Curriculum Development:
Universal Design and the Natural Human Senses

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Abstract

How can social competence and social skills training for the exceptional student be developed and fostered through curriculum in a post-secondary college program? This project addresses this question in part by looking at how social competence has been negatively impacted by a lack of social skills development in the student of exceptionality in a special education college program. Current special education literature, my own teaching experience and an overview of Universal Design and the natural human senses are included. Evidence was found that indicated that the lower the social competence levels of the student of exceptionality enrolled in post-secondary special education college classrooms, the less likelihood of academic, personal or work success for that student. How to positively provide opportunities for the development of social competence levels of the adult student of exceptionality and the implications of the research on curriculum and instructional design is the focus of this project. This paper suggests that social competence can be developed by combining specific Universal Design principles with the natural human senses and concretely building theory and practice into the interpersonal communications curriculum.
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CHAPTER 1

Introduction

In my experience as a teacher of adults of exceptionality at Thompson Rivers University’s (TRU) Work Skills Training (WST) program, I have consistently observed that the students I instruct suffer from varying degrees of low social competence. This can and does negatively impact their overall ability to function in the academic, personal and work areas of their lives.

The majority of WST students typically demonstrate an impaired, or a diminished capacity to display cooperative and positive behaviour when communicating with others in class or at work. How to remediate the observed low social competence levels of the adult student of exceptionality in the TRU-WST program, particularly respecting the social skills domain became the impetus for my Masters Project work.

Definitions:

Exceptionality: To properly interpret the project, key terms must be defined. In describing the students I use the term exceptionality. Throughout this study I refer to adult students and learners who have a wide spectrum of learning problems. This includes but is not limited to disability, dysfunction or simply, learning difference. I refer to all of these students and learners as students of exceptionality.
The Problem Statement

Over a three year teaching period I consistently observed and noted low social competence levels in the majority of adult students in the WST program. In particular, I watched students constantly struggle with demonstrating appropriate and effective social skills. I also saw the negative impact this had on them academically, personally and in their work experiences. Many WST students generally struggled to master the most basic of interpersonal communication skills.

For example, starting a conversation with a simple hello seemed difficult for most students in the program. They appeared either too shy or too awkward to initiate informal conversations. It seemed that many students either did not know how to use, or did not care about using social rules. If an instructor or workplace supervisor was not in the classroom and available to facilitate introductions they generally did not occur. I also noticed that the students experienced specific problems with social perceptions, both of themselves and of those around them. Often a student would misinterpret or completely miss the social cue of a fellow student which in turn would cause other students to display inappropriate, unexpected, or odd behaviour.

Further exacerbating the student’s perceived lack of effective social skills was the accompanying lack of self confidence and positive regard for self and others that resulted. This combination of across-the-board low social competence levels creates multiple obstacles for the adult of exceptionality both in the classroom and also in their work experience.

For WST students to succeed and participate fully in their individual academic, personal and work lives they need to feel good about themselves. It is difficult for the student
to do so when they constantly report feeling incompetent or odd. Socially, the majority of adult WST student reports seeing themselves as failures, or as they negatively describe it as “weird”.

My classroom experience of observing these expressions of low levels of social competence by the students was also noted by my predecessor, Jay Goddard. Goddard, who successfully initiated and ran the WST program between 1990 and 2001, confirmed the biggest challenge for students has always been low social competence levels. Goddard said this was especially evident in the majority of students he instructed, who demonstrated an obvious lack of social skills training. Specifically Goddard indicated that, in his experience, the adult student of exceptionality in the WST program “lacks in self-confidence and basic social skills development” (Goddard, personal communication, 2005).

Two other current program colleagues who supervise the workplace component of the TRU-WST program concur with Goddard’s opinion that low social competence, particularly low social skill levels continues to be a problem for the WST students. Both colleagues indicate they have repeatedly witnessed this in the WST students, particularly at their work placements. This is displayed as low self-confidence and low self-esteem levels in the students. These deficits continue to be major challenges commonly facing the student of exceptionality in the TRU-WST program both academically and in their employment. It is unfortunate that these deficiencies diminish student capacity to recognize that they have reason to be confident in themselves and they should be able to regard themselves as individuals with unique abilities and capacities. Even a rudimentary awareness of their own strengths and abilities could have a positive impact the students’ ability to have more social success in all aspects of their lives.
A cursory look into the individual functioning of typical TRU-WST students may help to show how low social competence and impaired social skill levels manifest themselves among students in the WST special education program. Following are three examples of adult students of exceptionality who have successfully participated in the TRU-WST program and who are generally representative of the typical students attending the program.  

*Individual students, social competence and social skills deficit*

The three students depicted in these examples have very distinctive learning differences. They also have unique and distinctive personalities. However, they are characteristic of the adult of exceptionality student in the WST program and they represent the eclectic mix of students that commonly participate in the TRU-WST program. The common denominator is an overall deficiency in their social competence levels.

Although low social competence can critically affect the social skills domain of the typical WST student and negatively impact them overall, it does not have to ultimately signal failure for the students academically, personally, or at work placement. With appropriate and effective intervention both improvement and remediation are possible for the WST student.

*Student A: Autistic Spectrum Disorder* - This female student -aged 19- is bright, articulate and capable academically, but she is socially inept and extremely difficult to manage in the classroom. In her early education she was formally assessed as “autistic” and was also identified as a hands-on, tactile learner. This student tended to be a loner who appeared to have very little, if indeed any, desire to have connections with other human beings. Socially isolated from her family and peers she had to be carefully supervised and managed in the classroom due to her unpredictable behaviour. At times she could be
profoundly difficult to deal with and she was prone to explosive outbursts and negative behaviour.

Her strength was an incredible drive to succeed. She had dreams, she had goals and she was ambitious. When her head and hands were simultaneously engaged she could concentrate and focus on the task at hand. Ultimately she found her niche in bookkeeping at which she became very proficient.

Although socially she had incredible difficulty participating appropriately both in a small circle as well as in the larger classroom, this student was eventually successful. Student A’s greatest challenge in the classroom would present itself when certain specific words like “food”, “cats” and the “World Wrestling Federation” (WWF) were mentioned. Upon hearing these terms her attention would be drawn compulsively into what would appear to be a dimension of her own. At times she would spin out of control talking incessantly and inappropriately about what food, cats and the WWF meant to her. People in the room would tend to feel uncomfortable, to move away, if possible, and avoid having to interact with her. Fortunately, Student A had academic skills that allowed her to graduate from the WST program and go on to realize a lifelong dream to live semi-independently in the lower mainland. She also successfully entered a specialized bookkeeping and accounting program delivered at Douglas College (BC).

Student B: Deaf-FASD - This young First Nations man was profoundly deaf but simply refused to wear a hearing aid. Because he was extremely shy and reserved he was very quiet both inside and outside of the classroom. A gifted artist, he could draw remarkably well and his printing might be considered an art form. As a First Nations student he had close
family ties and he was well connected both in town and on the reserve. He appeared to enjoy relatively healthy and appropriate family relationships.

In the classroom and at his work placement this student appeared attentive but generally he refused to participate in class discussions or activities. He tended to operate in social isolation while at school. Student B rarely spoke to anyone in the classroom, whether the individual was an instructor or student. Basically he did not socialize with anyone unless he was forced to do so. However, when he did participate he was polite and appropriate. Other students however, had little response to his contribution. He spent class time meticulously doing his work, or drawing. Although he displayed acceptable manners and he would attempt to answer questions when prompted, his responses were minimal.

Some of the other WST students were not comfortable with his apparent deference. In spite of this, he demonstrated remarkably good hands-on work skills and was one of the few students who was able to get a job after graduation.

*Student C:* Spina Bifida (Low IQ 62) - An 18 year-old female student with a high school leaving certificate, who exhibited high social needs and a strong personal desire for human connection. Initially she was extremely resistant to entering the TRU-WST program; however she eventually spent three years in the program and successfully graduated. Academically, she was a very low functioning student and was illiterate in spite of having spent twelve years in school. Academically, she functioned at a pre-school level.

