表1

由家長自行匯報的評估組兒童的特殊需要類別的分佈

由家長自行匯報的特殊需要類別	*第一時段* （*N= 105*）	*第二時段*[c] （*N= 102*）
	n	*n*
特殊學習困難		
確診	10	8
智力障礙		
確診	0	3
自閉症譜系（ASD）		
確診	8	10
注意力不足及過度活躍症 （ADHD）		
確診	20	26
語言障礙		
確診	52	59
視力障礙		
確診	1	0
聽力障礙		
確診	2	0
小肌肉發展遲緩		
確診	18	15
大肌肉發展遲緩		
確診	10	11
整體性發展遲緩		
確診	5	10
臨界性發展遲緩		
確診	1	0
其他障礙 [a]		
確診	9	11
懷疑個案 [b]	13	11

註：個別兒童或有多於一種特殊需要。

[a] 包括有社交及情緒問題，及感覺統合障礙。

[b] 家長自行匯報為懷疑個案。懷疑個案指兒童未完成任何由政府機構或私人執業機構作診斷，故沒有特殊需要的辨識。

[c] 部分特殊需要類別分佈數字於第二時段的增長可歸因於部份兒童於第二時段已完成任何由政府機構或私人執業機構的評估診斷，故由懷疑個案轉為由家長自行匯報的特殊需要類別分佈。

表2

評估組兒童在《香港學前兒童綜合發展量表》上各能力範疇的平均值和標準差

發展範疇	平均值（標準差）		t 值		Cohen's d	效果
	第一時段	第二時段	(df)	p 值		
認知	10.73 (3.08)	12.78 (2.44)	6.17 (82)	<.001	.68	中
語言	10.06 (3.37)	12.78 (2.75)	11.22 (82)	<.001	1.23	大
社交認知	10.19 (3.76)	12.12 (2.88)	4.24 (82)	<.001	.47	小
大肌肉	9.77 (3.31)	12.32 (3.86)	1.04 (52)	.304	.14	小
小肌肉	8.94 (2.93)	9.58 (3.82)	4.03 (52)	<.001	.55	中

註：因在第一時段時，有 13 位兒童於第一時段時未達《香港學前兒童綜合發展量表》評估年齡，故無法比較他們在第二時段的相對應量表分數。排除這 13 位兒童，以及另外 6 位未有完成整段評估的兒童，合共有 83 位參加者完成第一及第二時段評估。故在認知、語言及社交認知範疇的可比較樣本數目為 83 位參加兒童。又因第五波疫情影響，部分家長選擇進行網上視像評估，無法進行有效的大小肌肉評估，故此兩項範疇的可比較樣本數目為 53 位參加兒童。

註: 效果大 (*Cohen's d* >= 0.80)， 效果中 (*Cohen's d* = 0.50 - 0.79), 效果小 (*Cohen's d* = 0 - 0.20)

表 3
評估組年齡低於 3 歲 4 個月的兒童在第一時段《文蘭-3》各範疇表現 (N=13)

	平均值	標準差	最少	最大
溝通	5.43	3.16	0	11
日常生活	6.86	3.01	3	12
社會	5.64	3.39	0	12
動作	7.21	1.89	4	10

表 4
評估組兒童在兒童發展量表上各能力範疇的表現

發展範疇 (*N* = 89)	平均值（標準差）		*t* 值 (*df* = 44)	*p* 值	*Cohen's d*	效果
	第一時段	第二時段				
認知	2.25 (0.62)	2.47 (0.55)	6.02 (88)	<.001	.64	中
語言	1.79 (0.78)	2.07 (0.73)	5.88 (87)	<.001	.63	中
社交認知	2.20 (0.55)	2.34 (0.54)	2.96 (88)	.004	.31	小
大肌肉	2.35 (0.52)	2.55 (0.43)	4.40 (88)	<.001	.47	小
小肌肉	2.15 (0.65)	2.41 (0.57)	5.50 (87)	<.001	.59	中
自理能力	2.26 (0.58)	2.47 (0.50)	5.81 (87)	<.001	.62	中

註: 效果大 (*Cohen's d* >= 0.80)， 效果中 (*Cohen's d* = 0.50 - 0.79), 效果小 (*Cohen's d* = 0 - 0.20)

發展範疇	平均值（標準差）		*t* 值 (*df* = 44)	*p* 值		
	第一時段	第二時段				

表5

由家長自行匯報的實驗組兒童的特殊需要類別的分佈

	第一時段 *（N = 137）*	*第二時段* [c] *（N = 76）*
由家長自行匯報的特殊需要類別	*n*	*n*
特殊學習困難		
確診	10	15
智力障礙		
確診	1	0
自閉症譜系（ASD）		
確診	1	2
注意力不足及過度活躍症 （ADHD）		
確診	31	20
語言障礙		
確診	53	30
視力障礙		
確診	1	1
小肌肉發展遲緩		
確診	14	11
大肌肉發展遲緩		
確診	5	8
整體性發展遲緩		
確診	12	7
臨界性發展遲緩		
確診	2	0
其他障礙 [a]		
確診	22	14
懷疑個案 [b]	28	7

1　註：個別兒童或有多於一種特殊需要。

2　[a] 包括有社交及情緒問題，及感覺統合障礙。

3　[b] 家長自行匯報為懷疑個案。懷疑個案指兒童未完成任何由政府機構或私人執業機構作診斷，故沒有特殊需要的辨識。

4　[c] 部分特殊需要類別分佈數字於第二時段的增長可歸因於部份兒童於第二時段已完成任何由政府機構或私人執業機構的評估診斷，故由懷疑個案轉為由家長自行匯報的特殊需要類別分佈。

表6

實驗組兒童在兒童發展量表上各能力範疇的平均值和標準差

發展範疇 (N = 45)	平均值（標準差）		t 值 (df = 44)	p 值	Cohen's d	效果
	第一時段	第二時段				
認知	2.25 (0.65)	2.47 (0.59)	5.10	<.001	.76	中
語言	1.87 (0.76)	2.12 (0.74)	3.51	.001	.52	中
社交認知	2.23 (0.51)	2.38 (0.55)	2.14	.038	.32	小
大肌肉	2.35 (0.47)	2.48 (0.47)	2.94	.005	.44	小
小肌肉	2.13 (0.62)	2.36 (0.65)	3.42	.001	.51	中
自理能力	2.29 (0.53)	2.45 (0.54)	2.80	.008	.42	小

註: 效果大 (*Cohen's d* >= 0.80), 效果中 (*Cohen's d* = 0.50 - 0.79), 效果小 (*Cohen's d* = 0 - 0.20)

表 7

實驗組兒童在兒童發展量表上各能力範疇的平均值和標準差

對照組兒童的年齡組別分佈

年齡組別	第一時段	第二時段
3 歲至 3 歲 5 個月	26	6
3 歲 6 個月至 3 歲 11 個月	30	11
4 歲至 4 歲 11 個月	56	39
5 歲至 5 歲 11 個月	55	55
6 歲或以上	35	68

表 8
對照組兒童在兒童發展量表上各能力範疇的平均值和標準差

發展範疇	平均值（標準差）		t 值 (df)	p 值	Cohen's d	效果
	第一時段	第二時段				
認知	2.42 (0.56)	2.65 (0.42)	9.27(169)	<.001	.71	中
語言	2.24 (0.67)	2.47 (0.54)	6.62 (166)	<.001	.51	中
社交認知	2.36 (0.51)	2.51 (0.44)	4.63 (164)	<.001	.36	小
大肌肉	2.42 (0.54)	2.57 (0.45)	4.96 (163)	<.001	.39	小
小肌肉	2.21 (0.70)	2.50 (0.54)	8.20 (163)	<.001	.64	中
自理能力	2.34 (0.62)	2.56 (0.45)	6.67 (162)	<.001	.52	中

註: 效果大 (*Cohen's d* >= 0.80), 效果中 (*Cohen's d* = 0.50 - 0.79), 效果小 (*Cohen's d* = 0 - 0.20)

表9

比較實驗和評估組、及對照組的兒童發展量表各能力範疇的表現

| 發展範疇 | 平均值（標準差） | | *t* 值（*df*） | *p* 值 | *Cohen's d* | 效果 |
	實驗和評估組	對照組				
第一時段						
認知	2.21 (0.63)	2.44 (0.55)	3.73 (388)	<.001	.38	小
語言	1.79 (0.80)	2.25 (0.66)	6.06 (382)	<.001	.62	中
社交認知	2.20 (0.54)	2.37 (0.51)	3.15 (381)	<.001	.32	小
第二時段						
認知	2.45 (0.57)	2.65 (0.42)	3.67 (325)	<.001	.41	小
語言	2.07 (0.73)	2.46 (0.54)	5.56 (325)	<.001	.62	中
社交認知	2.34 (0.55)	2.51 (0.44)	3.14 (325)	<.001	.35	小
小肌肉	2.35 (0.64)	2.49 (0.53)	2.19 (324)	.015	.24	小
自理能力	2.43 (0.55)	2.56 (0.45)	2.31 (324)	.011	.26	小

註: 效果大 (*Cohen's d* >= 0.80), 效果中 (*Cohen's d* = 0.50 - 0.79), 效果小 (*Cohen's d* = 0 - 0.20)

表 10

於第二時段為 4 歲至 4 歲 11 個月的實驗和評估組及對照組兒童於兒童發展量表大肌肉範疇的表現

	平均值（標準差）	
	第一時段	第二時段
實驗和評估組	2.08 (0.40)	2.33 (0.44)
對照組	2.31 (0.42)	2.38 (0.37)

表 11

評估組於第一時段按年齡組別之數據比較

	平均值（標準差）					*F* 值	*p* 值	η^2 值	效果
	3 歲至 3 歲 5 個月	3 歲 6 個月至 3 歲 11 個月	4 歲至 4 歲 11 個月	5 歲至 5 歲 11 個月	6 歲至 6 歲 11 個月				
兒童發展量表上的能力範疇									
認知	1.34 (0.61)	1.78 (0.47)	2.27 (0.44)	2.57 (0.43)	2.47 (0.59)	14.67	<.001	.39	大
語言	0.68 (0.65)	1.33 (0.69)	1.80 (0.64)	2.17 (0.61)	2.09 (0.64)	11.10	<.001	.33	大
社交認知	1.61 (0.76)	1.95 (0.41)	2.17 (0.51)	2.44 (0.43)	2.45 (0.45)	7.02	<.001	.23	大
大肌肉	1.97 (0.66)	2.18 (0.45)	2.26 (0.53)	2.52 (0.48)	2.56 (0.44)	3.55	.010	.13	中
小肌肉	1.37 (0.62)	1.68 (0.56)	2.21 (0.46)	2.46 (0.44)	2.43 (0.57)	11.91	<.001	.34	大
自理能力	1.69 (0.49)	1.91 (0.50)	2.37 (0.41)	2.51 (0.37)	2.52 (0.41)	10.60	<.001	.32	大
《香港學前兒童綜合發展量表》上的能力範疇									
社交認知	5.33 (4.46)	7.86 (3.48)	10.22 (4.05)	11.06 (3.58)	10.21 (3.97)	4.01	.005	.15	大
大肌肉	5.33 (3.14)	9.71 (3.22)	9.41 (2.92)	9.59 (4.08)	10.26 (2.81)	2.47	.050	.10	中

註: 效果大（ η^2>.14), 效果中（η^2= .06 -.13), 效果小（η^2= 0 -.05)

表 12

評估組於第二時段按年齡組別之數據比較

兒童發展量表上的能力範疇	平均值（標準差）						*F* 值	*p* 值	η^2 值	效果
	3 歲至 3 歲 5 個月	3 歲 6 個月至 3 歲 11 個月	4 歲至 4 歲 11 個月	5 歲至 5 歲 11 個月	6 歲至 6 歲 11 個月	7 歲至 7 歲 11 個月				
認知	0.89	1.82 (0.67)	2.20 (0.62)	2.65 (0.25)	2.67 (0.36)	2.86 (0.18)	11.21	<.001	.39	大
語言	0.20	1.49 (0.86)	1.81 (0.81)	2.21 (0.55)	2.35 (0.51)	2.33 (0.62)	5.34	<.001	.23	大
社交認知	1.17	1.95 (0.54)	2.07 (0.53)	2.54 (0.37)	2.46 (0.53)	2.48 (0.63)	4.97	<.001	.22	大
大肌肉	2.08	2.13 (0.65)	2.31 (0.46)	3.69 (0.36)	2.67 (0.34)	2.73 (0.34)	5.03	<.001	.22	大
小肌肉	1.80	1.57 (0.66)	2.03 (0.61)	2.64 (0.34)	2.65 (0.38)	2.83 (0.15)	13.75	<.001	.44	大
自理能力	1.14	1.69 (0.65)	2.19 (0.51)	2.67 (0.26)	2.69 (0.32)	2.75 (0.26)	15.05	<.001	.46	大
《香港學前兒童綜合發展量表》上的能力範疇										
認知	1.00	10.00 (2.70)	11.86 (3.51)	12.72 (2.42)	12.84 (2.56)	12.38 (2.45)	4.94	<.001	.21	大
語言	1.00	8.25 (4.50)	10.69 (4.29)	12.40 (2.80)	13.44 (2.26)	14.00 (3.02)	7.05	<.001	.27	大
社交認知	1.00	7.50 (5.44)	9.67 (4.14)	12.56 (1.94)	12.80 (2.48)	12.38 (3.16)	7.69	<.001	.29	大

註: 效果大（η^2>.14), 效果中（η^2= .06 -.13), 效果小（η^2= 0 -.05)

