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TEACHER PERCEPTIONS ON WHAT A FUNCTIONAL CURRICULUM SHOULD BE FOR CHILDREN WITH SPECIAL NEEDS

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Curriculum planning for the intellectually disabled must be forward looking, giving due consideration to the students' current and future needs, sensitive to the environments in which the individuals will ultimately be expected to adapt and function after leaving school. In this survey, the emphasis is seeking the teachers' perceptions on what constitute a more functional and comprehensive curriculum for enhancing the independence and employability of the students, having earlier done focus group interviews with all the stakeholders, namely, teachers, employers, parents and ex-students regarding the relevancy of the curriculum.

In 1976, the Association for the Educationally Sub-Normal Children (AESN) was formed by a group of volunteers who attempted to address the pressing schooling needs of children within the Intelligence Quotient range of 50 to 70, which is equivalent to the present definition of persons with moderate learning difficulties. In the early years, there were no trained teachers or even a specific curriculum available. Today, AESN is known as the Association for Persons with Special Needs (APSN) and special education services in Singapore have come a long way since the *Report of the Advisory Council of the Disabled: Opportunities for the Disabled* was published in November 1988. Although the voluntary welfare organizations (VWOs) are currently running the special schools for the different exceptionalities, the administration and funding patterns are assisted by the Ministry of Education (MOE) and the National Council for Social Services (NCSS) on a 50:50 basis. MOE and NCSS have also attempted to improve the teacher-pupil ratios for the different exceptional groups as well as oversee the higher levels of staffing of para-professionals in improving the quality of educational opportunities for the children. However, the curriculum of the special schools are still very much left to the discretion of the VWOs who rely on volunteers, teachers and principals in special schools.

According to Polloway, Patton, Smith & Roderique (1991), curriculum planning for the intellectually disabled must be forward looking, giving due consideration to the students' current and future needs, sensitive to the environments in which the individuals will ultimately be expected to adapt and function after leaving school. Morse, Schuster and Sandknop (1996) further elaborated that the curriculum must emphasize skills that are both functional and longitudinally relevant so that students will develop skills that enable them to work and interact in integrated community services when they are adults. As these students may take relatively longer time to master certain skills due to their skill deficits, it may also be necessary that the exact choice of relevant, functional skills be taught as early as in the elementary years. Furthermore, the curriculum needs to be functional, that is, one that instructs the students in the life skills they require for successful daily living and prepares them for those situations and environments that they will encounter upon leaving school. They need to be exposed to curriculum content designed to enhance their current and future independence such as personal hygiene, consumer skills and independent living skills. By a functional curriculum one is also concerned with the application of skills to real-life situations. The instructional approach, known as community-based instruction should also be adopted for easy transfer and generalization to other settings which the skills are to be used. The emphasis on natural settings will maximize the

meaningfulness and relevancy of the instruction and allows for the integration of skills from other domains (Browder & Snell, 1993; Snell, 1988).

The Association of Persons with Special Needs (APSN) in Singapore recognizes the need for a functional curriculum that will enhance independence in their students when they leave the schools. A recent study using focus groups (Ee & Soh, 2004) sought the views of stakeholders, namely, teachers, employers, parents and ex-students regarding the relevancy of the curriculum. The study using 47 respondents indicated that it was vital that the curriculum should equip the students with the right attitudes, skills and knowledge so that they are able to adapt and integrate into society after school.

However, as the number of respondents were not sufficient to warrant generalization of the views of the teachers, employers, parents and ex-students, this survey was conducted with the questionnaire based on the results of the previous study. The purpose was to validate the curricular needs of the students as perceived by the APSN teachers as respondents.

Research Questions

This survey sought to find answers, partial though they may be, to the following questions believed to be critical for curriculum revision.

1. What are the relevant subjects that teachers perceive will enhance students' independence?
2. To what extent has the APSN curriculum enhanced the independence and employability of their students?
3. What are the essential subjects that teachers perceive will enhance students' employability?
4. What do teachers perceive that APSN can do for the students?