Although dependent on parents and caregivers for basic human care needs, Student C was extremely social and definitely wanted to connect intimately with others. In her family of origin she was very well cared for and raised by a very loving and supportive family. Her parents had high expectations of her. She was expected to act appropriately, to be reasonable
and to do her best. In most circumstances she tried to do so. Like her parents, she too appeared to have high expectations both of herself and of those around her and this was especially true socially. She desperately wanted to make friends, she needed to be connected and she was very clear about her strong desire to do so. Upon entering the program she appeared fearful, agitated and uncomfortable. She seemed profoundly angry about having to continue going to school and she was highly vocal about her discontent. Fortunately, she recognized another student in the WST classroom whom she had previously known from an earlier school situation and this somewhat softened the transition for her.

Knowing a fellow student made a huge difference for her personally and socially; she connected with this former acquaintance and promptly forgot her anger and anxiousness about the new classroom situation. In spite of extreme physical disability, Student C worked hard and applied herself. In particular, she became a great social leveller in the classroom. She was honest in her communication and genuinely appreciated classroom dynamics. She was very curious and liked to be adventurous in the classroom. Often she would be the first to try a new experience; role play, for example. She genuinely liked to socialize and she was constantly trying to find ways to extend classroom discussion.

Student C also spent inordinate amounts of time and energy trying to divert the class’s attention from academic subjects because she knew they were her weakest areas. While this student appeared to have high social needs and a strong desire for connection, her social skills were quite limited. In her interactions with others she was often stubborn, sullen and defiant about what she wanted to communicate. She did not seem to observe and understand the social cues of others.
Student C's perceptions of herself and other students were often inaccurate or incorrect. For example, she would often commiserate with other students in class about feeling misunderstood. She was personally and socially impaired and dysfunctional; she was also remarkably good at feigning understanding and personal capacity. However in spite of low social competence she succeeded in the WST program and graduated.

*Common denominators of low social competence and WST students*

Individually and collectively, the three students demonstrate the affects and effects of low social competence levels. The following specific problems have been demonstrated:

a) a lack of social skills training and development,

b) the accompanying social isolation it can cause,

c) an inability to form meaningful and lasting relationships, and

d) difficulty in securing gainful employment due to social impairments.

The three student profiles share these common denominators with their WST peers. Low self confidence and low self esteem result in social isolation affecting all aspects of the student's lives. The TRU-WST special education student is not unique, nor are they alone in this plight. Low social competence levels are also commonly experienced by other students in special-education college programs throughout British Columbia. For example exceptional students in the Job Education and Training Program(JET) in Quesnel, British Columbia also commonly experience low social competence levels. As a professional social worker and direct liaison with the Jet program students through my work at the Ministry of Children and Families (MCF), I personally worked with several JET students who suffered low social competence and the resultant interpersonal difficulties associated with it.

*Social competence levels, social skills deficits and other special education college programs*
Lack of social skills and difficulties in social interactions with others has been identified as a commonly found characteristic of many adults with learning disabilities (Hazel & Schumaker 1989; Mellard & Hazel 1992; Smith, 1987). An informal canvas of British Columbia post-secondary special education programs comparable to that of the TRU-WST program (e.g., Camosun College ASE, College of New Caledonia-JET, Douglas College ASE, Kwantlen College ASE, Selkirk College ASE, and Vancouver Community College ASE) indicated similar patterns of interpersonal communications dysfunction and difficulty for the typical adult student of exceptionality. It appears that the generalized low levels of social competence experienced amongst students of exceptionality in similar special education college programs is common. Several of the programs canvassed indicated that this is directly related to a lack of concentrated, long-term social skills training and development within their individual programs.

Existing programs of this type are typically short-term. A specific query regarding specialized interpersonal communications curriculum for the adult student of exceptionality in the special education classroom was also included in the canvass. It was noted that to date there have been no unique, or specific interpersonal communications curriculum developed and delivered for the adult student of exceptionality. Generally, the common instructional practice within comparable programs has been to utilize interpersonal communications materials designed for the general public. These materials are adapted by the program instructors in an attempt to meet the unique and diverse interpersonal communication needs of college-age adult students of exceptionality.

However, in my experience as an instructor in the WST adult special education program I have found both this instructional method and the existing materials insufficient
for the needs of the students. This lack prompted me to consider creating and developing a unique interpersonal communications curriculum specific to the specific needs of the exceptional adult students. It was my feeling that interpersonal communications curriculum could be used to remediate WST students' social competence levels. Although an earlier the intervention for all students is understood to be the best practice, both socially and academically, intervention at any point on the interpersonal communications continuum can be useful. “Because children with language and communication disorders are at risk for academic and social failure it is important that their difficulties be identified as early as possible” (Kuder, 2003, p.10). Unfortunately for the typical WST adult student, early intervention either did not occur, or it does not appear to have been particularly effective. TRU-WST students report “horror stories” of social isolation, dismal relationships and much failure and frustration at not “getting-it” socially. Social failure often becomes a self-fulfilling prophecy for the student of exceptionality.

The specific kinds of social skills reported to wreak havoc with adult success for the special education learner of exceptionality may include, but not be limited to the following:

- perception of facial expression and verbal cues
- use of language and social conventions
- vocal monitoring
- skills in asking for and receiving help
- body awareness
- organizational skills
- personal space (boundaries)
- mood swings
• overreaction
• depression

Development of effective social skills plays an important role in the life of adult WST students in preparing for and achieving a successful and affirming life. But how can this be accomplished if students are plagued with overall low social competence levels? As adults can they be self-supporting? Will they function in their community without supervision? Are they able to live in harmony with others? These are common questions and concerns that particularly affect persons of exceptionality.

Overall, the literature respecting students with learning disabilities and exceptionality indicate that education should be concerned with helping students succeed, particularly as they become young adults. Success means working to effectively increase social skills, thus increasing social competence levels in preparation for adult life in the community at large. The remediation of social skills deficits becomes critical as this particular deficit appears to be a solid predictor of whether or not a person of exceptionality will go on to enjoy a satisfying and fulfilling life without major social complications. A study by Strain and Odom (1986) concluded that deficiencies in social skills best predicted significant and lasting consequences for adulthood. One possible way to combat or avoid these negative consequences is to ensure that social skills training components are built into the overall curriculum design and delivery.

Curriculum, social competence and social skills deficits in the classroom

When I began teaching the TRU-WST program, there was no specific interpersonal communications curriculum in existence. Similar to other province-wide post-secondary special education programs for the adult student of exceptionality, all that existed was a
generic mix of traditional and mainstream interpersonal communication resources. These materials would be adapted or modified according to the instructors' perceptions of the particular needs and requirements of their special needs learners.

Individual special education program instructors throughout British Columbia indicated that they typically developed their own materials as required, and that they considered the practice of devising adaptations to program materials and program delivery as a general and accepted practice. I found this instructional method both unsatisfactory and somewhat disrespectful of the students I was instructing. I did not find it particularly helpful to me as a supporter or builder of communication capacity in the students nor did it appear to enhance student social functioning. As an instructor I also experienced frustration with the obvious lack of interpersonal communications resources made available that were specific to the exceptional learner. A further frustration I experienced with these existing resources was that they reflected content that was predominantly American. Problems would arise due to using materials that did not accurately reflect the experiences of adult students of exceptionality in a Canadian context and setting within special education programs.

Classroom methods attempted

For a number of years I had successfully facilitated assertiveness training workshops and social skills development training sessions for adults. Therefore, I decided that I would develop curriculum for the TRU-WST students starting with basic assertion skills.

In the first semester I repeatedly witnessed the adult students having serious – and in some cases, severe – communication difficulty and impairment. For example hearing, speech and physical mobility were problems to varying degrees for the majority of students in the classroom. One student was legally deaf, another student had a serious speech
impediment and another was wheelchair bound. Physical and social distance between students caused instructional as well as communication difficulty, as did many of the emotional and mental immaturities inevitably displayed by some WST students. Generally the students did not act in a friendly manner towards one another inside or outside of the classroom. Some students ate their lunches alone, or simply left the building altogether. It seemed the latter was preferred. Often when students did interact it was born out of nervousness, frustration or anxiety and much of the interaction was not positive, nor was it encouraging. For the first several weeks of the WST program I used instructional time for troubleshooting and sorting out individual and group squabbles that often seemed to me childish, or trite. Trust was nonexistent in the classroom. Students did not appear to trust themselves, others in the class, nor my instruction. I had to start at the most basic communication level by encouraging students to simply work at getting to know one another. This was difficult as the adult student mix in the classroom was definitely not conducive to doing so. Because the WST students are at such different communication and social competence levels it was difficult to effectively and simultaneously deliver instruction to all the students in the classroom while also attending to specific and individual student needs. Often students declined to participate, or seemed uninterested in participating at all.