表 13

實驗組於第一時段按年齡組別之數據比較

兒童發展量表上的能力範疇	平均值（標準差）					*F* 值 (4,78)	*p* 值	η^2 值	效果
	3 歲至 3 歲 5 個月 (*N = 23*)	3 歲 6 個月 至 3 歲 11 個 月 (*N = 8*)	4 歲至 4 歲 11 個月 (*N = 22*)	5 歲至 5 歲 11 個月 (*N = 21*)	6 歲至 6 歲 11 個月 (*N = 9*)				
認知	2.07 (0.55)	1.78 (0.94)	2.30 (0.57)	2.49 (0.52)	2.49 (0.51)	3.10	.020	.14	大
小肌肉	1.87 (0.68)	1.69 (0.89)	2.12 (0.57)	2.47 (0.42)	2.41 (0.47)	4.42	.003	.19	大
自理能力	2.13 (0.62)	1.84 (0.72)	2.36 (0.50)	2.48 (0.39)	2.38 (0.50)	2.77	.033	.12	小

註: 效果大（η^2>.14), 效果中（η^2= .06 -.13), 效果小（η^2= 0 -.05)

表 14

對照組於第一時段按年齡組別之數據比較

兒童發展量表上的能力範疇	平均值（標準差）					F 值	p 值	η^2 值	效果
	3 歲至 3 歲 5 個月	3 歲 6 個月至 3 歲 11 個月	4 歲至 4 歲 11 個月	5 歲至 5 歲 11 個月	6 歲至 6 歲 11 個月				
認知	1.76 (0.66)	2.07 (0.49)	2.45 (0.40)	2.72 (0.30)	2.79 (0.32)	33.61	<.001	.42	大
語言	1.58 (0.74)	1.93 (0.71)	2.31 (0.56)	2.46 (0.48)	2.61 (0.45)	15.58	<.001	.25	大
社交認知	2.04 (0.63)	2.13 (0.48)	2.28 (0.48)	2.61 (0.34)	2.61 (0.39)	11.19	<.001	.20	大
大肌肉	1.98 (0.66)	2.23 (0.52)	2.39 (0.48)	2.72 (0.32)	2.66 (0.43)	13.53	<.001	.23	大
小肌肉	1.37 (0.73)	1.79 (0.55)	2.13 (0.55)	2.72 (0.32)	2.68 (0.39)	41.37	<.001	.48	大
自理能力	1.64 (0.71)	2.03 (0.56)	2.33 (0.49)	2.67 (0.34)	2.72 (0.30)	26.64	<.001	.37	大

註: 效果大（η^2>.14), 效果中（η^2= .06 -.13), 效果小（η^2= 0 -.05)

表 15

對照組於第二時段按年齡組別之數據比較

兒童發展量表上的能力範疇	平均值（標準差）					*F* 值	*p* 值	η^2 值	效果
	3 歲至 3 歲 5 個月	3 歲 6 個月至 3 歲 11 個月	4 歲至 4 歲 11 個月	5 歲至 5 歲 11 個月	6 歲至 6 歲 11 個月				
認知	1.92 (0.21)	2.16 (0.74)	2.48 (0.35)	2.74 (0.31)	2.82 (0.30)	18.61	<.001	.30	大
語言	1.94 (0.50)	1.93 (0.83)	2.23 (0.48)	2.58 (0.47)	2.63 (0.46)	9.57	<.001	.18	大
社交認知	2.06 (0.36)	2.16 (0.73)	2.33 (0.40)	2.60 (0.37)	2.63 (0.39)	7.77	<.001	.15	大
大肌肉	2.15 (0.40)	2.16 (0.75)	2.38 (0.36)	2.62 (0.40)	2.74 (0.35)	9.93	<.001	.19	大
小肌肉	1.46 (0.49)	1.78 (0.62)	2.24 (0.47)	2.60 (0.40)	2.75 (0.37)	27.51	<.001	.39	大
自理能力	1.98 (0.45)	1.94 (0.61)	2.31 (0.41)	2.63 (0.34)	2.79 (0.29)	24.07	<.001	.36	大

註: 效果大（η^2>.14）， 效果中（η^2= .06 -.13), 效果小（η^2= 0 -.05)

表 16

評估組於第一時段按服務對象組別的比較

	平均值（標準差）[a]						
	組別 1 (N = 34)	組別 2 (N = 47)	組別 3 (N = 17)	組別 4 (N = 10)	F 值 (3,104)	p 值	η^2 值　效果
兒童發展量表上的能力範疇							
認知	2.14 (0.68)	2.08 (0.68)	2.56 (0.40)	2.29 (0.47)	2.69	.050	.07　　　中
自理能力	2.27 (0.61)	2.17 (0.59)	2.56 (0.37)	1.95 (0.58)	2.94	.037	.08　　　中

[a]組別 1：懷疑有殊需要；組別 2：正輪候兒童體能智力測驗中心評估；組別 3：經兒童體能智力測驗中心評估後確診臨界性發展障礙、或單一特殊需要、但並未達至輪候第二層支援服務的要求；組別 4：正在輪候第二層支援服務

註: 效果大 (η^2>.14)， 效果中（η^2= .06 -.13), 效果小 (η^2= 0 -.01)

表 17
實驗組和對照組兒童課室適應能力比較

	實驗組(*N*=107)		對照組(*N*=130)	
	第一時段	第二時段	第一時段	第二時段
	M(SD)	*M(SD)*	*M(SD)*	*M(SD)*
專注力行為	3.45(.92)	3.58(.99)	4.31(.89)	4.22(1.01)
干擾性行為	1.94(.59)	1.86(.52)	1.84(.61)	1.65(.47)
親社會行為	3.52(.80)	3.63(.79)	4.33(.79)	4.31(.91)

表 17
實驗組和對照組兒童課室適應能力比較

表 *18*

第一時段和第二時段評估組、實驗組和對照組的家長親職評估

	平均值（標準差）		*t* 值	*p* 值
	第一時段	第二時段		
評估組				
家長自我效能	3.78	3.87	1.69	.10
	(0.47)	(0.45)		
家長壓力	2.65	2.70	1.05	.30
	(0.48)	(0.45)		
育兒憤怒	2.92	2.93	.16	.88
	(0.75)	(0.77)		
整體健康	2.92	2.82	-1.10	.27
	(0.67)	(0.76)		
實驗組				
家長自我效能	3.71	3.77	1.08	.29
	(0.48)	(0.41)		
家長壓力	2.68	2.72	0.77	.44
	(0.41)	(0.42)		
育兒憤怒	2.79	2.86	0.98	.33
	(0.66)	(0.71)		
整體健康	3.01	2.94	0.96	.34
	(0.59)	(0.52)		
對照組				
家長自我效能	3.71	3.77	1.08	.29
	(0.48)	(0.41)		
家長壓力	2.68	2.72	0.77	.44
	(0.41)	(0.42)		
育兒憤怒	2.79	2.86	0.98	.33
	(0.66)	(0.71)		
整體健康	3.01	2.94	0.96	.34
	(0.59)	(0.52)		

表 19

比較實驗和評估組、及對照組於第一及第二時段的家長親職評估數據

	平均值（標準差）				Cohen's d	效果
	實驗和評估組	對照組	t 值（df）	p 值		
第一時段						
家長壓力	2.60 (0.44)	2.70 (0.46)	2.26 (434)	.024	.22	小
第二時段						
整體健康	2.83 (0.68)	3.02 (0.62)	2.61 (346)	.005	.28	小

註: 效果大 (*Cohen's d* >= 0.80), 效果中 (*Cohen's d* = 0.50 - 0.79), 效果小 (*Cohen's d* = 0 - 0.20)

表 20

於第二時段為 5 歲至 5 歲 11 個月的評估和實驗組、及對照組兒童家長的整體健康

	平均值（標準差）	
	第一時段	第二時段
評估和實驗組	2.92 (0.51)	2.78 (0.67)
對照組	2.95 (0.57)	3.02 (0.62)

表 21

於第二時段為 5 歲至 5 歲 11 個月的評估和實驗組、及對照組兒童家長的家長壓力

	平均值（標準差）	
	第一時段	第二時段
評估和實驗組	2.72 (0.47)	2.87 (0.38)
對照組	2.69 (0.47)	2.64 (0.44)

節錄 2.01

> 「在學校通過觀察孩子的表現，作出及時的引導，當發現不足亦會糾正孩子，發展其語言潛力；讓孩子感到不抗拒，願意一起進行做遊戲，而孩子的詞彙量越來越多，語言能力越見進步，跟正常孩子一般。」（C0201 家長）

> 「針對性的訓練，令孩童慢慢地駛改善自己，變得有自信；尤其在疫情期間，學校停課，沒有學校正統學習，反而更顯出支援服務的幫助是顯著

的。」（C0311 家長）

節錄 2.02

「我認為父母個人的知識是有限的，而且缺乏專業的訓練，從而未能靠自己去教導兒子。而這計劃有專業的人員能提供專業的知識、方法、建議去教導小朋友，是更直接有效的。」（C2208 家長）
「當家長對小朋友的行為表現有疑慮但又不知如何是好時，計劃及時給予家長及小朋友的支援，對我們作為家長來說是很大的支持及指導。」
（C0307 家長）
「令家長能有效地改善與孩子的關係。」（C2104 家長）
「能確切地幫助兒童，有效改善各自所需，減輕家長的焦慮。」（C2427 家長）

表 22

參與焦點小組訪問的教師之人口特徵

參與試驗計劃學校的校長及行政人員					
受訪者編號	學校類別	職位	學校背景	性別	教學年資
SE001	幼稚園	校長	其他非牟利機構，荃灣	女	>30
SE002	幼稚園 暨兒童中心	校長	其他非牟利機構，元朗	女	>30
SE003	幼稚園 暨兒童中心	校長	營辦機構,南區	女	>30
SE004	幼稚園 暨兒童中心	老師	其他非牟利機構，港島東	女	15-20
SE005	幼稚園 暨兒童中心	老師	其他非牟利機構，港島東	女	10-15
非參與試驗計劃學校的校長及行政人員					
SC006	幼稚園 暨兒童中心	校長	其他非牟利機構，沙田	女	15-20
SC007	幼稚園	校長	其他非牟利機構，港島東	女	>30
SC008	幼稚園	校長	其他非牟利機構，屯門	女	>30
SC009	幼稚園 暨兒童中心	主任	其他非牟利機構，葵青	女	15-20
SC010	幼稚園 暨兒童中心	老師	其他非牟利機構，葵青	女	10-15
SC011	幼稚園 暨兒童中心	校長	其他非牟利機構，黃大仙	女	15-20

節錄 2.03

以下節錄個別校長與教師的相關回應：

「團隊在提供服務時會提供諮詢服務，如就著兒童個案，老師可以如何在課室內的環境上、教材上的建議和課程活動上的調節提升個案兒童的能力。而老師在實行這些建議後亦可見個案兒童在學習上有進步。 ……這些服務能夠讓小朋友直接受惠。老師觀察到兒童主動學習上有所提升，會主動提出去哪個角落看書。」(SE003 校長)

「我很欣賞第一層支援在整個團隊到校進行觀察後與老師討論兒童的情況、向老師解釋有關兒童的行為表現、提供一些針對性的課堂上的調適的建議。」（SE001 校長）

節錄 2.04

以下節錄個別校長與教師的相關回應：

「團隊則在此能給予補足，給予老師有關兒童的深入的分析，而老師則能從中學習到一些專業的處理特殊需要兒童技巧。專業團隊亦會到課堂上與老師協作並提供支援，讓老師知道應如何在課堂上、小組上、個別輔導上輔助兒童。」（SE001 校長）

第一層支援團隊對兒童的觀察非常細微，並且能夠就此給予相應建議和解決方案予老師，令老師能夠做到微化教育，提點了老師沒有留意的地方，從而提升了老師的教學。(SE002 校長)

確實現時學校老師有接受相關，對特殊需要的認識亦更深，但始終停留在理論層面上，再者，每位小朋友的特質以及所需的支援都相差較大，而專業團隊的意見會更加針對性。在學習上的建議成效很高。(SE003 校長)

節錄 2.05

以下節錄個別校長與教師的相關回應：

「主要原因是人手資源上的援助。我校共有十幾二十個特殊需要兒童在第一層支援服務計劃內，但每次只有一個社工／教育心理學家來駐校兩天的話，事實上是並不足夠的。總括而言，人手配備和支援時間並不足夠。如果這方面可增加的話便會有滿分。」（SE001 校長）

「我認同校長的說法，主要是在於人手上的支援。第一層支援服務計劃中支援人員需要照顧的兒童數目頗高，若支援人員要關顧到每位個案兒童的話，能夠配置的支援時間實質上並不多。另外，在給予課堂調適建議時，支援人員需要對學校的課程熟識才能給予一些針對性且有效的建議。為此，支援人員在正式給予支援前亦需要花一段時間去了解學校的課程。」（SE002 校長）

「改善的地方在於支援團隊給予的建議太過針對性，未能顧及和配合班上其他兒童的情況。老師在課室推行課程的時候，若要針對性地對其中一位或兩位兒童而作出調適、教學上的配合的話，事實上對老師亦會是另一大挑戰，因老師不但要支援該兒童，亦要公平地對待其他兒童。」（SE004、SE005 教師）

表 23

特殊兒童教育建議做法項目的表現

建議做法範疇	項目隊執行者		
	平均數	（排列次序）	標準差
領導能力	6.10	5	0.43
評估	6.36	1	0.51
環境	5.85	8	0.66
家庭為本	6.15	3	0.57
學與教	6.00	6	0.68
交流	6.27	2	0.82
合作	5.97	7	0.53
銜接/過渡	6.14	4	0.46

