware of this factor to avoid falling into the pitfall of believing that there cognitive and emotional ages are connected. Analysis indicates that a longer more gradual learning curve is recommended in order to increase the likeliness that implementation will be successful.

The final consideration of the analysis was the budget and timeframe required to ensure success. We understand that finances are by no means unlimited and throughout our design will consider methods of reducing costs. As part of the cost however we will suggest higher quality more durable products that are more resilient and do not need to be replaced or repaired as often. The total timeline suggested for project completion will be 2 years with a maximum cost of $50,000 (inclusive).

**Design**

The reason that a new learning program is being designed is so that Hope Inc. can better reach their goals and serve their members needs. This fact will remain the most central factor as new options explored and technology considered.

The three primary goals of the organization are:

1. *Increase Independence and Roles within the Community*
2. *Create Innovative Programs for Teaching Educational and Life Skills*
3. *Enhance Communication and improve the ways Members Interact with the world*

Hope Inc. ideally wants to train their members to become self sufficient and teach them the skills they require to be successful in the community utilizing the most minimal of supports. I am confident that through the design of a new learning program Hope will be better able to achieve their goals.
Increase Independence

The first goal of Hope is to increase independence for the members. After looking at all of the different technology available on the market and reconciling this to the needs of the members, I have come up with two suggestions for technology that can be utilize to reach this particular learning goal.

**GPS – (Global Positioning Satellite)**

| Cost | Approx – $150 each for standard Car Model GPS |
| Learning Purpose | Utilizing GPS technology will give members more freedom and staff more confidence. The GPS devices can be tracked online so that members can be quickly located. In addition a paging feature on some of the more advanced devices can be used to page members. For example if a member is in the community on a volunteer placement staff can monitor their location. When it is time to return a message can be sent. If the message is not responded to, staff can easily locate the member and assist them in their return. |
| Drawbacks and Limitations | The most significant difficulty with this piece of technology is that it needs to remain with the member in order to be effective. If it is left on a bus or at a placement the device without the member will be tracked. |
| Intended Learning outcome | Within the 2 year full implementation the final learning outcome will be that members are able to learn to use the functions and use the device for its full intended purpose. If a member has a new place to visit we ideally want them to be able to input the address and follow the map until they find their destination. |

**PLN – (Professional Learning Network)**

| Cost | Free – Minimal start up cost |
| Ongoing expense to pay for the staff member and the time required to track progress and maintain contacts |
| Learning Purpose | PLN is strongly suggested to be one of the first and most strongly promoted learning tools. The purpose of the Learning Network is to expand the number of contacts that can benefit both the staff and the members. The PLN can be used to contact either professional or community contacts. Staff can become familiar with, and use social media to follow different Drs and industry professionals in order to become aware of the latest research and relevant trends. |
| In addition, the PLN can be built up within the context of the community. Staff |
can stay connected with organizations and individuals who are interested in supporting the members. Also the PLN can be used to encourage more interest and awareness for HOPE inc by having a strong constant social media presents.

**Drawbacks and Limitations**

The most significant drawback is the amount of time and effort required constantly to maintain a healthy and active learning network. If updates and communications become less frequent contacts have a tendency to lose interest and will drop off. This could potentially lead to lost opportunities.

**Intended Learning outcome**

By the end of the project the goal is to allow the PLN to be built up strong, and to gain its own momentum. It would be ideal to have experts in specific areas come in and volunteer to teach members skills. Also we would love to see the PLN used to give feedback to staff about the progress of the members within their community placements. That way when they are on their own with minimal staff assistance both the member and facilitator are connected with the Centre for support.

---

**Create Innovative Programs**

The goal of creating innovative educational processes is a key foundational element of Hope inc. Not all members will progress quickly or have the ability to integrate into the community; therefore having strong academic and educational learning is critical to meeting the needs of all members. Of all of the goals this one is the most widely explored because the needs of every single member are in some way reached through ongoing learning and understanding.

**PLN – (Professional Learning Network)**

In addition to using the PLN to increase independence in the community, I feel there are also strong ties to the creation of new elements, and the daily operations of programs. By networking with others within the industry and the community, we can synergize to make the educational programs even better. The PLN can be used to network with educational specialists all over the world; each professional brings with them their own set of skills and experienced that can be utilized to teach different aspects of understanding to the members. In addition we can use community contacts to encourage volunteerism. Interested volunteers can participate in the learning process by utilizing their expertise to teach specific skills to the members. We would be open to anything from one time seminars to repeat volunteers who would educate the members in art or technology or even everyday life skills.