Awkwardly, and very slowly over a period of several weeks I saw students gradually begin warming toward one another. This began with simple prompts like saying “good morning,” “hello,” or any simple acknowledgment as students arrived in the classroom. Instructionally, I stuck to the delivery of functional academics in an attempt to neutralize the classroom atmosphere for the students. This helped them initially in becoming more physically used to one another. Students could work in close proximity without feeling
threatened, but if they needed help I could assist them, or ask another student to do so without causing a major classroom disturbance.

At approximately eight weeks, I noticed a slightly positive communication shift in the majority of the students in the classroom. Students appeared more comfortable and familiar with one another. However, it was well into the winter semester before I saw a dramatic and positive overall shift in student communication within the classroom. It took several months of daily routine in class together before the WST students became routinely engaged with one another on a more personal and informal basis.

I examined the literature on social competence, social skills training and the accompanying developmental components and incorporated many of them into instruction at every level. I also continued to adapt the interpersonal communication and social skills instruction materials available. I built ample time and opportunity for social skills practice and reinforcement into all program components in an effort to provide the much needed communication practice students required.

It seemed that for the WST student to actively participate and "get-it", on-the-spot adaptation and re-design of curriculum and instruction was critical. I found that the mandatory two-hour daily communication skills classes were not adequate nor did they provide the students with the reinforcement they needed to improve communication skill and ability. Over two full semesters I continued to build in additional interpersonal communication and social skills strategies and components into instruction. Slowly but steadily students improved in their overall communication ability as instruction was delivered. This prompted me to further and more seriously consider developing specific interpersonal communications curriculum for the WST student of exceptionality.
I felt it was critical and necessary to build in across the curriculum ongoing social skills training, development and practice into all aspects of the WST program and particularly within the extant course structures. Further, I also felt it was absolutely necessary to simplify the WST program. Instructionally, I focused on building student strengths without denying students' obvious limitations. I wanted to avoid seeing students re-experience shame and doubt about their capacity or capability.

As I continued to build on and observe students practice appropriate social skills within all of the required WST course structures, I saw gradual and concrete benefits in their overall interpersonal communication effectiveness. For example, students routinely began to pair up with one another without being asked. Some students also began exchanging phone numbers with one another while other students began spending more time socializing with one another outside of the WST classroom. I also tried to increase student effectiveness by adapting and delivering a stand-alone unit of Social Skills Training (SST).

This is common practice in special education college programs like WST (e.g., College of New Caledonia – JET) I discovered that, as Gresham, Sugai and Horner (2001) had indicated, SST can have both weak and limited effects. That is, in the WST classroom social skills training was not in-depth or comprehensive enough to be effective. In my teaching experience I found it was far more beneficial to build SST components and their accompanying practice into all program course requirements on a daily basis at every possible level.

One example of how this was successfully done is illustrated by the TRU-WST Networking class. Community presenters attend the class and deliver information to students on a wide variety of subjects of interest that are employment related. Over a three-hour
period students would interact informally by asking questions, thanking guests, engaging in discussion points, offering feedback and fully interacting with the presenters. This encouraged social skills development and also provided students with ample opportunity for both concrete practice and reinforcement of social skills. This instructional method and practice was extended to all TRU-WST required course structure including numeracy, literacy, communications, computing and work experience. Although it may appear to be a somewhat non-traditional method it proved effective and beneficial for the WST students.

Generally, I found in my teaching practice of the WST program that traditional teaching methods, along with traditional curriculum and instruction were ineffective in the context of the special education classroom for the student of exceptionality. Special needs learners require curriculum and instructional content and context that are specific to their unique and diverse interpersonal communication needs. Traditional curriculum and instruction does not always allow for, or build in the flexibility needed for delivery, practice and reinforcement that is often required for communication success in the special educational classroom.

*Low social competence levels, impaired social skills function and the WST classroom*

Low social competence and social skills training deficits have been identified as constituting two major challenges facing the adult student of exceptionality in the TRU-WST program. These challenges continue to negatively impact students academically, personally and in their employment pursuits. This has been especially true in the WST program, an employment training program for learners of exceptionality with learning disabilities and learning difference. Developing and delivering unique and specific interpersonal communications curriculum for the adult of exceptionality in the WST college program is a
clear recognition of the value and inherent worth of the student it serves. In developing a specific interpersonal communications curriculum, remediation is far more likely to be effective and successful. If the specific curriculum developed can enhance and improve social skills deficits it can also improve overall social competence levels by increasing and augmenting interpersonal communication skill and ability.

Chapter Two

Literature Review

The apparent lack of social competence, and in particular the low social skills functions of students with exceptionality, is relatively well documented. This is especially true of the research on children with both specific and non-specific learning disabilities and exceptionality who have been extensively and widely studied. For decades, research was focussed almost exclusively on children with learning disabilities and the difficulties that they experience with academic skills (Smith, 1989). In the 198’s “there was a greater awareness of the fact that social skills were also an area of difficulty for many of these children” (Johnson, 1995, p.1) The literature contains much research specific to children with learning disability or exceptionality, and the resultant academic and personal difficulties that accompany those disabilities (Johnson, 1995).

This is not the case in terms of the experience of the interpersonal communication skills impairments and difficulties of the student of exceptionality in the special education college classroom. The literature specific to this topic is relatively new and somewhat scarce. However, some of the literature that is available is clear in defining and determining a clear distinction between social competence and social skills both as functions and also as
characteristics (Gresham, Sugai & Horner, 2001). Regardless of the distinction, overall low social competence resulting from social skills deficit continues to plague and challenge the adult students of exceptionality in the TRU-WST program.

Research conducted by Gresham, et al., indicated that “… many students with specific learning disabilities exhibit substantial deficits in social competence” (p.332). They go on to articulate three specific distinctions regarding these deficits. First, the researchers emphasize that there is an important difference between social skills and social competence as terms. In their view social skills are the specific behaviours that an individual uses to perform competently or successfully on particular social tasks (e.g., starting a conversation, giving a compliment, entering an ongoing playgroup). Further they assert that in their opinion social competence is an evaluative term, or outcome based on a social agent’s judgements, given certain criteria, indicating that a person has performed competently on a social task. “In sum social skills are behaviours that must be taught, learned and performed whereas social competence represents judgements or evaluations of these behaviours within and across situations” (Gresham, et al., p. 333).

In Gresham, et al.’s article, a meta-analysis (a quantitative means of reviewing studies of treatment outcome) was applied to the Social Skills Training (SST) literature. The outcomes of the analysis are from both a narrative, and a quantitative review basis that indicated SST can produce both small and relatively large effects on social competence functioning. While a meta-analysis may imply a weak empirical effect, (it is guided by practical experience and not theory), Gresham, et al. indicated one conclusion that may nonetheless have strong implications for practice and the overall instruction of SST: “… social skills training for individuals with high incidence disabilities must be more frequent
and intense than has occurred in most studies” (p. 341). Social Skills Training often consists of a total of thirty hours of instruction and practice and SST is delivered once a week over ten to twelve seeks. This is ineffective for the WST students as they require more intensive and comprehensive overall social skills development training. A second distinction made by Gresham, et al. is that “social skills intervention also must be directly linked to the individual’s social skills deficits—be they acquisition deficits, performance deficits, fluency deficits, or a combination of these” (p. 341). Acquisition deficits refer to the absence of knowledge for carrying out specific skills under optimal conditions, or a failure to discriminate which social social-skills are appropriate in certain circumstances. Performance deficits represent skills that are in the person’s capability, but are not performed at acceptable levels in specific situations. Fluency skills deficits develop, or arise from a lack of exposure to sufficient and skilled models of social behaviour, insufficient practice of a skill, or low rates and inconsistent delivery of reinforcement of skilled performances.