表 24
參與焦點小組訪問的營辦機構項目隊的人口特徵

受訪者編號	職位	性別	工作年資
N001	教育心理學家	女	28
N002	教育心理學家	女	6
N003	教育心理學家	女	10
N004	教育心理學家	女	6
N005	教育心理學家	女	6
N006	教育心理學家	女	1.5
N007	教育心理學家	女	1.6
N008	教育心理學家	男	5
N009	特殊幼兒工作員	女	8
N010	特殊幼兒工作員	女	7
N011	高級特殊幼兒工作員	女	12
N012	特殊幼兒工作員	女	25
N013	特殊幼兒工作員	女	21
N014	高級特殊幼童工作員	男	8
N015	高級特殊幼兒工作員	男	22
N016	高級特殊幼兒工作員	女	12
N017	特殊幼兒工作員	女	5
N018	特殊幼兒工作員	女	1.5
N019	特殊幼兒工作員	女	3.5
N020	高級特殊幼兒工作員	女	10
N021	高級特殊幼兒工作員	女	20
N022	高級特殊幼兒工作員	女	13
N023	高級特殊幼兒工作員	女	20
N024	高級特殊幼兒工作員	女	20

節錄 2.06

以下節錄個別特殊幼兒工作員的相關回應：

> *「在提供第一層支援服務經驗中，有個案兒童在及早識別過程中發現需要特殊學*
> *習上的支援，並因此進入第一層支援服務計劃，得到一些及早支援服務，因而在*
> *學習能力上有所提升。」（N024 特殊幼兒工作員）*

> *支援人員亦會提供一些課堂及功課調適建議給老師，讓老師運用在課堂上以減低*
> *兒童在課堂上的學習障礙，同時提高老師對有學習差異兒童的接納程度。在進行*

調適後，能夠觀察到兒童對學習的信心、開心程度、適應度都有所提升。(N020 特殊幼兒工作員)

第一層支援服務能幫助一些因環境問題而出現行為問題的兒童提升能力，融入到大班的環境。(N011 特殊幼兒工作員)

節錄 2.07
以下節錄個別特殊兒童工作員的相關的回應：

> *「於家長方面，第一層支援服務計劃並不會為兒童做一些正式評估，不會導致有標籤的問題出現，因此一些頑固的家長對第一層支援服務計劃的接受度較高。此外，第一層支援服務亦會讓這些家長增加對起小朋友的學習需要的認識。通過支援人員與家長的持續溝通，讓家長學會一些家中訓練以幫助小朋友。而家長亦會將所學的技巧融入家中的日常生活和流程中，讓小朋友在家中亦能得到支援。」(N020 特殊幼兒工作員)*

> *對於家長，第一層支援所提供的服務是更能接受的，因為不需要進行正式的評估。在接受第一層支援服務後，可觀察到有些家長與學校／支援團隊的溝通變得緊密良好，並且對特殊學習支援如到校學前康復服務或第三層支援服務支援的接受程度提高。(N012、N013 特殊幼兒工作員)*

> *補充第一層支援服務計劃能夠讓家長更容易接納兒童的學習需要情況，因為不需要正式評估。對一些較嚴重的個案，第一層支援服務計劃能夠令家長逐步接受孩子的需要並推動家長接受支援。(N010 特殊幼兒工作員)*

節錄 2.08
以下節錄個別教育心理學家及特殊兒童工作員的相關回應：

> *「在參與了第一層支援服務計劃後，老師們變得更願意留有特殊需要兒童在班房內，上堂時亦會願意讓支援人員入班房協助兒童上堂。到了參與計劃的第二年，可見老師變得更為積極參與特殊支援教學，更會主動提出為有特殊需要兒童作調適。」（N004 心理學家）*

> *成效上，可以提升老師對學習差異的接受度，老師亦表示變得較有信心去教導不同類型的兒童包括特殊需要兒童。(N003 心理學家）*

> *認同第一層支援服務計劃能夠提升老師們在教導學習差異上的技巧，例如：曾經教導老師一些簡單的功課調適如兒童抄寫能力較差可先用螢光筆模仿，再慢慢轉用鉛筆等。在開始時，老師或需要支援人員的教導，但其後老師亦能自發地將這些技巧運用於其他有同類型需要的兒童身上。由此可見老師在教導或管理學習差*

異兒童的技巧上是有所提升的。另外，亦可從老師與家長的溝通中看到老師對有學習差異的認識加深了，會知道如何從家長方得到有用的資訊，並向家長解釋有關學習差異的事宜。（N008 教育心理學家）

可觀察到老師們普遍能夠將第一層次支援服務中的一些諮詢建議以及支援人員入班支援時所用的方法套用在其他不同的兒童身上。從中可見，老師們在支援及照顧學習差異兒童的技巧以及信心上都有所提高。而這些改變是之前提供到校學前康復服務支援時未曾觀察到的。(N021 特殊幼兒工作員)

認為第一層支援服務計劃中為學校老師所提供支援服務令老師對有學習差異的兒童的認知以及辨識能力都有所增強。在比較計劃初期識別過程與第二年識別過程，可以觀察到學校老師在第二年能夠更快地提供懷疑個案兒童名單，並且能夠對名單上的兒童向支援團隊給予相關意見。由此可見，老師變得更加留意兒童的學習需要，並在識別兒童需要的能力上有所提升。(N020 高級特殊幼兒工作員)

而第一層支援服務除了提升學校老師對特殊學習教育的認識和態度，亦幫助老師學習優化教學策略，包括：認識如何運用班房空間以改善兒童的表現、課業的調適。而這些優化教學的策略，不但能支援到有需要的兒童，其他兒童亦會受惠。(N011 特殊幼兒工作員)

節錄 2.09
以下節錄個別教育心理學家及特殊兒童工作員的相關回應：

「源自於多方面，其中一個主因為人手資源不足的問題-- Tier1 服務中不包括提供治療師的諮詢服務。」（N021 特殊幼兒工作員）

原因源自缺乏言語治療師及職業治療師的服務，尤其是言語治療師的支援，因有越來越多小朋友需要言語治療。希望將來能夠加入治療師的服務。(N012、N013 特殊幼兒工作員)

缺乏治療師以及社工支援。如有這些支援的話，能夠控制到的情況會更多。
(N015 特殊幼兒工作員)

源自缺乏言語治療師及職業治療師的服務。另外，學校對特殊學習教育的接受程度會影響支援團隊可提供的支援項目和量。(N020 特殊幼兒工作員)

第一個限制為計劃成效會所校本本身的文化和校內安排如：課程或管理層的作風等所影響。例如：若學校課程的靈活度較低，學校便認為所有兒童仍需要有一個

統一的標準，較不接受減低功課量等的調適建議。在這情況下亦可觀察到兒童的進展會受影響。(N007 心理學家)

在參與第一層支援服務時的想法是在兒童的問題不大時便能介入並提供全班性的支援而非個人化的支援以幫助有需要兒童。但有一些學校會要求聚焦於名單上的兒童的支援，不希望有太多全班性的支援和調適。這些學校的心態依然堅持只對有問題兒童作調適。這會是計劃中的一大限制，以致未能達到優化全班的成效。另外一些限制則是有一些兒童有大小肌肉訓練上的需要，但我們教育心理學家對此範疇了解不深，能給予的建議不足夠。如在這範疇上能有職業或物理治療師的支援，給予老師一些有關訓練大小肌肉的意見的話，支援上便會更全面。(N004 心理學家)

在兒童教育上，有治療師的支援是非常重要的，因此亦都認為第一層支援服務需要加入治療師的資訊服務以令支援更全面。(N008 心理學家)

缺乏治療師的諮詢服務是我們教育心理學家可見的問題。認同計劃需要一個多元範疇的團隊以提供支援。如支援團隊有多元範疇的人員支援便可支援到單一個案的小朋友（只有言語治療／大小肌肉發展較慢的兒童）和第四組別的特殊需要的兒童。(N001 心理學家)

表 25

試驗計劃服務量和服務成效標準

服務量指標	服務量標準	每支項目隊
1. 37 個月服務兒童名額（OS1）	3 840	640
2. 由教育心理學家為學校的（一）學校工作人員（校長、教師）、（二）兒童、或（三）家長/照顧者於 37 個月提供個別或小組的評估/諮詢/輔導的節數 （OS2）	14 040	2340
3. 由高級特殊幼兒工作員/特殊幼兒工作員為學校的（一）教師、（二）兒童、或（三）家長/照顧者於 37 個月提供個別或小組的評估/諮詢/輔導的節數 （OS3）	86 400	14400
4. 37 個月提供予家長/監護人/照顧者的訓練及教育項目數量 (OS 4)	48	8
服務成效指標	最低水平	每支項目隊
1. 家長/監護人/照顧者滿意服務完結時給予兒童的整體服務的比率（OC1）	80%	80%
2. 教師/學校工作人員滿意提升其照顧兒童的多樣性 (包括：課堂管理、課程調適、教學策略的諮詢和教師發展計劃等)(OC2）	80%	80%

表 26

家長對營辦機構所提供的服務及支援之評價

	平均數	標準差
心理學家／特殊幼兒工作員提供的服務		
− 我認為兒童評估有助子女的發展。 (*N*=150)	5.74	1.12
− 我認為個別訓練有助子女的發展。 (*N*=148)	5.83	1.10
− 我認為小組訓練有助子女的發展。 (*N*=113)	5.86	.98
− 我認為課堂觀察有助子女的發展。 (*N*=123)	5.90	.99
− 我認為課堂調適有助子女的發展。 (*N*=111)	5.83	.90
我認為計劃中各專業人士對子女有足夠的支援。		
− 臨床心理學家／教育心理學家 (*N*=98)	5.43	1.24
− 特殊幼兒工作員 (*N*=116)	5.75	.96
我對心理學家／特殊幼兒工作員的質素感到滿意。 (*N*=166)	5.95	1.01
整體而言，我對機構提供的服務感到滿意。 (*N*=165)	5.80	1.02

註：因部分家長選了「不適用」的選項，所以各題的總人數有所不同。

表 27

家長對幼稚園／幼稚園暨幼兒中心所提供的支援之評價

	平均數	標準差
學校的設施顧及到有特殊需要的兒童。 (*N*=155)	5.64	1.03
學校的政策顧及到有特殊需要的兒童。 (*N*=160)	5.63	1.03
學校給予我和我的子女足夠的支援。 (*N*=167)	5.74	.97
我與學校有足夠的溝通。 (*N*=169)	5.75	1.01
教師能有效配合「幼稚園／幼稚園暨幼兒中心第一層支援服務試驗計劃」。 (*N*=166)	5.83	.97

註：因部分家長選了「不適用」的選項，所各題的總人數有所不同。

表 28

雙變項相關分析：家長對試驗計劃的整體滿意度以及他們對兒童各發展範疇之關係

	家長對試驗計劃的整體滿意度
大肌肉 (*N*=107)	.39***
小肌肉 (*N*=119)	.40***
社交及情緒管理 (*N*=137)	.45***
認知能力 (*N*=123)	.51***
語言 (*N*=146)	.49***
自理能力 (*N*=132)	.42***

註：因部分家長選了「不適用」的選項，所各題的總人數有所不同。

節錄 3.01

以下節錄個別家長對試驗計劃的相關看法：

「輪候政府的智力測驗需時，試驗計劃能作出適量的評估和服務，令小孩盡早得到相對的訓練，得到改善和進步(六歲前黃金期)；家長亦可獲得多方面資訊，令自己更加了解如何作出適當的幫助和家居訓練，減少大人的疑惑和焦慮。總結非常好！」（C2404 家長）

「很適合我小朋友的情況，因為我小朋友問題不大，無需上到校學前康復服務／治療，而我小朋友只是比同年的小朋友差少少，所以這個計劃很適合我小朋友參加。」（C2401 家長）

「適時為正輪候評估的兒童提供服務，免於兒童及學校及家長於未得到服務前，因為處理有特特殊需要兒童時變得無所適從。若果沒有第一層支援服務，相信學校對特殊需要兒童的教學上也感吃力，家長亦會因為兒童表現上感壓力及未見有支持」（C2218 家長）

節錄 3.02

以下節錄個別家長對試驗計劃的相關看法：

「家長不知道兒童在班上有何特殊需要，如果有專門的人士能在班上第一

時間察覺到問題並處理，絕對比起到兒童進入小學才發現追不上，更加有效解決問題。」（C2206 家長）

「可以及早發現小朋友有甚麼特殊需要，以及需要那些訓練。如果沒有第一層支援服務，排 S 位（特殊幼兒中心）的時間便會更長。越早發現，就越早可以排位。」(C1403 家長)

「試驗計劃提供便捷、可靠和直接的兒童支援服務，讓家長可放心給兒童在學校接受觀察、評估和恆常訓練；避免因時間不配合、新環境或舟車勞動、家長工作等延誤兒童接受適當服務。服務值得持續進行！」（C2205 家長）

「於學校裡面同步做到訓練，家長和小朋友都會容易接受及做到。」
(C1201 家長)

節錄 3.03

其中兩位家長在問卷中的回應如下：

「相比沒有任何服務好，總算有些訓練，希望次數可以多一些，在小朋友發展黃金期可以多些訓練。」（C00506 家長）

「我覺得好處是感覺讓小朋友可以未獲取正式服務時，而得到的少許幫助。但因為導師（特殊幼兒工作員）只在一星期的其中一日入班，及班老師調適，在時間性投放不多。應及早加入語言治療、職業治療、導師訓練小組。雖然學習時數一定比『正式的訓練』有差異，但至少給這班小朋友能夠盡早提供訓練。」（C0102 家長）

節錄 3.04

家長與家長對溝通形式及頻率的看法之摘錄：

「訓練內容充實，如果可以提供小手冊記錄兒童服務事項，簡單評估兒童進度更好，以便家長可配合服務，在家或假日也可相應訓練兒童。現時以電話形式給家長了解也可接受。」（C2205 家長）