**IPads/IPods –**
Amanda Paul
Consultant Project
April 2011

<table>
<thead>
<tr>
<th>Cost</th>
<th>16GB IPad - $519cnd</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Apps: Range from free – $4.99 (Average)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Purpose</th>
<th>Of all of the different learning elements suggested within the design plan the ipads are the most versatile. Members can use this technology for everything from playing games to running educational applications. The Ipads can be customized and are easy to change. Therefore as members develop new interests or their skills increase the technology can change and grow with them.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One of the best aspects of this technology is that it puts the learning in the hands of the members. Instead of investing in a smart board or other teacher driven technology I thought it was critical to select software the members could touch and use either with or without support.</td>
</tr>
<tr>
<td></td>
<td>In terms of the specific learning function of the ipad, the options are as limitless as the over 1Billion different apps downloaded last year. Almost anything you can consider using technology for can be completed on the ipad. The screen is big and designed to be touched so members with motor control issues are able to equally participate in activities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drawbacks and Limitations</th>
<th>There are two main potential drawbacks to this type of technology. The first one is the rate of obsolescence. IPads/Pods seem to have a very short period on the market before the next model is released. The goal would be to keep the technology for 3-5 years and during that period many new and more powerful versions will emerge.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Second, there are a lot of different functions on any type of “I” technology. Even with limited functions being customized onto the machine we are still concerned that it may be overwhelming and thus additional teaching and support may become necessary.</td>
</tr>
</tbody>
</table>

| Intended Learning outcome | The goal is to have the ipads customized to the specific needs of the members and implemented fully into both educational and community based practices. It would be ideal for members to be able to access the machines and use the technology to fulfill specific academic and life skill tasks. The other goal is for the members to continually advance beyond the current programming. Because apps are inexpensive and readily available members can learn without restrictions. As soon as a program is mastered or a goal is met, the staff can continue to rotate and select new programming for the machines. |

<table>
<thead>
<tr>
<th>Wii/Wii Fit -</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Cost</th>
<th>Wii - $249.99/unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fit Board - $99.99/unit</td>
</tr>
</tbody>
</table>
### Games/Accessories – Prices Vary

#### Learning Purpose
This technology is multi-faceted and can be customized to meet the needs of members with either developmental or physical challenges. The overall purpose of the technology would be to get members up and moving.

Individuals with Autism and Down Syndrome have a high probability of also suffering from low muscle tone. Using the Wii system is a really fun way to encourage physical activity and practice strengthening weaker muscle groups in a safe encouraging environment. For individuals suffering from more severe physical conditions games can be simplified so they too can feel successful.

The Wii system offers a wide variety of activities so each member’s interests can be represented. Using the game with a traditional remote control the games can be played for the purpose of strengthening cognitive abilities and practicing problem solving skills.

#### Drawbacks and Limitations
More physical challenges are going to require staff supervision and additional safety considerations. Given the variance between learner’s abilities it is possible for a member to become discouraged when they see a peer’s progress in contrast to their own.

Keeping a wide variety of different games and accessories can become an expensive task. Each new game requires additional add-ons and more expensive pieces. Also members will require training on all new pieces to be sure they are using them properly and safely.

#### Intended Learning outcome
Ideally members will progress to a point where they can turn on a game and play either independently or with a friend without staff support. Each member will have a list of personal fitness and strength goals that they will work on until they have accomplished the task. When the task is completed they will progress to the next task in an effort to gain physical strength and fitness abilities. The desire is for skills learned on the Wii to become transferable into daily life.

### Screencasting -

<table>
<thead>
<tr>
<th>Cost</th>
<th>Limited trial version is Free</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Professional Version is $14.99/yr for Jing</td>
</tr>
</tbody>
</table>

#### Learning Purpose
Capture small incremental pieces of knowledge and share them in a way that is easy to understand and encourages a gradual learning process. Due to the fact that most members struggle with new learning having a program like a screencaster (Jing/Camtasia) is an important tool for gradual and ongoing learning.

Staff can take a new learning concept like how to utilize an app on the iPod, or
function on other technology and use the software to teach step by step process. Each new screen can be captured/animated and shared taking into account the specific learning needs of the members.

**Drawbacks and Limitations**

- **Minimal – Slight learning curve for first time use**
  
  In most cases limitations of functionality have more to do with the comfort of the user then the options within the software.

**Intended Learning outcome**

- Eventually members will start to adapt to this type of learning curve and the technology adoption process will go quicker and require less steps. In addition the number of training sessions will ideally decrease overtime. Instead of needing five trainings on the same element members will learn the same level of skills in only 2-3 encounters.