Determining which type of social skills deficit is operative in the student of exceptionality is helpful when developing effective curriculum for special education. Knowing where to logically start with curriculum and instruction is key to the success of the design of appropriate interpersonal communications curriculum for the student of exceptionality in the special education context. The third critical distinction Gresham et al. made regarding Social Skills Training (SST) analysis is that it should be delivered with “more frequency and intensity” than it has been in the past. This may make an appreciable difference in successfully re-mediating social skills deficiencies and thus improve overall social competence levels for the student of exceptionality.
So, the question then becomes how to successfully and effectively inject and integrate SST into the WST interpersonal communications curriculum. This can be accomplished if the curriculum is specifically and uniquely designed to meet the multiple and diverse special communications needs of the adult of exceptionality it is meant to serve at all levels.

Universal Design (UD) is one such theory and practice that concretely applies the unique and diverse contextual needs of the student of exceptionality to curriculum and instructional design specific to the special education classroom.

**Universal Design**

Universal Design (UD) is “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.” (Burgstahler, 2002, p.1). According to the Centre for Universal Design (1997),

In terms of learning, universal design means the design of instructional materials and activities that make the learning goals achievable by individuals with wide differences in their abilities to see, hear, speak, move, read, write, understand English, attend, organize, engage, and remember. Universal design for learning is achieved by means of flexible curricular materials and activities that provide alternatives for students with differing abilities. These alternatives are built into the instructional design and operating systems of educational materials—they are not added on after-the-fact. (n.p.)

There are seven principles underlying UD, they are; (a) equitable use, (b) flexibility in use, (c) simple and intuitive use, (d) perceptible information, (e) tolerance for error, (f) low physical effort, and (g) size and space for approach (The Centre for Universal Design, 1997). I found three specific UD principles to be particularly applicable and useful to interpersonal
communications and social skills training curriculum development for the adult of exceptionality in the TRU-WST classroom. These three principles are described in the following section.

*Principles of Universal Design applied to curriculum*

The first principle was that of equitable use. In design terms it allows for marketability and use to persons of diverse abilities. An example of this might be a website that is designed so that it is easily accessible to everyone, including students who are blind and using text-to-speech software.

Flexible use is the second UD principle I use in the design of interpersonal communications curriculum for the TRU-WST classroom. This design principle accommodates a wide range of individual preferences and abilities which is conducive to the student of exceptionality. One example of flexible use might be a museum which allows visitors to either read or listen to the description of contents in a display case.

The third UD principle that is useful and applicable in developing specific WST interpersonal communications curriculum is simple-intuitive use. Use of the design is easy to understand regardless of the user’s experience, knowledge, language skills, or concentration level. Science lab equipment labelled simply with control buttons might be a good example of an application of this principle.

Using these three specific UD principles of equitable, flexible and simple intuitive use in combination with their accompanying and underlying instructional methods of inclusiveness, physical access, delivery methods, web pages, interaction, feedback, and provision of multiple means for students to demonstrate knowledge was critically important to the successful design of the curriculum project. One advantage in employing UD
principles throughout the curriculum design is that it demonstrates a learner centred instructional focus. A disadvantage of injecting UD principles into the overall curriculum might be the additional preparation and instructional workload it can cause special education instructors.

Implementing and integrating UD allowed for the creation, development and delivery of unique interpersonal communication and social skills training specific to the diverse needs of the adult student of exceptionally in the WST college classroom. Universal Design is a paradigm first developed in the field of architecture to make architects aware of the wide variety of types of people who need to be served by their built environments (Harrison, 2004).

*Universal Design and the natural human senses*

In combination with UD, the other major resource tool I used to design and develop both Communication WORKS and Module (5) SENSES is Ackerman’s (1990), *A natural history of the human senses*. In combination these tools provided the diversity, flexibility and creativity which the interpersonal communications curriculum required. Ackerman contends that all communication, and therefore all learning, is filtered first through the natural human senses—not the brain. This perspective and her research provide a useful paradigm shift and unique framework for both WORKS and SENSES, in particular. Utilizing UD principles in combination with Ackerman’s unique perspective provided the built-in accessibility, diversity, and opportunity that the curriculum and instruction for all TRU-WST adult student learners required. The building blocks of accessibility, diversity, and opportunity were directly built into the interpersonal communications curriculum design overall; they were not add-ons, or after thoughts.
Injecting Ackerman's perspective into the WST interpersonal communications curriculum has definitely been a paradigm shift, but it has also been largely successful. Both Ackerman's perspective and subsequent application of the natural human senses to learning provides students with new and alternative ways of knowing or communicating. For many adult students of exceptionality, knowing, communicating what they know, or how they know what they know has been difficult if not impossible. Students often report thinking that their brain is their biggest problem and obstacle in their failure to "know". Students also often report thinking that if they just had a different and better brain they would know, or could know, better. It has not occurred to many adult students of exceptionality that they may have resident within them alternative and different ways of communicating and thus learning or knowing.

While some WST students indicate they can accept on some level that their brain does not operate optimally, or efficiently, these same students appear to have little or no acquaintance with their own personal and human senses. Introducing and designing interpersonal communications curriculum that fully appreciates and integrates the natural human senses into it opens up another avenue of possibility and opportunity for improving and building students social competence levels. Within the TRU-WST program and specifically for successful and effective design and development of interpersonal communications curriculum and instruction I have found that what works most effectively for the adult student of exceptionality is the ability to be inclusive, learner centered and most importantly, flexible.

Creating genuinely authentic curriculum and instruction that is equitable, flexible, simple-intuitive in both theory and practical application can help remediate social
competence levels. Curriculum designed and delivered inclusively and flexibly in combination with the natural creative capacity of the natural human senses makes instructional sense for the adult student of exceptionality in the special education classroom. The application of UD principles in combination with the natural human senses allows students "the chance to be heard and seen, in a manner in which they do not feel intimidated, ultimately instils confidence and stronger feelings of self-worth" (Morris, 2002, p.70).

Chapter Three

*Communication WORKS and Module (5) SENSES*

This project is concerned with designing and delivering specialized curriculum content that provides positive opportunities for the development and enhancement of the social competence levels of the exceptional student in the special education classroom. Within the curriculum project this was accomplished by using the specific UD principles of equitable, flexible, and simple-intuitive use in combination with the natural human senses of sight, sound, taste, touch and smell. Both WORKS and SENSES are introductory communications curriculum concepts and models; SENSES is the fifth and final module contained within WORKS.

*Introduction to Communication WORKS*

*WORKS* is a practical, hands-on concept and model that contains curriculum that is designed and developed uniquely by combining the Universal Design principles of equitable, flexible, simple-intuitive use with the natural human senses. Contained within *WORKS* are five complete curriculum modules that meet TRU-WST course requirements. The five generic Level I and Level II course requirements are: (a) Numeracy and Literacy, (b)
Communications, (c) Networking, (d) Computing, and (e) Work Experience. This course structure parallels the required course content inclusive of the functional academics of English, Math, Communications, Computing, Networking and Work Experience.

*WORKS* was designed and developed as an introductory interpersonal communications manual and concept. Instructionally the entire focus of *WORKS* curriculum content is on discovering learner strength and passion, pumping up interest, and providing effective interpersonal communications training, particularly enhancing social skills levels. This is accomplished within the curriculum and instruction both by fully integrating and also appealing to the natural human senses of the student of exceptionality in the communication process. Both of these models, *WORKS* and *SENSES*, in particular, are specifically designed and developed with the goal of increasing overall social competence for the student of exceptionality in the TRU-WST classroom. This is accomplished by improving upon and continuing to build social skills level and capacity directly through interpersonal communications curriculum content and instruction.