Methodology

Data Collection

The survey questionnaire attempts to find out teachers' perceptions of their students' learning, their perceptions of essential skills for enhancing student learning and what they think students need to learn to integrate more effectively in the workforce and society. The questions took the cue from the responses obtained in the focus group discussion conducted with some APSN teachers as reported earlier in Ee & Soh (2004). The survey questions were cast in the form of either Likert scales or open-ended questions.

Respondents

A total of 118 copies of the questionnaire were distributed to APSN teachers in its five schools. Forty-seven completed copies were returned, yielding a response rate of 39.8%. This response rate is less than what the researchers desired but then response rate is always a contentious problem in mailed survey. Some teachers did not fill in the school names, suggesting that some teachers saw responding as having an element of sensitivity, although there is none as far as the researchers were concerned. As shown in Table 1 below, 87% of the teachers were female and only 13% males. Most of the teachers (72%) are ethnic Chinese and more than half of them (57%) were below the age of 40. This sample size is approximately one-third of the teacher population in APSN and is a fair representative of the population.

Chi-square tests were run to check the goodness-of-fit of the respondents sample to the population on the four demographic variables. No statistically significant chi-squares were found for School (although there seems to be a preponderance of Tanglin), Gender, and Age, although the chi-square for Race is statistically significant at the .05 level. Thus, taken all these together, the respondents formed a sample well representing the population in important aspects with the exception of ethnicity.

Table 1:
Teachers' Bio-Data

Research Population		Total Teacher Population	
Frequency	Percentage (N=47)	Frequency	Percentage (N=118)

School	Delta Senior	6	12.8	14	11.9
	Tanglin	13	27.6	46	39.0
	Katong	7	14.9	17	14.4
	Jervois	7	14.9	19	16.1
	Chao Yang	8	17.0	22	18.6
	Missing	6	12.8		
Gender	Male	6	12.8	16	13.6
	Female	41	87.2	102	86.4
Race	Chinese	34	72.3	67	56.8
	Malay	4	8.5	25	21.2
	Indian	4	8.5	19	16.1
	Others	4	8.5	7	5.9
	Missing	1	2.2		
Age	25-30	5	10.6	15	12.7
	31-40	22	46.8	55	46.6
	41-50	14	29.8	37	31.4
	51 and above	3	6.4	13	11.0
	Missing	3	6.4		

Data Analysis

Responses were tabulated as frequencies and percentages. Percentages were calculated using the number of all respondents (47) as the base. For the Likert-type items, percentages for all options added up to 100 as the available options were exclusive of one another. For responses to open-ended questions, each group of responses was treated as independent to the other groups after coding and multiple responses were allowed, hence the percentages did not add up to 100 exactly.

Results

Topics to Learn :

To the question on what topics the teachers believed that the working students should have learned during schooling, most of them (64%) mentioned independent living (Table 2). This is followed by consumer/work skills and attitudes which were mentioned by 47% of the teachers. Moral values were also considered an important topic by 47% of the teachers. Slightly less than these are social skills and money/budgeting, mentioned by 45% and 43%, respectively. However, functional language was considered important only by 34% of the teachers.

Topics Not Covered but Important

As for the question on topics *not* covered in the school curriculum but considered important, 66% mentioned work attitudes and skills (Table 3). Problem-solving skills for independent living were considered important by nearly half of the teachers (49%). Near to this, 43% of the teachers mentioned social interactive skills for boy-girl relationships as important topic the students should have learned. Besides, 32% teachers considered moral values an important topic that could have been in the school curriculum.

Table 2
Teachers' Perceptions on Relevant Topics to Learn if Students are working

	Examples	Frequency	Percentage (N=47)
Independent Living	- travelling - adaptability - hygiene - grooming - safety - time-management - problem-solving - physical fitness - domestic science	30	63.8
Consumer/Work Skills/Attitudes	- responsibility - initiative to work - punctuality	22	46.8
Moral Values	- self-control - integrity - manners - tolerance	22	46.8
Social Skills	- speak properly - interaction skills - conflict resolution - communication	21	44.7
Money/Budgeting	- use of money - budgeting	20	42.6
Functional Language	- follow instructions - functional language	16	34.0

Note: Multiple responses allowed.