「訓練的透明度稍低，家長不太清楚兒童工作員提供了甚麼支援，又不太清楚小朋友的發展進度。」（C0410 家長）

「疫情期間可透過影片/視像讓家長指導兒童學習，亦可請家長拍片跟進小朋友進度。停課期間不應停訓練，即使兒童未能回學，可嘗試運用科技/文字繼續跟進兒童發展情況，支援家長。」（C2324 家長）

表 29

實驗組學校教師和行政人員對試驗計劃的成效數據

	第一時段（*N*=203）		第二時段（*N*=142）	
	M_1	SD_1	M_2	SD_2
兒童在不同發展範疇的進步				
大肌肉	5.27	1.11	5.22	1.18
小肌肉	5.45	1.02	5.46	1.16
社交及情緒管理	5.66	.93	5.45	1.11
認知能力	5.43	.99	5.39	1.07
語言	5.58	.99	5.52	1.07
自理能力	5.46	1.07	5.39	1.08
在計劃期間，我能清楚掌握兒童的發展進度。	5.79	.86	5.77	.85
偏好的服務模式 **（特殊幼兒工作員及教育心理學家）**				
我認為兒童評估有助兒童的發展。	5.90	.89	5.89	.89
我認為個別訓練有助兒童的發展。	6.04	.93	6.01	.84
我認為小組訓練有助兒童的發展。	6.03	.82	6.03	.84
我認為課堂觀察有助兒童的發展。	6.00	.95	5.94	.86
我認為課堂調適有助兒童的發展。	5.97	.87	5.91	.89
我認為講座/工作坊有助兒童的發展。	5.95	.80	5.77	.89
我認為個別諮詢/輔導有助兒童的發展。	6.08	.78	5.99	.82
我認為共同備課有助兒童的發展。	5.87	.96	5.83	.96
營辦機構的支援				
機構舉辦的教師講座有助我了解兒童的特殊需要。	6.03	.71	5.83	.97
我對專業治療師／社工／幼兒工作員／心理學家的質素感到滿意。	6.14	.73	6.17	.79
我認為計劃中各專業人士對兒童有足夠的支援：				
- 臨床心理學家／教育心理學家	5.83	.93	5.99	.83
- 特殊幼兒工作員	5.90	.99	6.04	.85
機構主動向我溝通兒童的治療進度。	6.05	.79	6.07	.80
如有需要，機構中的專業人士能向我提供其他服務的資訊。	6.01	.80	5.96	.79
機構中的專業人士明白我所遇到的困難。	5.98	.79	5.84	.82
機構中的專業人士協助我相信自己有能力教導有特殊需要的兒童。	5.84	.84	5.73	.84
機構中的專業人士協助我看見自己作為老師尚未	5.41	1.03	5.44	1.01

	M_1	SD_1	M_2	SD_2
發掘的優點。				
我與機構有足夠的溝通。	5.95	.85	5.87	.81
整體而言，我對機構提供的服務感到滿意。	6.08	.75	6.08	.79
學校的支援				
我能有效配合「第一層支援服務試驗計劃」。	6.10	.73	5.97	.70
學校的設施顧及到有特殊需要的兒童。	5.70	.92	5.48	1.07
學校的政策顧及到有特殊需要的兒童。	5.70	.97	5.45	1.04
學校給予我和我的兒童足夠的支援。	5.78	.84	5.56	.97
學校、家長及我之間有足夠的溝通。	6.03	.59	5.89	.78
參與計劃的整體經驗				
我對「第一層支援服務試驗計劃」的內容有足夠的了解。	5.90	.72	5.74	.94
我能清楚了解「第一層支援服務試驗計劃」及社署各資助學前康復服務計劃所提供的服務的分別。	5.85	.84	5.64	.98
現時政府對有特殊需要的兒童投放了足夠的資源。	4.44	1.75	4.40	1.65
在參與「第一層支援服務試驗計劃」後，我對應付兒童發展的需要變得更有信心。	5.59	.88	5.49	1.00
整體而言，我對「第一層支援服務試驗計劃」感到滿意。	5.99	.75	5.98	.79

註：M_1SD_1＝第一時段的平均分及標準差；M_2SD_2＝第二時段的平均分及標準差

表 30

實驗組學校教師及行政人員對專業支援的數據

	第一時段（N=203）		第二時段（N=142）	
	M_1	SD_1	M_2	SD_2
學校制度	3.91	.43	3.93	.40
計劃協助學校推行必要的評估，使我們為兒童提供更合適的支援。	3.89	.47	3.92	.46
在有關早期識別有特殊需要兒童和個案轉介的議題上，計劃都能提供專業支援。	3.99	.49	3.96	.46
計劃為學校提供專業支援以迎合不同特殊需要的兒童。	3.98	.47	3.99	.48
計劃在學校的課程規劃上提供支援。	3.80	.61	3.83	.58
教師	3.92	.45	3.89	.44
計劃能幫助老師為有特殊需要兒童訂立更合適的「個別學習計劃」(IEP)	3.78	.63	3.68	.75
計劃為老師在個案研討會中提供有效的諮詢。	3.95	.55	3.92	.62
計劃向老師在教學及學習方面 (例如：教學方法和技巧) 提供專業支援。	4.00	.52	4.04	.46
計劃向老師就處理兒童情緒及行為問題上提供有效的專業意見。	4.00	.51	4.00	.45
計劃為老師舉辦實用的講座和工作坊。	3.85	.58	3.80	.59
家長和兒童	3.94	.46	3.92	.43
計劃跟進有特殊需要兒童的個案，為他們安排合適的到校訓練。	3.97	.55	3.98	.55
計劃向老師及家長清楚地解釋有關的訓練程序。	3.93	.58	3.91	.53
計劃提升了老師及家長對有特殊需要兒童的發展需要認知。	3.99	.47	3.94	.47
計劃向兒童及家長提供有效的學校為本跟進建議。	3.95	.51	3.95	.51
計劃向兒童及家長提供有效的家居訓練建議。	3.89	.54	3.94	.54
計劃為家長舉辦實用的講座和工作坊。	3.76	.69	3.83	.56
學校人員	3.97	.48	3.95	.47
根據我個人的評價，認為學校在支援有特殊需要兒童有顯著的改善。	3.96	.51	3.94	.54

計劃幫助學校迎合不同有特殊需要的兒童。	3.98	.51	3.96	.49

節錄 3.05

以下節錄個別校長的相關回應：

> 「第一層支援服務服務上的配合與協作都做得非常好，對一些較緊急的個案亦能給予即時的轉介和評估服務，對兒童與家長都有正面作用。處理個案速度會很快。服務的支援人員現時每星期會駐校一天，與到校學前康復服務團隊和學校老師的聯繫的緊密度很高。」（H 校長）
>
> 「我很欣賞營辦機構在提供第一層支援的期間並不只有社工到校，而是整個團隊到校進行觀察，包括：教育心理學家、臨床心理學家、言語治療師等一起到校觀察目標兒童，並在觀察後與老師討論兒童的情況、向老師解釋有關兒童的行為表現、提供一些課堂上的調適的建議、與家長聯繫並告知家長如何在家中為兒童提供所需的訓練活動。這些所有的支援服務都能夠減輕老師和家長的負擔。重要的事，支援團隊在提供建議後更會協作老師一起在課室內設立一些讓目標兒童感到舒服的學習環境給兒童。因此，計劃成效很大。」（校長 C）

表 31

對照組學校有潛在有支援需要的兒童數目及類型

	學校A	學校 B	學校 C	學校D	學校 E
學校類型	幼稚園暨幼兒中心	幼稚園	幼稚園	幼稚園暨幼兒中心	幼稚園暨幼兒中心
在學習、社交、行為、情緒等範疇有特殊需要的兒童數目	8 位	6 位	6-8 位	10 位	5 位
正在輪候兒童體能智力測驗中心評估的兒童數目	5 位	5 位	3 位	5 位	2 位
經兒童體能智力測驗中心評估為有邊緣成長發展問題或只有單一殘疾但未合資格申請資助學前康復服務的兒童數目	2 位	0 位	0 位	0 位	5 位

節錄 3.06

以下是一些校長與教師的回應：
> 「我們學校所觀察到的情況認為受疫情的影響，小朋友大部分時間都留在家中，從而減少了他們的社交活動的機會。因此，他們在行為上表現得較為自我。」（SC007 校長）
> 「家長教育子女的技巧方面亦需要關注，因有些家長會讓小朋友長期玩手機，小朋友因而缺乏與人溝通的機會，語言能力發展落後。」(SC011 校長)
> 「本校老師會根據兒童的學習表現看小朋友是否有一些發展需要。」(SC010 教師)

「因本校有社工計劃，本校在識別和支援懷疑有特殊需要兒童上得到社工的支援。另外，社工在疫情期間為兒童家長介紹一些能夠提供免費的評估服務的醫生為有特殊需要跡象兒童進行評估。 此方案比輪候母嬰健康院的評估服務更快。」（SC008 校長）

「為本校提供到校康復服務的社工會幫忙進行深入觀察，對於某些低收入家庭，社工會介紹一些較便宜的評估服務。」（SC011 校長）

「當學校發現校內有小朋友有問題時，老師會想尋求方法解決，例如：如何與兒童用說話溝通、身體語言和如何下指令才能讓該兒童接受、該兒童所在意的東西，如不接受一些高頻率的聲音等。」（SC007 校長）

「在懷疑個案兒童的轉介及等候評估期間，學校的 IP 老師會和班任老師討論看是否可以設立或進行一些暫時性的課程目標或調適以幫助有需要兒童。另外，有時亦會讓這些懷疑個案兒童一起加入一些小組訓練以作為臨時性的簡單支援。」（SC011 校長）

節錄 3.07
以下是一些校長與教師的回應：

「有些小朋友的手肌較弱，抄寫類的功課需要調整，但家長見到小朋友的字寫得差時會感到不滿意並向老師表達相關情況，老師便需要對家長進行解釋。」（SC006 校長）

「家長教育亦需要加強，因仍有家長對學習需要的接受不大，需要加強對這方面的認識。」（SC008 校長）

「因有些家長會讓小朋友長期玩手機，小朋友因而缺乏與人溝通的機會，語言能力發展落後。 」（SC011 校長）

「現時大部分家長都較為看得開並願意接受小朋友有特殊需要的可能性，但他們在面對此情況時並不知道該如何應對。 」（SC007 校長）

節錄 3.08
以下是一些校長與教師的回應：

「對於一些有特殊需要的小朋友以言，社交距離不足，容易與其他小朋友發生衝突。」（SC006 校長）

「Funding 上的幫助亦非常重要，因要購買所需的訓練用具，如：練力膠等。」（SC008 校長）

「在課室內，只要有一位小朋友不跟從大隊的時候，便需要差不多一對一地幫助該位小朋友回歸課室秩序內。（SC007 校長）

「現時本校每班會有兩位老師，如班上有特殊需要的兒童需要處理時，其中一位便會負責，但另一位老師便要獨自教授餘下兒童。」（SC009 教師）

「如該班內的特殊需要小朋友人數較多的話，即便人手足夠，亦很難同時處理多個個案。」（SC006 校長）

「 雖然學校老師會上一些教育局定期舉辦的有關特殊教育的課程講座，但年資較少的老師未必能處理有關特殊需要小朋友的社交或情緒問題。」（SC006 校長）

「老師培訓上希望可以提供多些個案研究（case study），讓老師可以更能應用到所學的理論和知識。」（SC011 校長）

「會有出現一些情況是家長會向老師提出其小朋友有某些特殊需要的特徵，若老師對這方面的知識不足時，便會錯誤地認同家長的說法而非先觀察小朋友的行為特徵再進行辨別和回應家長。因此，老師對各種不同類型的特殊需要的特徵的了解有助老師在班上和個別觀察時辨別小朋友的需要以及與家長溝通。」（SC006 校長）

節錄 3.09

以下是一些校長與教師的回應：

「建議校本化。若能實行校本化，學校便可有較大彈性去調整學校的支援措施和選擇。如今年較多兒童需要言語及活躍症方面的支援，學校便可選擇言語及活躍症相關的師資培訓課程。」（ SC007 校長）

節錄 3.10

以下是一些校長與教師的回應：

「我們最需要的是人手上的支援。在課室內，只要有一位小朋友不跟從大隊的時候，便需要差不多一對一地幫助該位小朋友回歸課室秩序內。因此，1 比 11 的師生比例需要再收窄才能合付現時大部分學校的教學情況。」（ SC007 校長）

「認為人手上的支援以及對老師的知識培訓非常重要。在人手上，希望資助上或教育局對兒童教育的人手安排上能提高，已改善師生的比例不再是 1:11。現時對特殊需要的了解增加，如人手配置上亦能配合的話，相信能夠更好地幫助有需要的小朋友。（SC008 校長）

節錄 3.11

以下是一些校長與教師的回應：

「對特殊需要的類型和特徵的認識上的培訓不論對新進老師或資深老師都可提高老師對有特殊需要兒童在課堂上的行為和表現的了解，從而提高老師對兒童的諒解度。另外，建議培訓課程可切合學校所需的狀況而定，這樣便可更有效地即使幫助老師解決現行校內的特殊需要兒童的所需。 」（SC007 校長）

「另一問題為希望可以提供有關特殊需要教育的教師培訓。老師對這一範疇的認知都只限於學院內所學到的知識屬為基礎層面，因此一些年資較短的老師在處理有關事宜時並未有相關經驗以及足夠知識去應對。」（ SC009 教師）