*Introduction to Module (5) SENSES*

The fifth and final module, *SENSES*, is also an introductory interpersonal communications model and concept contained within *WORKS*. This fifth module is one example of how curriculum content and instruction can effectively combine UD principles with the natural human senses. This combination may result in the successful remediation of social skills, thus improving the encompassing social competence levels of the student of exceptionality in the TRU-WST program. *WORKS* and *SENSES* both as concepts and models are inclusive, learner centered and learner driven curriculum and instruction. The overall curriculum content and instructional focus within both *WORKS* and *SENSES* was
designed deliberately to reduce complexity. Simplifying content and instruction for the adult student of exceptionality is one positive first step that can result in successful remediation, or improved social competence levels of students of exceptionality. An example of this is the written communication of the typical WST student. Many students of exceptionality struggle with comprehension problems, particularly reading and writing the English language. Typically the WST students deplore having to write, they often give up without much effort, telling themselves they failed before so they are destined to fail again. For many WST students this has become a self-fulfilling prophecy. When students experience this writing frustration they are offered alternative ways to express their thoughts. They are not required to read aloud (thus avoiding embarrassment) and they can simply discuss orally what they have learned, or perhaps use artwork.

Applying UD principles to the natural human senses

How does the application of specific UD principles of (a) equitable, (b) flexible, and (c) simple/intuitive use in combination with the natural human senses remediate, or improve the low social competence levels within curriculum and instruction? First, equitable curriculum by definition must be fair to all the students of exceptionality that it aims to serve. For content to be both successful and effective it must attempt to meet the unique and diverse needs of all students of exceptionality that it is meant to serve. The UD principle of equitable use attempts to ensure this fairness principle is fully incorporated into the curriculum by building accessibility for all students, directly into the original design so that it is equally available to everyone regardless of skill level or ability.

Second, an effective curriculum for the student of exceptionality must be flexible. Flexible use within and throughout the design is the true capacity of the curriculum to
accommodate wide ranges of preference and ability that is essential to overall success and effectiveness. The third UD principle directly applied to the design and development of SENSES was simple-intuitive use. This principle ensures an effective curriculum design because it insists on simple, easy to understand, easy to apply content regardless of a user’s experience, knowledge, language skills or concentration level. This is absolutely critical for the student of exceptionality in the special education classroom context if they are going to successfully remediate or improve their communication competence levels.

The three UD principles of (a) equitable, (b) flexible, and (c) simple-intuitive use in combination with the natural human senses of sight, sound, smell, taste and touch provide a creative and practical curriculum content and context that increases social skill capacity. It can do so because the whole curriculum design and delivery has built-in diversity, authenticity and multiple ways of exploring and enhancing social skills capacity, thus increasing student social competence. The overall objective of the SENSES curriculum and instruction is to encourage the TRU-WST student to build and enhance self-awareness. In doing so students will more successfully engage, participate and express themselves personally, academically and in their work experiences.

SENSES was specifically designed with the human senses as the focal and starting point in learning and communicating. The lesson plans contained within SENSES provide students the opportunity to participate and explore diverse and meaningful ways of learning and communicating. One example of this can be found in the third lesson plan on smell in which students explore and discover several different ways that include the physical, mental and emotional means to do so. Students receive information handouts, they watch a video on the olfactory sense (smell), and they both actively and hands-on investigate their sense of
smell with lift and smell patches, a veritable smorgasbord of various smells on display in the classroom. Students are able to choose what and how they want to learn in this setting because the information is delivered in several different ways including lecture, visual presentation, discussion format, question and answer but the main focus is on student participation and interaction. The specific objectives of: (a) acceptance, (b) building, and (c) connecting contained within SENSES curriculum and instruction are naturally parallel to the Universal Design principles of equitable, flexible and simple-intuitive use. Both the outlined objectives and the UD principles employed serve to encourage, support and promote self-awareness for the exceptional student in the WST special education program. They also provide the instructional means to improve and remediate social skills development. It is hoped that both SENSES and WORKS as curriculum can provide the necessary and additional social skills training development required to remediate and improve overall social competence levels.

Finally, this curriculum project was designed and developed specifically with the adult student of exceptionality in the special education classroom in mind. It is the specific overall objective of the curriculum design to encourage, support, and directly affect a student's ability to form effective and positive working relationships both within the classroom and also in their employment pursuits. Students can level up in terms of their social competence functioning by improving and enhancing their individual and collective interpersonal social skills without being judged, labelled, or unfairly categorized. The intent of this curriculum project has been an attempt to address the low social competence levels of adult students of exceptionality in the TRU-WST program specifically by working to
improve and enhance the wide and encompassing social skills deficits of the students of exceptionality in the special education classroom.

Chapter 4

Conclusion and Recommendations

It is hoped that this curriculum project can provide positive opportunities for the development of social competence for the exceptional student in the special education classroom. The project suggests that students' social competence levels can be enhanced and improved by concretely building theory and practice into the interpersonal communications curriculum. It is further suggested that combining the Universal Design principles of equitable, flexible and simple-intuitive use is a natural starting point in the development of such a curriculum. Both Communication WORKS and Module (5) SENSES are introductory curriculum models and concepts. They have been designed and developed out of a need to provide effective and appropriate development of social skills training for the student of exceptionality. This has been attempted by building as many social skills training elements into the entire frameworks of both WORKS and SENSES as is possible.

The curriculum project also suggests that competence levels and social skills are inextricably linked. Therefore, if effective interpersonal communications curriculum is the desired outcome, it must contain the elements and characteristics within the content and context that serves to build on and enhance communications competencies. Both the unique and diverse communication and learning needs of the exceptional student must be intentionally and directly built into the original curriculum design and delivery. These cannot be afterthoughts or add-ons because to so may cripple or deflect the actual intent of the curriculum.

In designing and developing this curriculum the intent has been to address the social competence needs of exceptional students in the TRU-WST classroom. It is hoped that this introductory material can be added to and build onto future curriculum development projects. It is also hoped that these materials will be shared with other special education programs and instructors in the service of the exceptional student. It is also my intention to canvass the
special education colleagues and institutions that I initially contacted regarding this curriculum project to get specific feedback regarding the Communication WORKS curriculum. That input and feedback will be most helpful to the ongoing development and delivery of WORKS.

Communication WORKS is an ongoing project steeped in UD principles. The entire design and application of WORKS “applies to instructional content, but also to its goals, methods and manner of assessment” (Schumaker, Deshler, & Denton, 1984, p.1). This project signals hope for both the special education instructor as well as special education student, both of whom have struggled with mainstream learning materials, content and strategies for decades. Persons with disabilities and learning differences have as many unique and diverse learning and communication needs as their mainstream counterparts. Effective educational resources and curriculum content in particular need to effectively reflect these needs.

Communication is learning and learning is communicating, these capacities and processes are inextricably linked. Within the curriculum and the learning environment of the exceptional student in the special education context they cannot and should not be ignored. As a post-secondary instructor working with exceptional adult students I continue to support the concept that, “education, at any level, should be a collaborative, cooperative experience that can be best realized by places, policies, programmes and processes which are specifically designed to invite the development of all involved” (McClelland, 2003, p. 47).

This curriculum project is an introductory overview of how Universal Design can be successfully built into curriculum and instruction. More study and research specifically and concretely into how and why the design and its application can be, or is effective would be helpful. In particular more research and study needs to be conducted in an effort to explore and create an appropriate evaluation tool for testing effects of the design and its application. An effective evaluation tool might also be helpful in identifying whether or not the curriculum design is positively or negatively impacting the overall social competence of the student of exceptionality in the special education classroom.
References


Appendix I

Preface

Following is the fifth module, SENSES, of the interpersonal communications model and concept Communication W.O.R.K.S.

Five lesson plans form and complete Module 5 which utilizes Universal Design of Instruction principles (a) equitable use (b) flexibility and (c) simple/intuitive use.

The lesson plans are designed with the human senses as the focal and starting point for all learning.

This module is specifically designed for use within the extant instructional framework used in the college classroom of the Thompson Rivers University-Work Skills Training program for adult learners with exceptionalities.

The lesson plans provide opportunity for students to participate and explore diverse learning styles, intelligences, and ways of learning (communicating) in respectful and meaningful ways. All five lesson plans are designed and steeped in the human senses.

Lessons one through five are designed within a framework of inclusivity, diversity and creativity. They are meant to encourage, support and promote self-awareness and encouragement within learners. Each lesson provides opportunity to engage, participate and express unique ways of communicating (learning) within the learning environment.