Table 3
Teachers' Perceptions on Relevant Topics that are important to the students but have not been taught in school

	Examples	Frequency	Percentage (N=47)
Work / Attitude Skills	- knowledge on working environment - coping with stress - computer skill - adaptive to work - submission to authority - customer service - work/attitude skill - punctuality - responsibility - initiative - exposure to work life - job attachment	31	66.0
Problem-Solving Skills for Independent Living	- problem-solving skills - setting goals - creativity - overseas excursion - use public transport - proper dressing / grooming - hygiene	23	48.9

Social interactive skills for Boy-Girl Relationships	- interaction skills - gain acceptance from public - effective communication - self-confidence	20	42.6
Moral Values	- moral / character education - tolerance - perseverance - appreciation/thankfulness - emotional development	15	31.9

Note: Multiple responses allowed.

Schooling Experience

Teachers' perception of the students' schooling seemed to be rather positive, with 57% perceiving the students enjoyed it very much (Table 4), with another 36% considering it somewhat enjoyed. Some of the reasons cited for their positive attitudes are that they felt accepted for who they are and for the varied programmes. Only a small proportion (6%) saw schooling neither enjoyed nor disliked by the students. Some of the comments made by the teachers are:

T44: *They personally told me they look forward to school and also their response towards learning*

T20: *They missed school especially during school holidays. Also, they look forward to return to school.*

T14: *They are accepted for who they are.*

T16: *They enjoy their classmates' company. They've friends in school.*

T25: *School time is a time of fun being with their friends etc.*

Table 4
Teachers' Perceptions on Students' Enjoyment Level at School

	Frequency	Percentage (N=47)
Enjoyed very much	27	57.4
Somewhat enjoyed very much	17	36.2
Neither enjoyed nor disliked school very much	3	6.4

Work Attitudes

How did the teachers perceive their students' work attitudes? As Table 5 shows, 62% teachers believed that the students neither liked nor disliked their work very much. Their perception of indifferent implied that they perceive their students perceiving work more as a necessity. Teachers' written comments are shown in the examples below:

T16: *They work because they needed the money ... because the job is bearable.*

T31: *They work because they want to earn some income.*

T37: *They know they need to earn a living, like or dislike employers is beside the point.*

The 32% of teachers who somewhat felt that the students liked their employers very much believed that it was because their employers treated them well. An example of teachers' written comment is:

T17: *Most of them enjoy their job. Employers treat them well though they get scolding at times.*

Only 6% believed that the students disliked their work.

Table 5 :
Teachers' Perceptions on Students' Attitude Towards Work

	Frequency	Percentage (N=34)
Neither liked nor disliked their employers very much	21	61.8
Somewhat liked their employers very much	11	32.3
Disliked their employers very much	2	5.9

Note: Percentages based on actual responses.

Prepared for Work

It can be seen from Table 6 that the majority of teachers (55%) believed the school has prepared the students for work just a little. Slightly more than one-third (36%) believed the school has prepared the students well for work. However, 9% considered the school had not prepared the students for work.

Table 6
Teachers' Perceptions on whether the school has prepared the students for work

	Frequency	Percentage (N=41)
A little prepared for work	24	54.5
Somewhat well-prepared for work	16	36.4
No preparation for work	4	9.1

Note: Percentages based on actual responses.

Suitability for Work

To the question on how suitable were the jobs for the students, as perceived by the teachers, 82% teachers considered the jobs to be acceptable and 11% very suitable. Examples of teachers' comments are shown below:

T12: *A good job fit*

T30: *Suit their personality*

T17: *Handle job assigned to them quite well*

Only 7% considered the jobs a little suitable for the students, with such comments as cited below.

T16: *Job is monotonous*

T19: *Can't find job they like and can do well*

Table 7
Teachers' Perceptions on job suitability of students

	Frequency	Percentage (N=27)
Acceptable	22	81.6
Very suitable	3	11.1
Little Suitability	2	7.4

Note: Percentages based on actual responses.