「老師培訓上希望可以提供多些個案研究（case study），讓經驗較少的老師可以更能應用到所學的理論和知識。期望教師培訓能夠補足老師對相關支援上的經驗不

足的情況，並有助老師在日常上課和支援兒童上的需要和溝通。 」（*SC011 校長*）

「*在老師教學層面上，當班上有特殊需要的兒童而合作老師年資較短時， 教師已知的相關的專業知識則變得非常重要，特別是在辨別小朋友的需要上。*」（ *SC006 校長*）

節錄 3.12

以下是一些校長與教師的回應：

「*當學校發現校內有小朋友有問題時，老師需要花時間專門觀測兒童的問題之餘，同時亦會想尋求方法解決，例如：如何與兒童用說話溝通、身體語言和如何下指令才能讓該兒童接受、該兒童所在意的東西，如不接受一些高頻率的聲音等。若可以提供到急救性的處理方案給老師的話，相信老師們會願意參與。如到校學前康復服務計劃中，有時會有心理學家來到學校時，老師便可即時向心理學家諮詢建議，有關問題的處理方法和措施，讓老師能夠即時處理相關問題。*」（*SC007 校長*）

「*贊成有即時諮詢的途徑可即時提供老師有效的建議。若安排更多的師資培訓項目的話，會有學校的人手不足的問題出現。因此，更傾向於要顧問形式的諮詢。*」（ *SC006 校長*）

表 32
到校學前康復服務的兩層規劃

第二層到校學前康復服務	IIA – 學校為本的個人或小組在各發展範疇的訓練	IIB -中心為本的個人或小組在各發展範疇的訓練
第一層支援服務	IA - 流程為本的支援，由特殊幼兒工作員和教師共同協商和進行	IB –心理學家、言語治療師、職業治療師、物理治療師和社工提供的諮詢或服務

附錄B2 研究團隊於2022年10月10日向社會福利署所提交的兒童、家長和教師的描述數據

成效評估研究：幼稚園／幼稚園暨幼兒中心第一層支援服務試驗計劃

第二時段數據收集概況 (截至2022年7月11日)

持份者	項目	第一時段 (2020年11至2022年1月)		第二時段 (截至2022年7月11日)*	
		實驗組	對照組	實驗組	對照組
兒童	1. 兒童發展評量表 (200)	208	183	170	179
	2. 兒童課室適應量表	191	177	163	167
	3. 兒童評估 (100)	106	不適用	102	不適用
家長	家長問卷 (200)	247	219	172	179
教師	教師問卷 (200)	233	83	178	98
	訪談	0	0	1	1
營辦機構	機構問卷	16	不適用	6	不適用
	訪談	12	不適用	2	不適用

*受第五波疫情影響，研究團隊於2022年2月須暫停收集數據一個月，直至2022年3月才重新開展第二時段數據收集。

對象	項目	實驗組人數	發展範疇	人數	進步人數	明顯進步人數	註	
兒童	1. 兒童發展評量表 (200) (由家長填寫) 兒童發展量表上的能力範疇	170 量表等於170名兒童	認知	134名相關兒童	100名兒童	17名兒童	2.30隨着年齡增長，兒童全都有提升。其效果最大的有認知、語言、社交認知、小肌肉和自理能力。	* 134名相關兒童= 可比較樣本數目 * 明顯進步 = +1 標準差
			語言	134名相關兒童	98名相關兒童	19名相關兒童		
			社交認知	134名相關兒童	90名相關兒童	24名相關兒童		
			大肌肉	134名相關兒童	88名相關兒童	22名相關兒童		
			小肌肉	134名相關兒童	68名相關兒童	12名相關兒童		
			自理能力等	134名相關兒童	100名相關兒童	15名相關兒童		
	2.兒童課室適應量表 (200) 教師觀察兒童課室適應量表	163 量表等於163名兒童	NA	107名兒童	60名相關兒童	15名相關兒童	2.40在專注力行為、干擾性行為及親社會行為三個範疇中 在干擾性行為上第一及第二時段的平均分出現顯著的分別。結果反映，實驗組和對照組的兒童課室適應能力，其干擾性行為明顯減少，這是一個正面的結果。 2.39所得數據經過刪除未完成問卷、重覆回應及無效值後才作分析，故各組樣本數目有變。已完成兩個時段課室適應量表的實驗和評估組兒童及對照組兒童分別有107名及130名。	
	3.兒童評估 (100) 《香港學前兒童綜合發展量表》上的能力範疇 (由顧問團隊填寫)	102 兒童	認知	83 名兒童	61名相關兒童	20名相關兒童	2.10因在第一時段時，有13位兒童於第一時段時未達《香港學前兒童綜合發展量表》評估年齡，故無法比較他們在第二時段的相對應量表分數。排除這13位兒童，以及另外6位未有完成整段評估的兒童，合共有83位參加者完成第一及第二時段評估。故在認知、語言及社交認知範疇的可比較樣本數目為83位參加兒童。又因第五波疫情影響，部分家長選擇進行網上	
			語言	83 名兒童	70名相關兒童	32名相關兒童		
			社交認知	83 名兒童	47名相關兒童	25名相關兒童		
			大肌肉	53 名兒童	35名相關兒童	17名相關兒童		
			小肌肉	53 名兒童	26名相關兒童	20名相關兒童		
家長	家長問卷 (200)	172 問卷	家長方面的成效評估	172 名家長	在參與「第一層支援服務試驗計劃」後，我對應付子女發展的需要變得更有信心。- 130 對「第一層支援服務試驗計劃」滿意 -	2.49有136位家長進一步在問卷中為試驗計劃給予詳細回饋	家長/教師問卷中有問及參與計劃後，我認為我的學生/子女在大肌肉範疇有顯著的進步。參與計劃後，我認為我的學生在小肌肉範疇有顯著的進步。參與計劃後，我認為我的學生在社交及情緒管理範疇有顯著的進步。參與計劃後，同上	在參與「第一層支援服務試驗計劃」後，我對應付子女發展的需要變得更有信心。整體而言，我對「幼稚園/幼稚園暨幼兒中心第一層支援服務試驗計劃」感到滿意。（刪去非常不同意、不同意和少許不同意。即包含非常同意、同意和少許同
教師	教師問卷 (200)	178 問卷	教師方面的成效評估	178 名教師	在參與「第一層支援服務試驗計劃」後，我對應付學生發展的需要變得更有信心。- 146 對「第一層支援服務試驗計劃」滿意 - 146	大肌肉 - 140 ;小肌肉 - 149;社交及情緒 - 152; 認知 - 151;語言 - 152；自理 - 153		在參與「第一層支援服務試驗計劃」後，我對應付學生發展的需要變得更有信心。整體而言我對機構提供的服務感到滿意。整體而言，我對「第一層支援服務試驗計劃」感到滿意。（刪去非常不同意、不同意和少許不同意。即包含非常同意、同意和少許同意）

家長方面（大肌肉 - 131;小肌肉 - 139;社交及情緒 - 139; 認知 - 137;語言 - 142;自理 - 135）

A Technical Report

on the Development of Child Observation Checklist

for Tier 1 Support Services

August 2023

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Abstract

This report described the contemplation of the Child Observation Checklist (COC) with validation conducted by the Consulting Team.

The COC was developed by a group of educational psychologists of the Operating NGOs participating in the Pilot Project on Tier 1 Support Services in Kindergartens (KGs) /Kindergartens-cum-Child Care Centres (KG-cum-CCC) for teachers of the pre-primary institutions (PPIs) and professionals of the On-site Pre-school Rehabilitation Services (OPRS) to early identify preschool children with mild or transient developmental or adjustment difficulties.

The first COC model comprised 5 factors with a total of 76 items and was used by teachers of 70 PPIs joining the Pilot Project on Tier 1 in December 2022 to assess a sample of 1,085 students. With the result gathered, the Consulting Team has conducted validity, sensitivity and specificity test on the COC by using the Rasch technique and a 5-factor model examined by Confirmatory Factor Analysis. However, there was limited psychometric support for the model's strength and validity. Subsequently, the Consulting Team has adopted the Rasch technique and Confirmatory Factor Analysis and derived a 15-item, 5-factor model (COC-15). The COC-15 correlated highly with student behaviour, differentiated students not receiving rehabilitation services from those receiving Tier 1 and OPRS; and, also detected variations between students from different grades. Based on the results of the receiver operating characteristic (ROC) curve analysis (ROC analysis), a two-point system was established to identify the eligibility of students for support services. Students with a COC-15 score one standard deviation below the mean were considered eligible for the immediate offer of support services. Students with COC-15 scores between one standard deviation below the mean and a score with at least 0.70 sensitivity were also considered for the application of support services. A table of norms was constructed to ready-reference and compare the characteristics or specific conditions of students according to grade. It is strongly recommended that the interpretation of scoring and comparison of norm tables should be confirmed by professional psychologists. Nevertheless, eligibility for services for children with special needs in PPIs should be further considered with reference to the student's contextual environment and monitoring of progress.

這份報告描述了兒童觀察量表(COC) 的發展和效度驗證。這份量表的主要目的是及早識別有輕度或短暫發展或適應困難的學前兒童。最初的 COC 模型由 5 個因素組成,共有 76 個項目,由成效評估研究:幼稚園／幼稚園暨幼兒中心第一層支援服務試驗計劃轄下的教育心理學家開發,並包括來自社會福利署和兒童體能智力測驗服務的專業人士的意見。隨後,教師於 2022 年 12 月使用 COC 評估來自 70 間參與第一層支援服務的幼稚園／幼稚園暨幼兒中心的 1,085 名學生。研究團隊根據這份量表在識別可能需要支援服務的兒童的靈敏度(sensitivity)和明確性(specificity),驗證了這份量表的有效性和篩選性。然而,對該模型的強度和有效性的心理測量支持有限。隨後,使用羅許模式(Rasch model)和驗證性因素分析(Confirmatory Factor Analysis)進行的分析則提倡採用 15 個項目、5 個因素的模型(COC-15)。COC-15 與學生行為之間具有極高相關性;將未接受康復服務的學生與接受第一層支援服務和到校學前康復服務的學生區分開來;並且可以檢測不同年級學生之間的差異。研究團隊根據接收者操作特徵曲線(receiver operating characteristics, ROC)分析的結果,建立了一個兩點系統(two-point system),來分辨學生是否有資格獲得支援服務。COC-15 得分低於平均值一個標準差

的學生被認為有資格立即獲得支援服務。COC-15 得分低於平均值一個標準差以及靈敏度至少為 0.70 的學生則被認為有資格可申請支援服務。然而，在這種情況下，應透過評估學生的相關環境和監察學生發展進度來進一步了解學生是否有資格獲得服務。最後，研究團隊亦建構了一個常模表（norm table），以方便參考和比較不同年級學生的特點或具體情況，強烈建議評分解釋和常模表比較應由專業心理學家確認。

Background

Services for Preschool Children with Developmental Disabilities

In Hong Kong, there are different types of rehabilitation services for preschool children with developmental disabilities. Special childcare centres provide training and care for children with moderate to severe disabilities (Social Welfare Department, 2023a). Early Education and Training Centres (EETC) provide early intervention services for children from birth to two years old, and children with disabilities aged two to under six who have not yet started primary school (Social Welfare Department, 2023b). Integrated Programs (IP) provide training and care to children with mild disabilities in ordinary kindergarten-cum-child care centres (Social Welfare Department, 2023c). Children with mild disabilities aged below six years attending kindergartens or kindergarten-cum-child care centres can also receive Onsite Preschool Rehabilitation Service (OPRS) if their preschools are participating in this program (Social Welfare Department, 2022). In the year 2020/2021, the Pilot Project on Tier 1 Support Services in Kindergartens/Kindergarten-cum-Child Care Centres (Tier 1 scheme) [1] was made available to children awaiting assessment by Child Assessment Centres (CACs), or assessed by CACs to have borderline developmental problems, in approximately 80 kindergartens/kindergarten-cum-child care centres participating in the OPRS scheme (Social Welfare Department, 2023d). In the 2023-24 budget, the Hong Kong government announced that extra funding would be made available to regularize Tier 1 Support Services (Hong Kong Government, 2023).

The Child Observation Checklist (Teacher Version)

The development of a Child Observation Checklist (COC) for preschoolers in Hong Kong was proposed in the Tier 1 scheme. The main purpose of the checklist is to identify preschool children with mild or transient developmental or adjustment difficulties as early as possible. This in turn enables for the provision of timely support to children with identified problematic issues.

The framework of the checklist was initiated through discussions among professionals, predominately educational psychologists from the six non-governmental organizations (NGOs) who participated in the Tier 1 scheme. This group agreed that the framework would better focus on children's adjustment difficulties which are observable and associated with the child's various special needs. For example, a K1 child's refusal to respond to a teacher's instruction such as sitting on a chair may be associated with their communication ability, home language diversity, and or emotional issues. Hence, we may need to observe the children's maladaptive behaviour before further exploring and identifying its root causes which may relate to the different special needs of the children.

Local and foreign assessment tools on adjustment or school readiness for young children were examined. Several tools summarized below were considered in developing the fundamental framework of the checklist:
1. 《臺北市學齡前兒童發展檢核表》 which covers developmental milestones and red flags for children from 4 months to 6 years old; however, no concrete framework was

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[1] The target service user of Tier 1 services include children under 6 years and studying in KGs / KG-cum-CCCs who are awaiting assessment by Child Assessment Centres (CACs); or assessed by CACs to have borderline developmental problems or single disability but not eligible for subvented preschool rehabilitation services; or having disabilities or special needs in the spectrum of learning, social interaction, behaviour or emotion (https://www.swd.gov.hk/en/index/site_pubsvc/page_rehab/sub_listofserv/id_daytraining/id_t1ss/)

included.