There are no specific individual, or collective learning objectives contained within the five lessons. Rather there are overall Curriculum goals to be obtained through the delivery of Module (5) Senses. They are:

(a) Curriculum Goal-A-Acceptance

b) Curriculum Goal-B-Building

c) Curriculum Goal-Connecting

Diane Ackerman’s A Natural History of the Human Senses (ANHHS), basic psychological learning styles (LS), multiple intelligences (MI) and Universal Design (UD) principles of (a) equitable use, (b) flexibility and (c) simple/intuitive use are the foundational basis which form the content and context of Module (5) SENSES.
Appendix 2

Curriculum Goal A:

Acceptance:

Many of the adult learners with exceptionality in the WST program report having been segregated and stigmatized in the learning environment specifically due to their learning difficulties. They report this alienation as particularly hurtful, shameful and demeaning. Some students describe themselves as “square pegs trying to fit into round holes”—others say early on in their education they gave up trying, because they felt it was pointless. A handful of WST students simply blurt out, “I’m too stupid to learn!”

The first overall goal of curriculum presented in Module (5) SENSES is Acceptance. Particularly moving towards, and building acceptance both individually and collectively within the classroom environment.

How does Module (5) SENSES do this? By incorporating and maintaining the principles of Universal Design of Instruction throughout each of the accompanying five lesson plans.

The principles of (a) equitable use, (b) flexible use and (c) simple/intuitive use are the guidelines and operational definitions with which the curriculum aspires to demonstrate and emulate.

The first of these UD instructional principles utilized (a) equitable use parallels the first curriculum goal of Acceptance. One dictionary definition of equitable: “just, fair” demonstrates a natural connection between the two.

Curriculum that encourages and supports individual and collective learner acceptance by definition then must be “just and fair”. It must be acceptable to the learner.

Collectively applying UD principles, learning styles and multiple intelligences, within the context of the human senses to curriculum design lends itself to the provision of “fair and just” which is one of the overall intentions of Module (5)SENSES.

Instructors can facilitate more equitable use within the context and content of curriculum and instruction using the following guidelines:

* provide the same means of use for all users: identical where possible, equivalent when not
* avoid segregating or stigmatizing any users
* provide for privacy, security, and safety equally to all users
* make the design appealing to all users.
Appendix 3

**Curriculum Goal B:**

**Building:**

Promotion of self worth and confidence amongst adult learners with exceptionalities is the overall objective of Curriculum Goal B-Building.

Adult students in the TRU-WST program typically have damaged self esteem and low self confidence. Building their confidence and capacity to learn (communicate) more effectively is critical to their overall well-being and functioning.

Flexible use the second UD instructional principle is also used throughout Module (5) SENSES lesson plans and curriculum. It is a natural foundation and building block toward increasing individual and collective student self worth overall.

Curriculum with built-in flexibility throughout it, encourages and supports the ongoing building of self worth, confidence and thus learner capacity. Building individual and collective student learner self worth and confidence in the classroom can be a natural outcome when flexible use is concretely applied and demonstrated within curriculum.

Flexibility denotes accommodation—the accommodation of a wide and diverse range of individual preferences, styles, or capacities which can be seen as another objective of this UD instructional principle.

Built-in flexible use within curriculum promises and provides ample opportunity for introducing, exploring and experimenting with multiple modes of learning (communicating) in the classroom. For adult learners with exceptionalities who hitherto have known only frustration, conflict and failure within a traditional learning context this is a refreshing and welcome change.

Students can experiment, express and explore themselves and their unique and individual ways of learning (communicating) in a safe, open, non-judgemental and non-threatening way. This is the essence of flexible use in curriculum design; building—building confidence, building competence and building communication skill and ability.

Instructors can ensure flexible use is built into curriculum utilizing the guidelines of principle two when they:

* provide choice in methods of use
* accommodate right or left handed access and use
* facilitate the user’s accuracy and precision
* provide adaptability to the user’s pace
Appendix 4

Curriculum Goal C:

Connecting:

Connecting—making connections—overall more effectively communicating (learning) through curriculum is the essence and primary objective of the third curriculum goal of Module (5) SENSES, lesson plans.

Making connections to learning (communicating)—making successful connections to fellow learners—making connections to content and context is critical to all learners. The adult learner with exceptionality is no exception.

When learning connections can be made simply, intuitively and easily, the more is the likelihood of success for the learner.

Human beings want and need to make safe, healthy and supportive connections to one another and the world around them. Within the learning context and environment when learning is created and presented simply; with fairness and flexibility as its guide, it can be more successfully integrated by the learner.

Simple and intuitive use, the third UD instructional principle is used as a guide throughout Module (5) SENSES, lesson plans contained within the module.

This third applicable principle also underpins the framework of the entire Communication W.O.R.K.S. interpersonal communications model and concept as well.

Foundationally this design principle allows curriculum to be easily understandable, regardless of the user’s experience, knowledge, language skills, or current concentration level. It is an inclusive design principle which like equitable use and flexible use, has heavily influenced the entire content and context of curriculum within Module (5) SENSES and the overall Communication W.O.R.K.S. model.

Adult student learners in the TRU-WST program are interested in connecting—connecting to life, connecting to work, connecting to others. Individually and collectively they express a strong need and desire to belong and become productive members of their community. Without exception WST students in the program have experienced great difficulty in effectively and successfully doing so.

Instructors can ensure simple/intuitive use is applied and demonstrated within curriculum using the following guidelines that accompany the principle:

* eliminate unnecessary complexity
* be consistent with user expectations and intuition
* accommodate a wide range of literacy and language skills
* arrange information consistent with its importance
* provide effective prompting and feedback during and after task completion
Appendix 5

Module (5) SENSES (Lessons 1-5)

Lesson 1-Sight:

Introduction:

(Power point) – Sight:

Our eyes are like our very own video camera, from the time we wake up until we close our eyes for sleeping, the eye is taking pictures which are being sent to the brain for processing and storage. This is how we come to identify what we are seeing. The eye is a complicated mechanism that really depends on light, size and shape which creates an upside down picture which is sent to the brain to identify and send the information back to you. We have protection for our eyes in the form of our eyebrows, which prevent sweat from running into the eyes; we have eyelashes which keep the eye clean by collecting and preventing small dirt, dust, and debris particles from entering the eye. The eyelids sweep dirt from the surface of the eye and, the eyelid also protects the eye from injury. Tears are sterile drops of clean water which constantly bathe the front of the eye—keeping it clean and moist.

Theory: Visual Learners: (Reflective Observation-Kolb) observing, watching-according to Kolb you will be inclined to carefully observe before deciding, and look at a situation from many different angles before drawing conclusions-tend to rely on patience and careful judgement prior to taking action.

Visual learner hints & tips:

* write things down
* keep eye contact to maintain focus
* visualize learning
* doodle and draw in the margins
* visual learners react strongly to colours (colour code important stuff)

**Facts:**

(Handout)

- Most humans blink every 2-10 seconds
- with each blink, the eyes is closed for 0.3 seconds which means the eye is closed about
  30 minutes per day just from blinking
- if you only had one eye everything would be two dimensional (doesn't work if you just close one eye!)
- an owl can see a mouse moving over 150 feet away with no more light than that of a candle!
- cats and dogs have mirrors (tapetum) at the back of their eyes; this is why they can see and their eyes glow at night
  
* an ostrich eye is two inches across and one eye weighs more than the brain
* a chameleon can look with its eyes in two different directions at the same time
* a newborn baby sees the world upside down because it takes some time for the baby's brain to turn the picture right-side up
* one in every 12 males is colour blind (*can't tell green from blue)

**Video:** Sight (Ackerman)

**Group Exercise:**

Name some famous people who are blind, or have impaired sight...

(Helen Keller, Stevie Wonder, Ray Charles...others?)
Individual Exercise:

Imagine yourself as blind—spend a specific amount of time keeping your eyes closed and continuing on with your everyday functions and activities—how does it feel to be blind? How do you experience your world without sight? What do you miss about being able to see? How are you able to communicate when you can’t see? What things do you have to pay more attention to when you are not able to see? What kind of an experience is this for you? Can you do it? Why? Why not?

Summary:

** 70% of the body’s sense receptors cluster in the eyes (Ackerman) and it is mainly through seeing the world that we appraise and understand it.