---

**Enhance Communication**

The third goal of the Centre for Hope is to enhance the communication of the members. The following suggestion give different technology alternatives that will encourage members understanding while at the same time providing new and alternative ways to ensure the members needs can be communicated and understood.

---

**Reading Pen**

<table>
<thead>
<tr>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Pen - $250</td>
</tr>
<tr>
<td>Set of 10 - $2300</td>
</tr>
</tbody>
</table>

**Learning Purpose**

- Members would use the reading pen to augment their academic studies. The reading pen would be used to scan written text and read the instructions to the members.

- Members can use the pens to decipher written messages, and to hear words they do not know, or cannot pronounce read out loud. Members can also use the pens to look up words and meanings, they can hear the definitions of new terms, or find additional insight on pre-obtained vocabulary.

**Drawbacks and Limitations**

- The reading pen works most successfully when text is computer generated. If a member has poor writing and tries to use the pen to decipher their work or the work of a peer it may become a frustrating experience.

- Also utilizing the pens properly require patients and a steady hand. If members lack the fine motor control or the cognitive ability to use the pen properly the message the pen reads will be disjoint and confusing.

**Intended Learning outcome**

- The goal is to reduce dependency on technology by increasing literacy. As members learn how to use the technology properly and become familiar with
specific ideas they will no longer depend on the pen for support.

Over time the pens can be used to support members as they tackle more challenging texts, or be used to check the fluency and understanding of their own work as a content proofing tool.

**Proloquo2go – In combination with Ipads/Ipods**

<table>
<thead>
<tr>
<th>Cost</th>
<th>$189/USD will purchase a license for 3 devices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learning Purpose</strong></td>
<td>Proloquo2go would be implanted into the learning program in order to augment/enhance communication skills. Based on the organizational goal, members would use the program to make communicating with others an easier and less stressful process. The overall learning purpose of the tool would be to increase understanding through repetition and exposure to specific words and ideas. Members would be able to select pictorial representations of their intended message and press the word to communicate that message. In addition seeing the constant combination of word and picture would enhance non-reading member’s awareness of the written word. The prolonged and repetitive practice would hopefully guide them one step closer to being able to read on their own.</td>
</tr>
<tr>
<td><strong>Drawbacks and Limitations</strong></td>
<td>The program requires time and effort to be customized with specific phrases that the use would need. If the phrases are not pre-programmed, looking up individual thoughts and ideas can take time. This will make the ability to have a conversation or share ideas via the technology a slow and challenging process.</td>
</tr>
<tr>
<td><strong>Intended Learning outcome</strong></td>
<td>The eventual ideal outcome would be that the dependency to the technology would diminish as the member’s knowledge and confidence increased. The technology for some members will become a perpetual tool; for others the goal would be to wean them off gradually using the tool only to supplement their own speech and communication.</td>
</tr>
</tbody>
</table>

**Development**

The development of the programs will be based on finding ways to support the design phase and ease the transition. In order to do this I have suggested:

- Network and create focus groups with key stakeholders; this will allow for a better needs assessment and allow key potential areas of issues to be targeted and addressed prior to becoming an issue.
- Visit other similar programs and learn from their past challenges and successes
- Hire professional contractors who will be able to guide the transitional phase and be responsible for technological aspects of change.
- Become familiar with literature and past studies researching successful transitional planning for individuals with challenges.

By completing these steps prior to making a significant investment, the goal would be to prepare all parties involved of impending changes.

### Implementation

The programs implementation will take place in 5 steps:

The implementation process is slow in order to account for the gradual learning curve of the members and potential resistance towards change.

<table>
<thead>
<tr>
<th>Step</th>
<th>Specifics</th>
<th>Time Frame</th>
</tr>
</thead>
</table>
| BUILD   | - Build and centralize the PLN contacts  
          - Learn how to use technology to better manage and communicate with contacts  
          - Reach out further and search for groups and individuals with similar interests  
          - Connect with valued industry professionals who have relevant expertise.                                                                 | Starting Immediately |
| UPGRADE | - Hire a professional to upgrade and defragment current computers  
          - Become familiar with system requirements and limitations                                                                                                                                          | Within 1-2 months |
| PURCHASE | - Shop for best available value  
          - Make selections based on needs and cost  
          - First round of purchasing includes 10 IPads, 2 GPS devices, and a Wii/Wii Fit Unit  
          - Additional purchasing will take place after testing and evaluation                                                                                                                                  | 3-4 months        |
| EDUCATE | - Teach staff how to use the technology  
          - Come up with a plan to teach members slowly one skill at a time  
          - Allow for ongoing practice and continued demonstration                                                                                                                                             | Within 6 months – 1 year |
| SYNCRONIZE | - Start to allow higher functioning members use of basic functions in the community setting                                                                                                           | 1-2 years         |
As members learn more increase functions
Test and make changes according to needs

Complete implementation (including all revisions) should take place within a two year period. It is important to note that each step is dependent on a variety of factors including; the success of the prior step as well as able funding to finance continued development.