2. 林秀錦、王天苗 (2004)〈幼兒入學準備能力之研究〉found that five domains of school readiness skills, including Self-Care, Group Adaptation, Communication, Motor and Academic Skills were identified as critical skills for better learning and adjustment in elementary schools. Academic Skills were considered the least important readiness skill; however, the other four domains received the highest ratings by all experts.

3. The Brief Early Skills and Support Index (BESSI) is a questionnaire for teachers assessing how well children are making the transition to school. Although originally designed for children in the Reception year (i.e., 4.5- to 5.5-year-olds), the results of a validation study involving 1,456 children (Hughes, Daly, Foley, White & Devine, 2015) indicated that the BESSI works equally well for children as young as 2.5 years. There are cut-offs for age groups of 2.5-3.49 years; 3.5-4.49 years; and 4.5-5.5 years. The BESSI contains 30 items composed into four subscales measuring Behavioural Adjustment (12 items), Language & Cognition (6 items), Daily Living Skills (6 items), and Family Support (6 items).

4. Early Development Instrument: A Population-based Measure for Communities, (EDI) is a 103-item checklist to collect information on children's strengths and weaknesses such that teachers can understand where children need the most help. The five domains in the EDI include Physical Health & Well-being; Social Competence; Emotional Maturity; Language & Cognitive Development; Communication Skills and General Knowledge.

Summing up the frameworks of the above references and professional expertise from participating NGOs, as well as from the Social Welfare Department (SWD) and Child Assessment Service (CAS), the current COC was finalized with a framework including 5 subscales and 76 items. The details are described in the Measures sub-section below.

Measurement of the Psychometric Properties of the COC (Teacher Version)

Several methods (Anastasi & Urbina, 1997) were used to examine the construct validity of the COC. The first involved a Confirmatory Factor Analysis (CFA) to test whether the data was consistent with the predicted model. The second involved an examination of the association between the COC scores and child behaviour problems and individual child assessment scores. The third method involved the use of contrasted groups. The COC scores of students receiving rehabilitation services were contrasted with children not receiving rehabilitation services. The fourth approach involved an examination of the age differentiation in COC scores of children in different grades. As a screening checklist, validity was also examined in terms of the sensitivity and specificity of the COC in identifying children who may need support services.

Rasch analysis (Bond & Fox, 2007) was used to examine the measurement properties of the COC. As test items are summed to form a total score, unidimensionality was tested by examining the infit and outfit mean square statistics of the items, point measure correlation, as well as a principal component analysis of the residuals that remained after the extraction of the linear Rasch measure (PCA). To test whether the teachers could distinguish between the categories in the 5-point rating scale, category functioning was examined. The Wright map was used to examine the targeting of the COC.

Reliability was assessed through measures of internal consistency and test-retest reliability.

<p style="text-align:center;">**Method**</p>

Participants

   The participants included 1,085 students from 70 preschools participating in the Tier 1 scheme as of September 2022. These participating preschools also received OPRS. The number of students from each per preschool ranged from 3 to 35, with an average of 16.2 students per preschool. The mean age of the students was 4.03 years ($sd = 1.09$, range: 2 to 7). Their teachers were requested to complete the COC. The distribution of students is shown in Table 1.

Table 1

Distribution of Students by Sex and Grade

Grade	Boys	Girls	Total
Nursery	47	45	92
K1	185	160	345
K2	152	152	304
K3	186	158	344
Total	**570**	**515**	**1,085**

   Among the students, there were 720 (66.4%) who were not receiving any support services. There were 180 (16.6%) who were receiving Tier 1 services, and 185 (17.1%) receiving subvented preschool rehabilitation services such as OPRS, IP, EETC, Training Subsidy Programme for Children on the Waiting List of Subvented Preschool Rehabilitation Services (TSP) and other services. The distribution of students is shown in Table 2. There was a higher percent (25.3%) of K3 students receiving OPRS/IP/EETC/TSP/other services but a smaller percent (2.2%) of nursery students receiving these services, χ^2 (6) = 34.87, p < .001.

Table 2

Distribution of Students by Grade and Services Received

Grade	Not receiving services	Tier 1	OPRS/IP/EETC/TSP/other	Total
Nursery	70	20	2	92
K1	242	57	46	345
K2	203	51	50	304
K3	205	52	87	344
Total	**720**	**180**	**185**	**1,085**

<p style="text-align:center;">6</p>

Table 3 illustrates service distribution by two categories.

Table 3

Distribution of Students by Grade and Services Received

Grade	Not receiving services	Tier 1/ OPRS/IP/EETC/TSP/other	Total
Nursery	70	22	92
K1	242	103	345
K2	203	101	304
K3	205	139	344
Total	**720**	**365**	**1,085**

In terms of the demographic background of the participants, Table 4 shows the number of schools (students) recruited from each district and the median household income of the district (Census and Statistics Department, 2022). Please note that preschools from the Islands were not recruited in this exercise.

Table 4

Number of Preschools and Students Recruited in Each District and Median Household Income of Each District

District	Number of preschools recruited	Number of students recruited	District median household income
Central and West	2	50	$42,000
Eastern	5	96	$31,500
Kowloon City	4	165	$29,700
Kwai Tsing	9	170	$23,300
Kwun Tong	7	175	$22,200
North	3	43	$23,300
Sai Kung	2	22	$37,200
Shatin	4	63	$27,100
Sham Shui Po	6	187	$22,000
Southern	3	59	$33,000
Tai Po	4	165	$30,000
Tsuen Wan	4	70	$31,800
Tuen Mun	1	18	$25,400
Wan Chai	3	60	$40,400
Wong Tai Sin	1	14	$23,300
Yaumati, Tsim Sha Tsui & Mong Kok	4	148	$27,900
Yuen Long	8	222	$27,000

Measures

Teachers were requested to complete the following questionnaires for their students:

The Child Observation Checklist (COC) – this checklist was developed by educational psychologists from the 6 NGOs providing Tier 1 and OPRS services. The checklist included input from clinical psychologists, occupational therapists and physiotherapists from SWD and clinical psychologists, paediatricians, occupational therapists and physiotherapists from CAS. It consisted of 76 items with 5 sub-scales with 13 items for Learning Adaptation (LA) i.e., routine, switch, focus, engagement; 20 items for Social Adaptation (SA) i.e., joint focus, communication, interaction; 13 items for Behaviour and Emotional Regulation (BER) i.e., self-control, emotional relief, problem Solving; 12 items for Daily Self-care (SC); and 18 items for Performance of Gross and Fine Motor (MP). Each item is rated on a 5-point scale, 0 (*never means it did not happen*); 1 (*rarely means it happened once a week*); 2 (*occasionally means it happened twice a week*); 3 (*often means it happened 3-4 times a week*); 4 (*always means it happened 5 times or more per week*), regarding the child's performance in the past four weeks. The checklist was to be completed by teachers[2] approximately 2 months after the commencement of the first school term (around December).

Strengths and Difficulties Questionnaire (SDQ; Goodman & Scott, 1999; Lai et al., 2010) – this is a brief behavioural screening questionnaire for children and adolescents aged four to 16 years. It consists of five Sub-scales including Emotional Symptoms; Conduct Problems; Hyperactivity/Inattention; Peer Relationship Problems; and Prosocial Behaviour. Each is rated on a 3-point rating scale from 1 (*not true*) to 3 (*certainly true*) with higher scores showing higher endorsement of the behaviour domain. A Total Problem Behaviour score could be computed by summing the raw scores from the Emotional Symptoms, Conduct Problems, Hyperactivity/Inattention and Peer Relationship Problems Sub-scales. The Chinese version of the scale was validated by Lai et al. (2010) for 6- to 12-year-old children.

In addition to the above, 123 children (from 62 schools) from a pool of K1 to K3 students with teacher-completed surveys were invited for individual assessment on cognitive ability using either the Hong Kong version of the Wechsler Preschool and Primary Scale of Intelligence 4th edition (WPPSI-IV) for those aged above four years old or Primary Test of Nonverbal Intelligence (PTONI) for those below four years old. With the WPPSI-IV, due to time constraints, children were assessed on the four sub-tests (Block Design, Information, Matrix Reasoning, Similarities) forming the General Ability Index (GAI).

Procedures

During November 2022, parents from the 87 preschools participating in the Tier 1 and OPRS schemes were invited to give consent and complete the online COC (parent version) for their children. It was expected that four boys and four girls from each grade should be selected from each school. Seventy of 87 schools participated in the project. A total of 1,628 parent responses from these 70 schools were received as of 13 December 2022.

Upon receiving parental consent, the class teachers of these children were requested to complete an online COC (teacher version) for all of these children in December 2022. A total of 1,085 teacher responses (from 67 schools) were received on 16 February 2023[3], with

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[2] In this exercise, parents were asked to complete the checklist as well and 1,628 parents completed the checklist between 16 November and 13 December 2022. This report focused on the teacher version.

[3] Three schools did not return parent questionnaires by 16 February 2023.

986 cases where parent and teacher responses could be paired up using children's names and 99 cases where the teacher questionnaire could not be paired up with parent consent.

In addition to the teacher and parent surveys, 123 students (from 62 schools)[4] from a pool of children whose teachers completed the survey for them were invited to undertake an individual assessment. Only Chinese students in grades K1 to K3 were chosen to participate in this assessment. The child assessment was conducted in the two universities' laboratories (CUHK and CityU) in February and March 2023 by educational psychologists who were blind to the students' COC scores or service status.

We invited the class teachers of 193 selected students to complete the online COC (teacher version) for these students on 17 March 2023. These students were drawn from a pool of 962 children whose teachers completed the screening checklist for them but were not selected for a child assessment.

Data Analysis

Association of the COC with student behaviour and individual assessment scores were examined using correlational analysis. Age and rehabilitation services differentiation were examined using an Independent t-test and Analysis of Variance (ANOVA). Sensitivity and specificity were examined through the receiver operating characteristic (ROC) curve method (Alman. 1991). These procedures were analysed using SPSS 29.0.0.0. CFA was conducted using AMOS Version 29. Rasch analysis was conducted using Winsteps 5.4.2.0. This report focused on the teacher version of the COC.

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[4] At the time when students were selected to undertake an individual assessment, only 62 schools returned teacher questionnaires.

Results

The Original 5 Factor, 76-item Version

The mean, standard deviation, kurtosis and skewness of each of the COC items are shown in Table 5.

Table 5

Items with their Sub Scales, Means, Standard Deviations, Skewness, and Kurtosis

Item Sub Scale	Mean	SD	Skewness	Kurtosis
Ta1 Be able to respond to their own names (LA)	3.51	.72	-1.50	2.08
Ta2 Can actively participate in different classroom activities during class (LA)	3.02	1.02	-.72	-.39
Ta3 Imitate movements with other children under the leadership of an adult (LA)	3.18	.92	-.83	-.20
Ta4 Imitate speech with other children (e.g., barometer/sing-along) under the leadership of an adult (LA)	3.12	1.02	-1.03	.40
Ta5 Answer the teachers' questions (LA)	2.93	1.10	-.82	-.09
Ta6 Follow the teachers' specific instructions (LA)	3.03	.94	-.67	-.26
Ta7 Can follow the whole-class instruction (e.g., look at the whiteboard, read together) (LA)	2.97	1.06	-.77	-.26
Ta8 Be able to arrange the sequence of activities at the self-selected activity time (LA)	2.74	1.18	-.68	-.38
Ta9 Be able to select the required materials according to different activities at the self-selected activity time (LA)	2.94	1.05	-.87	.18
Ta10 Can switch between activities smoothly (LA)	2.96	1.06	-.85	.07
Ta11 Can follow the teacher's instructions to move within a specific range without running or climbing inappropriately (LA)	3.01	1.06	-.86	-.03
Ta12 Can recognize and read Chinese words and English letters/words that are just learned (LA)	2.61	1.25	-.58	-.65
Ta13 Can distinguish between some similar Chinese characters and English letters (LA)	2.44	1.34	-.46	-.93
Tb1 Can give appropriate social responses (e.g., waving, "morning", "Hello") (SA)	3.17	.94	-.95	.19
Tb2 Make eye contact when interacting with people, (e.g., eyes follow the direction indicated by the teacher's fingers, can make requests to the teacher by gestures or language with appropriate eye contact) (SA)	3.03	1.00	-.77	-.26
Tb3 Ask an adult for help when having troubles (SA)	2.88	1.05	-.63	-.41
Tb4 Respond appropriately to other people's questions and not off the topic (SA)	2.76	1.11	-.70	-.23
Tb5 Take the initiative to ask questions to other people (SA)	2.52	1.31	-.50	-.89
Tb6 Play imaginary games to simulate simple daily life routine (SA)	2.83	1.08	-.71	-.29
Tb7 Take part in parallel games with peers (SA)	2.99	1.04	-.92	.20
Tb8 Can share toys/teaching materials with peers (SA)	2.90	1.07	-.82	-.05
Tb9 Can join in other people's games (SA)	2.84	1.11	-.76	-.23

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Performance of Gross and Fine Motor Skills.