Reflection:

(Power point) Sight

Language is steeped in visual imagery.

-- I saw it with my own eyes!—we see through peoples characters—I see where you’re coming from—watch out he might see what you’re up to—God “saw” that it was good-

Dylan Thomas reminds us there are many “fibs of vision” —what you see is what you get!

** Mind’s Eye—we see without our eye—from memory and sometimes with great detail…

Are you a visual learner—can you think of someone who you think, or know is a visual learner?
Lesson 2-Hearing:

Introduction:

(Power point) - Sound

Our ears serve a two-fold purpose: Do you know what that is? Sound and hearing are one ... balance is the other ...

The ears help balance the fluid in our bodies, and they also through vibrations and a very technical process involving both the ears and brain, help us to hear sound and determine what the sound is, to make sense of it....some people hear better than excellent, others have great trouble hearing due to a mechanics problem in the physical ear itself. And other people are deaf hearing totally nothing...they live in a completely silent world. People that are deaf develop their other senses due to their lack of ability to hear...Imagine life if you couldn’t hear? What would the world be like if it was totally silent, ALL THE TIME?! What about the joy of hearing music?

Sometimes people are born deaf, or become deaf because of injury or illness. They often learn sign language so they can still communicate. Loudness can also cause ear trouble and deafness—too much loud noise can wreck our hearing.

Scientists measure sound in decibels and the higher the decibel, the harder the sound will be on the ear. Normal talking voice registers a approximately 50-60 decibels and a rock concert would be100, a gunshot at 140 and so on...

...Jet engine at 130 and by the way have you ever noticed in an airplane as its lifting off and also landing how your ears get plugged, crackle, crack and feel weird? Sometimes this can be most irritating and even painful...
What can you do when on a plane and this happens? (Yawn, chew gum, or swallow...)

Sometimes babies get earaches because milk backs up into their Eustachian tubes, and cause bacteria to grow and may cause hearing problems later on.

**Theory:**

Auditory learners find it hard to follow directions (written). —but if they hear something they will remember it! Writing is hard for auditory learners. They often misread words from text—would rather listen and learn than read and learn. Not good at interpreting body language.—eyes tire quickly, though vision is fine...

**Auditory learner hints & tips:**

* ask speakers to speak up
* request more info if not sure you got what was said (clarification)
* associate what you’re learning with something pleasant you like to hear
* repeat back what you think you’ve heard

**Facts:**

(Handout)

- high elevations cause changes in ear pressure and they will “pop”
- children have more sensitive ears than adults and they can recognize a wider variety and range of noises
- dolphins have the best sense of hearing among animals they are able to hear 14 times better than humans
- animals hear far many more sound than humans do
- an earache is caused by too much fluid putting pressure on the eardrum, earaches are often the result of infection, allergy, or viruses...
**Video:** Sound-Ackerman

**Individual Exercise:**

Take turns --pick your favourite sound(s), explain why it's your favorite…

--list the different kinds of sounds which can be made by one source ie: the human voice
sings, hums, sighs, cries, laughs, wails, **Bell**—soft, hard, jingle jangle—list sounds related
to a given place—wedding, funeral, sports, church

--make different sounds without prompting, clap, whistle, hum, holler, whisper, sing, rap,
tap…etc.

--students close their eyes disguised voices speak, try to recognize them—how easy is it?
--students make the highest sounds possible and the lowest possible, how do they differ?
Why is it hard to demonstrate this?

**Group Exercise:**

a)In the classroom setting first we settle in and then we try to quiet down and listen—try
listening quietly to the sounds around you—in the classroom this might be the ticking of the
clock on the wall—someone sneezes—someone’s coughing—some people; breathe loudly—
someone sniffles—voices in adjoining rooms—traffic noise—footsteps—
--leaves rustling outside the door—a baby cries—a dog howls—the wind blowing strongly—
rain pelting the window  panes.

Listening to the sounds around us and with us is a very interesting exercise. What if
everyone is talking at the same time in the classroom. Can you hear? Can you make sense of
what’s being said? Can you concentrate—learn—why?—why not?
Summary:

Why do we have two ears and not just one—how are we able to hear many sounds but only pay attention to the ones we think are important—does our hearing get turned down when we’re sleeping—what jobs require good hearing—can people who can’t hear make music—how do they do that?

How do we remember people’s voices and recognize them in the first place—how does our hearing keep us safe—when we hear a baby laugh or giggle what’s that about—how about when someone is crying—how do we know that they are crying if we can’t see them but we can hear them?

Reflection:

Power point: (Sound)

Sounds thicken the sensory stew of our lives and we depend on them to help us interpret, communicate sometimes we use sound as an emotional curtain—Sound, particularly music is like massage from the inside—our pupils dilate and our endorphin level rises when we sing; music engages the whole body, as well as the brain, and there is a healing quality to it. (Ackerman) Are you an auditory learner? Who are some famous auditory learners?
Lesson 3-Smell

Introduction:

(Power point) Smell

More than most of our senses we seem to take smell for granted—yet it’s claimed to be the most direct of our sense—helps us stay safe by warning of food that’s gone bad—we can smell “trouble”—how’s that?

Watch an animal when it checks it’s new place—you can smell fire—some animals know their offspring by smell only and can pick them out accordingly(me and Todd!) How do animals say hello? They smell each other ALL OVER—particularly their behinds.

Humans find this offensive, but all dogs do it—

Describe the smell of your lover, special person, child, parent or partner...Nothing is more memorable than smell!!

Theory: Olfactory sense—Humans have 7 primary odours that help them determine objects—camphoric, musky, peppermint, roses, ethereal, pungent and putrid(Come to Your Senses)

*** NLP—(Neuro-linguistic Programming)

—think of a smell that makes you feel happy—now sad, mad or angry—compare how you feel when you think, or remember these particular smells...

Facts:

(Handout)

--can you smell popcorn, a baby horse, the carnival, a new baby?

--dogs have 1 million smell cells per nostril & their smell cells are larger than humans, they can smell thousands of times better than us...
--nose at its best can distinguish between 4000-10,000 smells!!

--as we age our sense of smell diminishes

Video: Smell-Ackerman

Group exercise:

Discussion of smells: Love and hate relationships. NEVER sniff anything strongly, because it can be life threatening and with kill us, or totally ruin our sense of smell---wafting smells are safer, and more commonsensical....(new word)

-think of smells associated with different locations, kitchens., Bars, gyms, shower rooms, field of flowers, beach, ballpark, swimming pool, horses, barns, fireworks, roasting wieners, barbecuing ribs, perfume from France...

What are some fruity smells?

Mouldy?

Individual Exercise:

Write (think of, or remember) a description of a smell without naming its source...

Can we smell, sweet, salty, sweaty?

--LIFT 'N' SMELL PATCHES...experiment/discussion points...

--Smell Samples: Toothpaste, fruit flavours, liquid smoke, tobacco, strong cheese, chocolate, lemons, perfume, liniment, vinegar, garlic, curry, pepper...

Summary:

FOLLOWING OUR NOSES...The nose knows....what does this mean?

Reflection:

Power point: Sound

--STOP TO SMELL THE ROSES—what smells do you love/hate?
Lesson 4-Taste:

Introduction:

(Power point) - Taste

Have you ever thought of why foods taste different? The tongue and the roof of the mouth are covered with thousands of tiny taste buds. Saliva is formed when eating food helps to break food down.

Sweet, salty, sour and bitter are generally the categories of taste. Babies have taste buds in their cheeks, and the sides and roof of the mouth so you were much more sensitive to taste. As we age our taste buds become less sensitive—this may account for why people eat foods later in life than when they were children. Food is not experienced as strong tasting.

Injury to the head, medications, smoking, not enough of the right vitamins, brain tumours, chemical exposure, and the effects of radiation can cause taste disorders.

Theory: Taste is the warning system of the body to keep us safe and alive...

Facts:

(Handout)

--we have almost 10,000 taste buds inside our mouth—even on the roofs of our mouths

--insects have the most highly developed sense of taste, they have taste organs on their feet, antennae, and mouthparts

--fish can taste with their fins as well as their tail and their mouth

--in general girls have more taste buds than boys

--taste is the weakest of the five senses
Before we’re born we already love sweet flavours which makes sense because sugars are the chemicals we need for energy and growth. We are born disliking bitterness, as a protection against eating poisons.