Satisfaction with Work

Were the students happy with their job? As seen by majority of the teachers (70%), the students were either happy or somewhat happy and nearly one-third (30%) believed the students were neither happy nor unhappy with their jobs (Table 8).

Table 8
Teachers' Perceptions on whether the students are happy with their jobs

	Frequency	Percentage
Very happy / somewhat happy with their jobs	26	70.3
Neither happy nor unhappy with their jobs	11	29.7

Further Help

If the students were not well-prepared for work, how could this be better done? As Table 9 shows, topics that will better prepare the students for work include consumer/work skills and attitudes. This was named by all teachers. Far below this are social skills, mentioned by 36% teachers. Functional language and independent living are mentioned by 28% of the teachers. However, only a small proportion considered money/budgeting skills (9%) and moral values (4%).

Table 9
Teachers' Perceptions on Topics that will better prepare students for work

	Examples	Frequency	Percentage (N=47)
Consumer/Work Skills/Attitudes	<ul style="list-style-type: none"> - responsibility - initiative to work - punctuality - on-job training - job attachment - hands-on experiences - vocational skill - customer service - visiting working places - hard working - efficiency in work - IT skills - inviting employers to talk - punctuality - self-discipline 	47	100.0
Social Skills	<ul style="list-style-type: none"> - speak properly - interaction skills - conflict resolution - communication 	17	36.2

	- social adaptive behaviour - social and work etiquette - appreciation and thankfulness - assertive training		
Functional Language	- spoken / written English - reading - follow instructions	13	27.7
Independent Living	- reality of life - problem-solving - physical exercise	13	27.7
Money/Budgeting	- value of money - budgeting - money transactions	4	8.5
Moral Values	- good moral values	2	4.3

Note: Multiple responses allowed.

Difficulty on Job

Teachers' perceptions of the difficulties encountered by the students are shown in Table 10. Top of the list is unfriendly colleagues (38%), closely followed by things the students did not understand (34%). Unhelpful supervisors were mentioned by a sizeable group of the teachers (28%). However, reading, writing, and counting were also considered difficulties, albeit by only a small proportion of teachers.

Table 10
Teachers' Perceptions of Students' Difficulty on the Job

Difficulty Area	Frequency	Percentages (N=47)
Unfriendly Colleagues	18	38.3
Things they don't understand	16	34.0
Unhelpful Supervisors	13	27.7
Reading	6	12.8
Writing	6	12.8
Counting	3	6.4
Others	9	19.1

Further Learning Needs Table 11 shows the topics the teachers believed the students were likely to return for. Work skills were mentioned by the majority (62%). Around a quarter mentioned social skills and English Language. Around 15% mentioned independent living skills and recreation activities. Only a small proportion mentioned Maths, Second Language, moral values, and mentor to younger kids.

Table 11

Teachers' Perceptions of Likely Topics that Students will come back to school to learn

Topics	Description	Frequency	Percentage (N=47)
Work Skills	- Administration skills - Work skills - Vocational skills - Skill enhancement - Listen / follow instructions - Technical skills - Banking skills	29	61.7
Social Skills	- social etiquette/manners - socializing	13	27.7
English	- Communication skills	10	21.3
Independent Living Skills	- Guidance in life - Self-help - Home cleaning - Personal grooming	8	17.0
Recreation Activities	- sports - coping with stress - recreation activities	7	14.9
Maths	- money skills	4	8.5
Second Language		2	4.3
Values		1	2.1
Mentor to younger kids		1	2.1

Note: Multiple responses allowed.

Daily Coping

As part of their daily living, the students would have to travel around the neighbourhood. Could they do this? More than three-quarters (81%) of the teachers believed that the students were able to do it with no difficulty or just some difficulty sometimes (Table 12). Only a very small proportion (4%) foresaw students always having difficulty.