Table 5 (Continued)

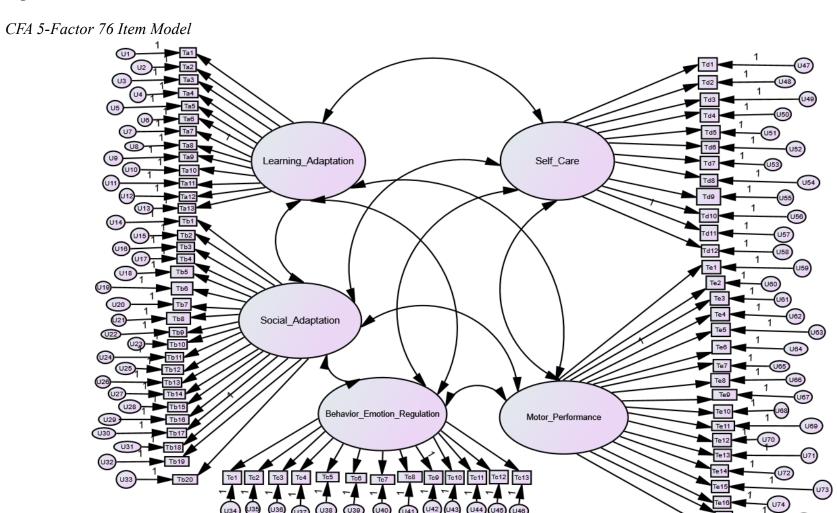| Item Sub Scale	Mean	SD	Skewness	Kurtosis
Tb10 Can take turns in the game (SA)	2.87	1.07	-.81	.05
Tb11 Can make simple conversation (SA)	3.06	1.11	-1.12	.49
Tb12 Can play cooperative games / games with rules with peers peacefully (SA)	2.91	1.08	-.88	.10
Tb13 Can name multiple classmates (SA)	3.01	1.24	-1.13	.19
Tb14 Have playmates/friends that they always like to play with (SA)	2.83	1.24	-.81	-.45
Tb15 Can understand the emotions and needs of peers or teachers, and respond appropriately (e.g., helping peers in need, comforting others) (SA)	2.63	1.19	-.55	-.65
Tb16 Can understand the meaning of time nouns, such as: yesterday, tomorrow, a while (SA)	2.71	1.23	-.78	-.37
Tb17 Can explain things or give reasons to convince others (SA)	2.31	1.35	-.34	-1.07
Tb18 Can describe how to do something, e.g., making a sandwich (SA)	2.42	1.34	-.49	-.92
Tb19 Can use imagination to create simple stories (SA)	2.24	1.39	-.30	-1.17
Tb20 Can express themselves with a proper tone (intonation) and speed (SA)	2.56	1.21	-.56	-.59
Tc1 After school starts for a period of time, can separate from caregivers and enter the school with a calm mood (BER)	3.36	.87	-1.44	1.94
Tc2 Can calm down with the help of an adult (BER)	3.20	.89	-1.26	1.71
Tc3 Can calm down on their own within a reasonable amount of time (BER)	3.12	.95	-1.09	.93
Tc4 Can express and explain one's emotions appropriately, verbally or non-verbally (e.g., I feel angry because...) (BER)	2.47	1.26	-.44	-.84
Tc5 Can use different methods to regulate emotions (e.g., deep breathing, counting, etc.) (BER)	2.30	1.28	-.32	-.96
Tc6 Emotions remain generally stable and positive (BER)	3.16	.87	-.86	.29
Tc7 Willing to wait for a response when request cannot be met immediately (BER)	2.90	1.05	-.83	.13
Tc8 Keep the volume at the appropriate level when studying or playing (BER)	3.01	.94	-.81	.31
Tc9 Be able to negotiate with others during activities/games (BER)	2.50	1.27	-.51	-.79
Tc10 Can actively seek solutions when facing problems (BER)	2.54	1.17	-.42	-.68
Tc11 Can restrain impulses and think before responding to questions or taking action (BER)	2.46	1.20	-.42	-.70
Tc12 Be able to accept winning and losing in the game and continue to participate (BER)	2.85	1.07	-.85	.23
Tc13 Can keep a generally stable mood when facing changes (e.g., supply teacher, event rehearsal) (BER)	3.13	.91	-1.14	1.30
Td1 Be able to tidy up the desktop and organize personal belongings according to the instructions (such as: put homework in the homework bag, put the school bag in the school bag cabinet), and can put and take items at the designated location (SC)	3.16	.93	-.91	.17

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Performance of Gross and Fine Motor Skills.

Table 5 (Continued)

Item Sub Scale	Mean	SD	Skewness	Kurtosis
Td2 Can demonstrate basic hygiene habits (e.g., wearing a mask, using hand sanitizer, taking a tissue to blow nose, etc.) (SC)	3.28	.88	-1.15	.89
Td3 Can clean hands by oneself (including turning on and off water tap, washing hands with soap and wiping) (SC)	3.49	.75	-1.64	2.95
Td4 Can express the need to use the bathroom (verbal, gesture, or movement) (SC)	3.18	1.22	-1.51	1.15
Td5 Can urinate on the toilet or urinal (SC)	3.43	1.06	-2.14	3.79
Td6 Can poo on the toilet (SC)	2.91	1.52	-1.10	-.43
Td7 After using the toilet, can dress oneself (e.g., tuck the shirt into the pants) (SC)	2.73	1.29	-.77	-.49
Td8 Willing to try different foods (SC)	2.77	1.29	-.90	-.23
Td9 Can keep clothes/surfaces generally clean while eating (SC)	2.82	1.24	-.96	-.01
Td10 Able to put on and take off clothes without buttons (e.g., open-chested coat) (SC)	2.81	1.19	-.82	-.23
Td11 Can identify the front and back or inside of clothing (SC)	2.81	1.21	-.84	-.18
Td12 Able to put on and take off shoes and socks on one's own (SC)	3.19	1.01	-1.32	1.35
Te1 Able to walk/run steadily without falling down easily (MP)	3.43	.76	-1.31	1.49
Te2 Able to walk and run normally, not oddly (MP)	3.42	.78	-1.36	1.67
Te3 Able to jump forward 3-5 times with one foot in a row (MP)	2.84	1.28	-.95	-.18
Te4 Can stand on one foot for 5-8 seconds with a stable body (MP)	2.77	1.24	-.84	-.24
Te5 Able to walk forward with alternating feet along the ground line (MP)	3.19	.97	-1.27	1.32
Te6 Can catch a medium-sized rubber ball (about 7-8 inches in diameter) that is thrown from a 5 feet distance, using both hands (MP)	2.79	1.19	-.86	-.01
Te7 Ability to engage in rhythmic games or large muscle group activities in the classroom (MP)	3.43	.81	-1.51	2.19
Te8 Able to ride a tricycle (MP)	2.89	1.27	-1.01	-.05
Te9 Able to skilfully pick up small objects with the tips of the fingers (MP)	3.22	.88	-1.11	1.01
Te10 The development of the dominant hand has stabilized	3.21	.91	-1.14	1.02
Te11 Can accept objects of different materials when making crafts (such as: glue, paste, hairy balls, etc.) (MP)	3.42	.80	-1.53	2.32
Te12 Can hold the pen correctly (MP)	2.72	1.17	-.72	-.24
Te13 Can open and merge objects using enough force (e.g., Lego, box lid, etc.) (MP)	3.16	.90	-1.00	.63
Te14 Can fill in the color within the range, not out of bounds (MP)	2.69	1.17	-.65	-.36
Te15 Both hands can move well, knowing how to use non-dominant hand to fix objects, such as holding down paper when drawing (MP)	2.95	1.07	-.90	.15
Te16 Able to write with appropriate amount of force, not too hard or too light (MP)	2.68	1.25	-.78	-.31
Te17 Can use scissors correctly (MP)	2.28	1.50	-.38	-1.28
Te18 Can copy simple figures and words (MP)	2.43	1.47	-.51	-1.13

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Performance of Gross and Fine Motor Skills.

Construct Validity

Confirmatory Factor Analysis

The general view when using Confirmatory techniques is that acceptable values of skewness (the deviation of a distribution of participant' scores on the COC from what is considered a normal distribution of scores i.e., equally distributed around the mean) fall between − 3 and + 3 (Brown, 2006). Levels of kurtosis (how much data resides in the extremes of a distribution of scores) are appropriate in a range of − 10 to + 10 (Brown, 2006). In our data (see Table 5) skewness and kurtosis values are in large part acceptable**.** The measure of validity associated with each of the five constructs was undertaken with a CFA using AMOS 29. In this instance, tested was the 5 Factor, 76 item model (see Figure 1). The values for skewness and kurtosis were generally within the acceptable range in justifying the use of maximum likelihood estimation with the CFA.

Figure 1

CFA 5-Factor 76 Item Model

Table 6

Standardized Coefficients and Associated Data

Item SubScale	Coefficient	SE	Z value	P-Value	95% CI
Ta1 (LA)	.71	.019	29.034	< .001	0.67; 0.75
Ta2 (LA)	.81	.024	36.183	< .001	0.76; 0.86
Ta3 (LA)	.86	.021	41.063	< .001	0.82; 0.90
Ta4 (LA)	.88	.023	42.228	< .001	0.84; 0.92
Ta5 (LA)	.86	.025	40.682	< .001	0.81; 0.91
Ta6 (LA)	.85	.021	40.141	< .001	0.81; 0.89
*Ta7 (LA)	.88			< .001	
Ta8 (LA)	.86	.027	40.625	< .001	0.81; 0.91
Ta9 (LA)	.88	.023	42.600	< .001	0.83; 0.92
Ta10 (LA)	.84	.025	38.471	< .001	0.79;- 0.89
Ta11 (LA)	.68	.029	26.791	< .001	0.62; 0.74
Ta12 (LA)	.66	.034	25.783	< .001	0.59; 0.73
Ta13 (LA)	.67	.036	26.143	< .001	0.60; 0.74
Tb1 (SA)	.73	.020	29.399	< .001	0.69; 0.77
Tb2 (SA)	.75	.021	30.804	< .001	0.71; 0.79
Tb3 (SA)	.74	.023	30.004	< .001	0.69; 0.78
Tb4 (SA)	.88	.021	40.122	< .001	0.84; 0.92
Tb5 (SA)	.85	.026	37.584	< .001	0.80; 0.90
Tb6 (SA)	.85	.021	37.951	< .001	0.81; 0.89
Tb7 (SA)	.84	.021	37.128	< .001	0.80; 0.88
Tb8 (SA)	.86	.021	38.858	< .001	0.82; 0.90
Tb9 (SA)	.89	.021	40.992	< .001	0.85; 0.93
Tb10 (SA)	.88	.021	39.877	< .001	0.84; 0.92
Tb11 (SA)	.86	.022	38.865	< .001	0.82; 0.90
Tb12 (SA)	.85	.021	37.600	< .001	0.81; 0.89
Tb13 (SA)	.84	.025	36.554	< .001	0.79; 0.89
Tb14 (SA)	.85	.024	37.768	< .001	0.80; 0.90
Tb15 (SA)	.87	.023	39.362	< .001	0.82; 0.91
Tb16 (SA)	.83	.025	35.775	< .001	0.78; 0.88
Tb17 (SA)	.87	.026	39.198	< .001	0.82; 0.92
*Tb18 (SA)	.86			< .001	
Tb19 (SA)	.84	.028	36.918	< .001	0.78; 0.89
Tb20 (SA)	.85	.024	37.775	< .001	0.80; 0.90
Tc1 (BER)	.49	.022	17.365	< .001	0.45; 0.53
Tc2 (BER)	.54	.022	19.368	< .001	0.50; 0.58
Tc3 (BER)	.64	.023	24.221	< .001	0.59; 0.68
Tc4 (BER)	.80	.027	34.087	< .001	0.59; 0.69
Tc5 (BER)	.81	.027	35.028	< .001	0.76; 0.86
Tc6 (BER)	.70	.020	27.413	< .001	0.66; 0.74
Tc7 (BER)	.77	.023	32.231	< .001	0.72; 0.81
Tc8 (BER)	.71	.021	28.273	< .001	0.67; 0.75
*Tc9 (BER)	.87			< .001	
Tc10 (BER)	.81	.025	34.924	< .001	0.76; 0.86
Tc11 (BER)	.83	.025	36.808	< .001	0.78; 0.88

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Performance of Gross and Fine Motor Skills.
*Regression weight fixed to 1

Table 6 (Continued)

Item SubScale	Coefficient	SE	Z value	P-Value	95% CI
Tc12 (BER)	.76	.023	31.355	< .001	0.71; 0.80
Tc13 (BER)	.67	.021	25.598	< .001	0.63; 0.71
Td1 (SC)	.73	.021	29.021	< .001	0.69; 0.77
Td2 (SC)	.77	.022	31.505	< .001	0.73; 0.81
Td3 (SC)	.74	.021	29.687	< .001	0.70; 0.78
Td4 (SC)	.82	.027	35.080	< .001	0.77; 0.87
Td5 (SC)	.72	.026	28.240	< .001	0.67; 0.77
Td6 (SC)	.67	.038	25.785	< .001	0.59; 0.74
Td7 (SC)	.85	.028	37.332	< .001	0.79; 0.90
Td8 (SC)	.59	.034	21.641	< .001	0.52; 0.66
Td9 (SC)	.71	.030	28.197	< .001	0.65; 0.77
Td10 (SC)	.86	.026	38.408	< .001	0.81; 0.91
*Td11 (SC)	.86			< .001	
Td12 (SC)	.74	.024	29.949	< .001	0.69; 0.79
Te1 (MP)	.65	.020	24.165	< .001	0.61; 0.69
Te2 (MP)	.64	.020	23.804	< .001	0.60; 0.68
Te3 (MP)	.78	.031	31.420	< .001	0.72; 0.84
*Te4 (MP)	.83			< .001	
Te5 (MP)	.81	.023	33.271	< .001	0.76; 0.85
Te6 (MP)	.80	.028	32.312	< .001	0.74; 0.85
Te7 (MP)	.70	.021	26.550	< .001	0.66; 0.74
Te8 (MP)	.76	.021	29.730	< .001	0.72; 0.80
Te9 (MP)	.79	.021	31.943	< .001	0.75; 0.83
Te10 (MP)	.80	.022	32.265	< .001	0.76; 0.84
Te11 (MP)	.67	.021	25.273	< .001	0.63; 0.71
Te12 (MP)	.84	.027	34.820	< .001	0.79; 0.89
Te13 (MP)	.81	.021	32.924	< .001	0.77; 0.85
Te14 (MP)	.85	.027	35.732	< .001	0.80; 0.90
Te15 (MP)	.87	.024	37.317	< .001	0.82; 0.92
Te16 (MP)	.84	.029	35.275	< .001	0.78; 0.90
Te17 (MP)	.79	.036	31.592	< .001	0.72; 0.86
Te18 (MP)	.82	.035	33.484	< .001	0.75; 0.89

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Performance of Gross and Fine Motor Skills.
*Regression weight fixed to 1

The coefficients of relationships, together with their *z*-values, standard errors, 95% confidence intervals and *p*-values (see Table 6) indicated high and significant loadings with each item across the five factors. To investigate the models' goodness of fit, several statistics were used (see Table 7). These included the Overall χ^2; root mean square error of approximation (RMSEA); Tucker-Lewis index (TLI); and the standardized root mean square residual (SRMR).