We learn to recognize salty and sour as we grow—memory will help us remember certain goods and guard against eating food which when spoiled, can harm us.

Do we not associate certain tastes, or foods with certain celebrations, holidays, and special occasions—does everything we eat or drink have taste—saliva, what does it serve as a purpose—cleanses constantly

Researchers indicate through testing that the average person has about 184 taste buds per sq I cent. Of tongue—that’s a lot of taste—super tasters have 425 or more per same area, and non tasters, average just 96 buds per cm².

**Video 4: Taste (Ackerman)**

**Individual Exercise:**

Describe your tongue, size, color, shape—Do a taste test—use your imagination—

List where the different tastes come from in a slice of pizza

**Group Exercise:**

Blindman’s Experiment in Taste (smorgasbord)

**Summary:**

Taste is largely social—food has a powerful social component—breaking bread—Food Gods have ruled the hearts and lives of many peoples.

Hopi Indians revere corn, especially blue corn—throughout history, taste has always had a double meaning, from the middle English to examine by touch, test, or sample and continues
back to the Latin *taxare* to touch sharply—so a taste was always a trial or a test,—good taste vs. bad taste—the first thing we taste is milk from mother's breast—

**accompanied by love and affection, stroking, a sense of security, warmth and well being, our first intense feelings of pleasure (or not)—we must eat to live—our friend first offers us food, drink—it is a symbolic act a gesture that says: This food will nourish your body as I will nourish your soul... in the wilds it is also saying I will endanger my own survival by parting with some of what I must consume to survive... It's *not to my taste*...**

**Reflection:**

**(Power point) - Taste**

Our real tasters and taste tellers are our taste buds, highly sensitive detectors found on the tongue—it’s not the bumps on your tongue, it’s inside papillae that as few hundred more or less reside—the very tip of the tongue is the best sweet guide, sides for sour, saltiness is detected all over, and the back of the tongue for bitter things—the tongue also gauges hot and cold, and “spicy” hot—in terms of flavour which can actually cause pain in the tongue... Some foods may stimulate endorphins—morphine-like painkillers produced by the brain and give us a sense of comfort and calm—take care of our tongue & taste buds by avoiding extremely hot/cold food—especially tobacco—these things spoil their efficiency and dull the millions of great taste buds who really want to work.
Lesson 5-Touch

Introduction:

(Power point) - Touch

It’s all over, skin that is....nerve endings and receptors that send messages to the brain, the main common receptors are heat, cold, pain and pressure(touch)—the pain receptors keep the body safe and tell the brain when the body is hurt.

Some body parts are more sensitive than others. For example when you bite your tongue it really hurts because there are so many nerve endings which are sensitive to pain—the tongue is not so good at sensing hot or cold that’s why we often burn ourselves when we drink hot/cold fluids—the fingertips are also extremely sensitive because of so many nerve endings, think of the person who is blind, they read Braille—by feeling the patterns of raised dots on paper.

Theory: Human beings and creatures must be touched in order to live and survive...

Facts:

(Handout)

--the least sensitive part of the body is the middle of the back
--most sensitive are the hands, lips, face, neck, tongue, fingertips and feet
--shivering is the way the body attempts to get warmer
--there are about 100 touch receptors in each fingertip
--rattlesnakes use their skin to feel the body heat of other animals

Video 5 Touch (Ackerman)

Group Exercise:
a) Try to identify an object using just your foot, or knee—then with your fingers and hands—your hands win hands down!!

b) Mystery Surfaces...experiment

**Individual Exercise:** Touch Inventory...Discussion points...

**Summary:**

Our sense of touch helps show us the shape, size and “feel” of our world. We are kept safe by learning what we can safely touch, what not to touch, when, where, how, and why...for example a hot stove, a sharp edge, very cold metal...etc.

Touching a puppy makes us happy—tickling makes us giggle and sometimes we feel sad when we bump into something like our funny bone, which really isn’t so funny after all , is it?

Some parts are more ticklish than others—why can’t we tickle ourselves? Why does tickling make us laugh with a little bit, but make us cry if someone won’t stop tickling us?

Scientists and researchers continue to study touch because it’s such a fascinating and remarkable sense. Think of robots how or can a robot ever experience and really sense touch as humans do? Replicating touch proves to be a remarkable study and journey for man and machine both.

What about animals and the sense of touch? Is touch important to them? –””Mother Bear and the tree—baby apes die when their mothers neglect them..

All animals including humans respond to being touched, stroked, poked in some way, and in any case, life itself could not have evolved without touch. Touch is the oldest sense and the most urgent....
Reflection:

Power point-Touch

Ackerman says, “Our skin is kind of like a space suit in which we manoeuvre through an atmosphere of harsh graces, cosmic rays, radiation from the sun, and obstacles of all sorts. Ours skin is what stands between us and the world.

Language is steeped in metaphors of touch—we call our emotions, feeling and we care most deeply when something touches us—problems can be thorny, ticklish, sticky or need to be handled with kid gloves—touchy people especially if they get coarse, get on our nerves.
COMMUNICATION WORKS

How it works...

W-write
O-oral (speak)
R-read
K-Kinesthetic (tactile, touch,-do-)
S-Senses: sight, sound, smell, taste, and touch.

Hands-on...

Hands see...
Hands hear...
Hands taste...
Hands smell...
Hands touch... Hands on....
W-write
Hand write...

O-oral (Speak)
Hand speak...sign language...

R-read
Hand read...Braille...

K - Kinesthetic (tactile—do----)
Hands-on...

S-SENSES...
The human senses of sight, sound, taste, smell and touch...
**Hands, the Senses and Communication...**

Without hands it would be difficult, if not impossible to communicate. We use our hands physically to write, and if we are deaf our hands help us speak and hear. If we are blind we use our hands to read. Hands feel, hot and cold, shapes, sizes and textures. Hands sense many wondrous and remarkable things. Imagine life without hands... how odd it would be!

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**HANDS**

Hands shape our world and help us communicate (learn)...in many different ways!

- Hands
- Hand write,
- Hand speak
- Hand read
- Hand’s “on”...

Hand knows the how & why of how the heart feels!

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**Module (1) Write...**

(Numeracy & Literacy, Communications)

- Wish it
- Real it
- Instinct it
- Tell it

Explain with the pen what you see with the eye, hear with the ear, speak with the tongue, feel with the heart and sense with the soul!
Module (2) Read...
(Numeracy & Literacy, Communications)

Read what you need
Explore your passion
Admire yourself and your ability
Determine & demand your own unique success!

Module (3) Oral (speak)...
(Communications, Networking)

Own what you say
Remember to be real
Ad-lib (make it up...) if you need to
Let yourself go and enjoy your own voice!

Module (4) Kinesthetic (tactile)
(Computing, Work Experience)

Find everything
Excite your senses
Expect to learn and succeed
Leave the world a better place for having feelings, seen with your eyes, heard with your ears, read with passion and lived with an open and trusting heart.
Module (5) SENSES...
(Communications-Networking)

Survive, sort yourself out
Expect beyond the familiar and see-able
Need to know, feel, be real and
Sensitive of yourself and towards others
End with love, luck and laughter...
Shine your special light all ways!!!

Communication Do's...

Be courteous
Be open
Be honest
Be real
Be flexible
Begin by taking a risk...
AND Be responsible for your self!

Communication Don'ts...

Don't judge
Don't blame
Don't expect miracles
Don't try to change everything in a day
Don't expect too much of yourself, or others
Don't expect perfection
Don't let yourself down
Don't be afraid to try, and remember we all make mistakes...
that is how we learn!
Closing...
Closing is important in communication. Sometimes when we can't, won't, or don't reach the end of something, we feel unsure, out of sorts, off kilter. It's okay to end, or say goodbye. Saying goodbye is often just as important and hard as taking a risk to say “Hello!” If we don't get to say goodbye, or end a process we may carry baggage we don't really need. It may greatly interfere with our ability to communicate in a healthy and good way. So remember to try for a simple that's it, goodbye or THE END.