**Evaluation**

Unfortunately, due to the nature of the project there are no real numerical indicators; this will prevent us from quantifiably being able to test the effectiveness of the program. Alternatively we still are able to consider all forms of qualitative feedback, and as a result listen to concerns or suggestions and make changes accordingly. In order to do this effectively I have set up four main qualitative evaluation indicators that will be monitored in order to determine success.

**Daily Observation** – This will involve both pre and post observation of daily activities. We will be looking at factors such as time taken to complete various tasks and level of frustration experienced during the process. Results will be compared, contrasted and utilized as an indicator of success.

**Member Enjoyment** – This aspect will be considered by witnessing general level of enjoyment while interacting with technology, as well as conversations with members regarding what they enjoy vs. do not enjoy about using the technology as part of daily practice.

**Staff Feedback** – Staff are the front line workers who interact with both the members and the technology perpetually. Talking to staff and asking for their input and expertise will provide valuable insights as to what is working well, vs. areas that continue to need to be developed or changed.

**Community Response** – the true success indicator and potentially even the most significant factor, is when technology can be used successfully within the community without needing significant support or intervention. We will know we have been successful when members are able to utilize their devices properly within the specified parameters. In addition we will be very open to hearing all forms of feedback from our community partners.

The evaluation of the program will happen on a continual basis. We will start from the very first stage of the implementation plan to make anecdotal observations and monitor responses from all shareholders. More intense qualitative feedback/focus groups with staff will take place initially at regular intervals during early implantation, and as required once the system is in place.

The purpose of evaluating the program is to receive the feedback necessary to make calculated
corrections and changes. Each bit of feedback will be considered and as changes are made, they too will become subject to the same evaluation procedure.

**Future State of the Organization**

Throughout the design phase the final goals and state of the organization have been considered. In this section we will consolidate these ideas and give further details as to what an ideal future for Hope Inc. would entail.

In two years time Hope Inc. ideally will be utilizing a wide variety of integrated technologies in order to reach their goals. Both the staff and the members will have been trained in the proper operation of the technology and will be confident enough to operate the technology with little to no support required. Each member will have the equivalent to an Individual Education Plan (IEP) and have a list of personalized goals and very specific technology related steps in place to complete these goals.

An average day for a member with moderate challenges will look something like this:

<table>
<thead>
<tr>
<th>TIME</th>
<th>ACTIVITY</th>
<th>TECHNOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00am – 10:30am</td>
<td>Academics</td>
<td>Member will collect their IPad off the shelf and set to work on a list of specifically select programs to challenge their intellectual goals</td>
</tr>
<tr>
<td>10:30 – 11:30am</td>
<td>Life Skills Seminar</td>
<td>A volunteer who is either part of the PLN or community network will volunteer their time to teach members about a specific area of interest.</td>
</tr>
<tr>
<td>12:30pm – 2:30pm</td>
<td>Community Volunteering</td>
<td>Members will collect a GPS device or Specific ipod unit and take it to their volunteering destination (Flower shop, museum etc). Volunteer facilitators will tweet when member arrives and continue to update Hope Inc. on their progress.</td>
</tr>
<tr>
<td>2:30pm – 4:00pm</td>
<td>Independent Learning Centers or Small Group Teaching</td>
<td>Activities will be set up around the room; members can select a specific activity and work on improving a skill. During this time members may be pulled aside in small groups to continue practicing a skill or be introduced to a new function/aspect of technology</td>
</tr>
</tbody>
</table>
Part of my consulting suggestions for Hope inc. includes continuous/ongoing evaluation of the technology, and flexibility in terms of making changes and monitoring results. When considering the state of the organization in two years time after the final learning program is in place it would be ideal to see everything in operational order and the technology having a positive impact on meeting the goals of both Hope and their members. Most likely the revisions being made to the use of technology for individual members will be an ongoing process. By the end of two years, we will see the number of revisions required on the decline and significant major changes having dropped off almost completely.

Hope inc. is an organization completely devoted to the continuous developments of adults within their community. It is my sincere goal as their consultant that these recommended changes have a positive impact on the daily operations of their programs. I wish them all the luck and success in the future.
Academic References


Professional References

Autism Matters – Publication by Autism Ontario


Living with Autism – Publication by Kerry’s Place