Table 12
Teachers' Perceptions of Students' Ability to Travel around the Neighbourhood

	Frequency	Percentages (N=47)
No difficulty	21	44.7
Some difficulty sometimes	17	36.2
Have difficulty but not often	7	14.9
Always have difficulty	2	4.3

Note: Multiple responses allowed.

Money Handling Another aspect of the students' daily living is the ability to handle money. As seen by the teachers (Table 13), nearly two-thirds (65%) may have some problems. However, 17% believed the students would have no problems, and another 17% lots of problems.

Table 13 Teachers' Perceptions of Students' Ability to Handle Money

	Frequency	Percentages (N=47)
Some problems	30	65.2

No Problems	8	17.4
Lots of problems	8	17.4

Note: Percentages based on actual responses.

Peoples' Reactions

The ability of the students to lead a reasonably effective life depends not only on them but also on people they come across. As Table 14 shows, around one-third of the teachers (38%) believed that people did not understand the students but were usually friendly to them. At the same time, 15% believed that people around the students were helpful to them and only a very small proportion (4%) believed that people looked down upon the students.

Table 14
Teachers' Perceptions of Peoples' Behaviour towards their Students

	Frequency	Percentages (N=47)
Don't understand them	18	38.3
Usually friendly	15	31.9
Are helpful	7	14.9
Look down on them	2	4.3
Other feelings e.g. fear (2) sympathetic (4) intolerant/impatient (2) indifferent (1)	3	6.3

Note: Multiple responses allowed.

More to Do What other things could APSN do for the students? Listed in Table 15 are some of those the researchers believed are worthy of attention.

Table 15
What APSN can do for the students

• Network with employers for job opportunities for students
• Find suitable jobs for the students
• Set up a home for independent living
• Set up support Service Centre with full staffing apart from CFA
• Start a club
• Provide proper facilities for students to apply to real life situations
• Set realistic goals
• More comprehensive curriculum
• Develop courses e.g. social skills, self-confidence, basic survival and vocational skills
• Train teachers to be more communicative

Discussion

The present study set out to find answers to four important questions regarding the curriculum and its outcomes of the APSN schools as perceived by the teachers. In spite of the small number of respondents, the survey yielded rich information that is useful for curriculum revision. With the findings reported above, an attempt is made here to answer the four questions asked.

-What are the essential subjects that teachers perceive will enhance students' independence?

Teachers placed independent living skills as top priority, followed by consumer/work skills and moral skills. This may indicate that teachers are aware that students need to be taught not only the skills for enhancing their independence and employability but also for character building to assist them in integrating with the community at large. Besides, the training of values such as integrity, manners, tolerance and self-control, they have also indicated the need to provide social skills to assist students not only in their interaction skills but also how to manage conflict resolution in case of problems arising. The importance of the use of money and budgeting as well as the use of functional language was also stressed as essential subjects for enhancing students' independence.

-To what extent has the APSN curriculum enhanced the independence and employability of the students?

Teachers felt that more training in work attitudes and skills may be needed in the APSN schools. Among these skills are the need for greater exposure to the working life through job attachments. This concurs with other researchers' findings (Browder & Snell, 1993a, 1993b; Snell, 1988) which acknowledged the importance of community-based instruction for easy transfer and generalization to other settings of students' skills.

Teachers were conscious of the importance of also assisting their students in problem-solving daily issues in the real world. The stress is also to assist them to set goals in life so that they are more purpose-driven in what they hoped to achieve and will be focused in more constructive actions in life. Independence skills are also stressed here which incorporates hygiene and proper dressing and grooming. Teachers are aware of the need for their students to integrate with the society at large and not looked as an "odd-man out" in the public.

As their students will be leaving school at age 18 as young adults, the teachers also felt that it was essential to assist them in their social skills especially in relating to the opposite sex.

Further emphasis was also felt in the area of moral/character education. As the students may have lower stress tolerance and lack self-control and perseverance, emphasis was placed on nurturing their emotional development, tolerance and perseverance as well as manners such as being appreciative and thankful.

-What are the essential subjects that teachers perceive when enhancing students' employability?

Teachers unanimously perceive consumer/work skills as of highest priority in enhancing students' employability. Again, the indicators that they provide stressed on providing hands-on experience, on-job training, visiting work areas and job attachment as some essential elements in ensuring that students' learning are transferable and generalized to other settings. In relating to consumers, teachers also felt the need to provide training in relating to customers. Work attitudes that should be inculcated include responsibility, punctuality, initiative and self-discipline.

Teachers have also maintained that students neither liked nor disliked their jobs. According to them, students perceived it as a necessity rather than a joy to work. Some of the factors that may account for this may be their lack of preparedness for the work that have been entrusted to them or the lack of fit with their personalities, or the difficulties that they faced at work.

However, the teachers perceived that students are fairly attached to their school indicating that they enjoyed very much to somewhat enjoyed very much school life.

In considering topics that are likely to be beneficial for ex-students to return to school to learn, the teachers suggested work skills, followed by social skills, English, Independent living skills,

recreational skills and money skills. These topics further suggest that teachers are aware of the need to provide work-related skills plus social skills that are necessary for student integration with the real world.

-What do teachers perceive that APSN can do for the students?

Much of the findings and suggestions from the teachers have already been emphasized in the earlier focus group interviews with all the stakeholders. In this survey, the emphasis is again on having a more functional and comprehensive curriculum for enhancing the independence and employability of the students.

It is necessary that APSN ensure that the teachers not only are efficiently trained to prepare their students in this direction but the need also to network with employers to place their students in appropriate employments. Suggestions are also made regarding setting up homes for encouraging independent living among their students besides a Support Service Centre with full staffing apart from CFA to cater for the youths and ex-students. Probably the Ministry of Community Development, Youth and Sports (MCDYS) and the National Council for Social Service (NCSS) may be encouraged to assist to make this into a reality.

The emphasis for proper facilities for students to apply their learning to real-life situations is also emphasized throughout this study. The earlier study (Ee & Soh, 2004) also indicates the need to have mock-up hotel rooms etc. to assist the youths in their training. Furthermore, training in moral values and attitudes which is part and parcel of character building must become a habit of the mind for these students from young.

Conclusions

As students with special needs learn at a slower rate and have difficulty in generalizing their learning, it is important to maximize their time in school by teaching those specific skills which help them survive in adult life. Furthermore, some of these skills must be taught as early as in the elementary years and allowed to be generalized in various settings (Nietupski, Welch, and Wacker, 1983).

To ensure that the curriculum is a functional one, academic skills must be applied to everyday, practical life, for example, following directions in a given recipe in a cookbook or completing a simple form for a library card, etc., and progressing to more higher functioning daily living skills that prepare students for independent living and employability. Morse and Schuster (2000) has further demonstrated how task analysis of grocery shopping through simulated training and criterion-based instruction can assist students' understanding and application.

APSN may also need to redesign or model some of their school settings into possible natural settings such as a supermarket, a departmental store or a hospital room or even a hotel room which allows the students to experience simulated facilities that can enhance transfer of training and generalization of their skills learned with ease to real on-the-job settings when they leave school. Browder & Snell (1993b) and Snell (1988) have also indicated that this will maximize the meaningfulness and relevancy of instruction and allows for easy integration of skills if our goals are to decrease the students' dependency on others and to enhance their ability to live and work independently in their community.

However, research has also indicated that even with the right curriculum content, the teacher factor needs to be taken into consideration. The teacher must also have the instructional skills and the creativity to design and empower their students with challenging tasks and prepare them for the real world. Alberto and Troutman (1999) and Moyer and Dardig (1978) maintained that task analysis may be a primary approach to teach functional and vocational skills to some of our students. Cooperative learning may also be included to increase success opportunities for these students in school (Snell & Brown, 1993) as it is likely to enhance their self-esteem and increase social acceptance with their peers (Slavin, 1991). Furthermore, it also provides opportunities for these students to learn how to mix socially and work as a team with the other students in the

class. Students can become more proficient and independent in a task if gradual removal of supports or scaffolded instruction is provided (Gargiulo, 2003).

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