Table 7

Goodness of Fit Statistics (5-Factor. 76 Item Model)

Fit Statistic	5-Factor Model (76 Items)
ChiSq (df), prob	24,588.710 (2,764) $p < .001$
RMSEA	.085
(90% CI)	(0.048;.0.055)
CFI	.771
TLI	.764
SRMR	.0628

Note. Df = degrees of freedom; RMSEA = Root Mean Squared Error of Approximation; CI = Confidence Interval; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = Standardized Root Mean Squared Residual.

The Fit statistics associated with the 5-Factor, 76 item Model were poor. For example, the CFI and TLI Goodness of Fit indices values are far less than the recommended cut-off values at greater than .950 (MacCallum, Browne, & Sugawara, 1996). In addition, the RMSEA at .085 is greater than a considered 'good' cut-off at <.06 (Hu, & Bentler, 1999).

Association with Student Behaviour and Individual Assessment

The total COC scores and sub-scale scores correlated positively with SDQ prosocial behaviour ($p <.001$) and negatively with SDQ behaviour problems ($p <.001$). The same pattern was observed in the total sample and by grade level. The results are shown in Table 8.

Table 8

Correlation Between Teacher Rating on the COC and SDQ

SDQ	LA	SA	BER	SC	MP	Total
Complete sample (*N*=1,085)						
Prosocial	.71***	.75***	.73***	.67***	.65**	.76***
Problem	-.66***	-.64***	-.70***	-.55***	-.52***	-.66***
Nursery (*n* = 92)						
Prosocial	.62***	.61***	.53***	.58***	.57***	.69***
Problem	-.65***	-.56***	-.56***	-. 48***	-.33***	-.60***
K1 (*n* = 345)						
Prosocial	.69***	.73***	.71***	.67***	.62***	.74***
Problem	-.65***	-.65***	-.70***	-.60***	-.58***	-.69***
K2 (*n* = 304)						
Prosocial	.68***	.73***	.69***	.57***	.58***	.73***
Problem	-.71***	-.66***	-.70***	-.55***	-.54***	-.70***
K3 (*n* = 344)						
Prosocial	.64***	.69***	.67***	.54***	.51***	.69***
Problem	-.61***	-.63***	-.71***	-.53***	-.48***	-.67***

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Performance of Gross and Fine Motor Skills.

*** $p \leq .001$

There were 72 students who were individually assessed by educational psychologists recruited by The Chinese University of Hong Kong. Among them, 71 were assessed on WPPSI IV(HK) and their GAI scores were calculated. Children aged under 4 years old were also assessed on PTONI on the same day. There were 21 who were assessed on both WPPSI (IV) and PTONI. There was one who was assessed on PTONI only. The distribution of students by grade is shown in Table 9. As there was only one K2 student assessed on PTONI, all PTONI analyses were conducted with K1 students only.

Table 9

Distribution of Children by Grade on Using WPPSI IV (HK) and PTONI to Measure Cognitive Ability

	K1	K2	K3	Total
WPPSI IV (HK)	23	24	24	71
PTONI	21	1	0	22

The correlations between individual assessment results and teacher rating on the COC is shown in Table 10. The correlations, though in the right direction, were largely non-significant for K2 and K3 students, and the sample size was small.

Table 10

Correlations Between Teacher Rating on COC and Children's Cognitive Ability

	LA	SA	BER	SC	MP	Total
K1 COG[a] (*n* = 23)	.70***	.64***	.50*	.67***	.59**	.66***
K2 COG[a] (*n* = 24)	.30	.45*	.05	.12	.25	.30
K3 COG[a] (*n* = 24)	.47*	.34	.05	.41*	.39	.35
K1 COG[b] (*n* = 21)	.69***	.67***	.55**	.74***	.48*	.67***

Note. COG = Cognitive Ability; LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.
[a] indicating the General Ability Index of Wechsler Preschool & Primary Scale of Intelligence IV Edition (HK) (WPPSI-IV(HK)) for those at or above four years old; [b] indicating the measurement of Primary Test of Nonverbal Intelligence (PTONI) for those below four years old.
* $p \le .05$, ** $p \le .01$, *** $p \le .001$

Students were divided into two groups according to their cognitive ability in terms of GAI and PTONI scores. Students with GAI: 79 or below; PTONI: 89 or below were rated as below average; those with scores above GAI:79; PTONI; 89 were rated as average or above. Mann-Whitney U Test results indicated that there were significant differences in teacher rating on the COC between the two groups of students in K1 and K2 but not K3 on GAI. The overall pattern was that those with average or above average scores in GAI/PTONI were rated higher on the COC by their teachers than those with below average GAI/PTONI scores. The results are shown in Table 11.

Table 11

COC Scores by Cognitive Ability Status

	Average or above	**Below average**	*p* **level**
K1 COG[a] (*n* = 23)	221.79	151.22	.012
K2 COG[a] (*n* = 24)	245.86	165.00	.021
K3 COG[a] (*n* = 24)	264.55	218.50	.229
K1 COG[b] (*n* = 21)	218.15	138.63	.006

Note. [a] indicating the General Ability Index of Wechsler Preschool & Primary Scale of Intelligence IV Edition (HK) (WPPSI-IV(HK)) for those at or above four years old; [b] indicating the measurement of Primary Test of Nonverbal Intelligence (PTONI) for those below four years old.
* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Differentiation of Students by Service Status

As explained in the Participants sub-section, there were three groups of students. First, students receiving subvented preschool rehabilitation services such as OPRS, IP, EETC, TSP, and other services (Tier 2); second, students receiving Tier 1 services (Tier 1); third, students not receiving any services (No service). ANOVA results indicated that there was a significant difference in COC scores by service status among the complete sample, $F(2, 1082) = 65.60$, $p < .001$; Nursery students, $F(2, 89) = 3.43$, $p = .037$; K1 students, $F(2, 342) = 36.64$, $p < .001$; K2 students, $F(2, 301) = 55.69$, $p < .001$; and K3 students, $F(2, 341) = 55.26$, $p < .001$. Post-hoc test (Scheffe) results indicated that apart from the Nursery group, the COC could differentiate the Tier 1 and Tier 2 students from the No service group, but there was a non-significant difference between the Tier 1 and Tier 2 group. For the Nursery group, post hoc test results were non-significant. The results are shown in Table 12. Overall, the No service group were rated higher by their teachers than the Tier 1 and Tier 2 groups.

Table 12

Differentiation of Students by 3 Service Status Groups

Service	Complete sample (*N*=1,085)	Nursery (*n* = 92)	K1 (*n* = 345)	K2 (*n* = 304)	K3 (*n* = 344)
No service	235.62 (*n* = 720)	155.89 (*n* = 70)	213.27 (*n* = 242)	253.52 (*n* = 203)	271.52 (*n* = 205)
Tier 1	188.76 (*n* = 180)	128.15 (*n* = 20)	165.88 (*n* = 57)	197.41 (*n* = 51)	228.67 (*n* = 52)
Tier 2	195.91 (*n* = 185)	103.50 (*n* = 2)	144.61 (*n* = 46)	193.70 (*n* = 50)	226.44 (*n* = 87)

It is perhaps not surprising that the Tier 1 and Tier 2 students could not be differentiated as the Tier 1 group consisted of students with a mixed array of difficulties including borderline problems; children waiting for assessment (possibly with varying degree of difficulties); and children with social/behavioural/emotional problems[1]. Another viable option was to examine the capacity of the COC to differentiate between the No service group and the combined Tier 1/Tier 2 group using Independent t tests. The results are significant for the complete sample, $t(1083) = 11.39$, $p < .001$; Nursery, $t(90) = 2.54$, $p = .013$; K1, $t(343) = 8.33$, $p < .001$; K2, $t(302) = 10.56$, $p < .001$; and K3 groups, $t(342) = 10.52$, $p < .001$. In

all cases, teachers rated the No service group higher than the Tier 1/Tier 2 group. The results are shown in Table 13.

Table 13

Differentiation of Students by 2 Service Status Groups

Service	Complete sample (*N*=1,085)	Nursery (*n* = 92)	K1 (*n* = 345)	K2 (*n* = 304)	K3 (*n* = 344)
No service	235.62 (*n* = 720)	155.89 (*n* = 70)	213.27 (*n* = 242)	253.52 (*n* = 203)	271.52 (*n* = 205)
Tier 1/Tier 2	192.39 (*n* = 365)	125.91 (*n* = 22)	156.38 (*n* = 103)	195.57 (*n* = 101)	222.27 (*n* = 139)

Association Between Individual Child Assessment Scores and Service Status

In terms of GAI scores by 3 service status, Kruskal-Wallis test results were not significant for K1 students, Kruskal-Wallis H (2) = 2.60, *p* = .273; K2 students, Kruskal-Wallis H (2) = 2.79, *p* = .248; and K3 students, Kruskal-Wallis H (2) = 2.92, *p* = .232. The results for PTONI (K1 students only) were not significant, Kruskal-Wallis H (2) = 0.70, *p* = .705. For GAI scores, students receiving Tier 1 service achieved lower scores than those receiving Tier 2 services. However, the sample size was small. The results are shown in Table 14.

Table 14

Cognitive Ability Scores by 3 Service Status

Service	K1 COG[a] (*n* = 23)	K2 COG[a] (*n* = 24)	K3 COG[a] (*n* = 24)	K1 COG[b] (*n* = 21)
No service	87.56 (*n* = 18)	104.82 (*n* = 17)	103.90 (*n* = 10)	100.87 (*n* = 15)
Tier 1	74.50 (*n* = 4)	87.80 (*n* = 5)	91.29 (*n* = 7)	95.25 (*n* = 4)
Tier 2	89.00 (*n* = 1)	101.50 (*n* = 2)	102.29 (*n* = 7)	87.00 (*n* = 2)

Note. [a] indicating the General Ability Index of Wechsler Preschool & Primary Scale of Intelligence IV Edition (HK) (WPPSI-IV(HK)) for those at or above four years old; [b] indicating the measurement of Primary Test of Nonverbal Intelligence (PTONI) for those below four years old.

In terms of Cognitive Ability using General Ability Index scores by 2 service status, Mann-Whitney U test results were non-significant for K1 students, *z* = 1.23, *p* = .218, K2 students, *z* = 1.56, *p* = .118, or K3 students, *z* = 1.26, *p* = .208. The results for Cognitive Ability using PTONI (K1 students only) were non-significant, *z* = 0.78, *p* = .436. However, the results need to be considered cautiously due to the small sample size. The results are shown in Table 15.

Table 15

Cognitive Ability Scores Scores by 2 Service Status

Service	K1 COG[a] (*n* = 23)	K2 COG[a] (*n* = 24)	K3 COG[a] (*n* = 24)	K1 COG[b] (*n* = 21)
No service	87.56 (*n* = 18)	104.82 (*n* = 17)	103.90 (*n* = 10)	100.87 (*n* = 15)
Tier 1/Tier 2	77.40 (*n* = 5)	91.71 (*n* = 7)	96.79 (*n* = 14)	92.50 (*n* = 6)

Note. [a] indicating the General Ability Index of Wechsler Preschool & Primary Scale of Intelligence IV Edition (HK) (WPPSI-IV(HK)) for those at or above four years old; [b] indicating the measurement of Primary Test of Nonverbal Intelligence (PTONI) for those below four years old.

The general pattern was that service status might not be directly associated with individual assessment scores. However, the sample sizes in the above analyses were small and therefore it was not clear that this sample was representative of the general population.

Differentiation of Students by Grade Level

For differentiation by grade level, ANOVA results were significant for LA, $F(3, 1081) = 60.00$, $p < .001$; SA, $F(3, 1081) = 81.89$, $p < .001$; BER, $F(3, 1081) = 61.28$, $p < .001$; SC, $F(3, 1081) = 174.99$, $p < .001$; MP, $F(3, 1081) = 206.02$, $p < .001$; and the total score, $F(3, 1081) = 128.41$, $p < .001$. In all cases, post-hoc analyses indicated that there were significant differences across the grades with students from higher grades being rated with higher scores. The details are shown in Table 16.

Table 16

Differentiation by Grade

Grade	LA	SA	BER	SC	MP	Total
Nursery (*n* = 92)	29.57	36.50	28.84	22.30	31.51	148.72
K1 (*n* = 345)	35.14	49.08	33.47	32.14	46.46	196.28
K2 (*n* = 304)	40.00	58.35	38.73	39.11	58.08	234.27
K3 (*n* = 344)	42.81	64.51	41.21	42.61	62.50	253.64

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.

Sensitivity and Specificity

ROC analysis was performed separately for each grade to identify the cut-off point that could best identify students requiring support services at each grade. Teacher report of student service status (No service vs Tier 1/Tier 2) was the state variable. The results of the ROC analyses are presented in Table 17. Graphical illustrations of the ROC analyses are shown in Figures 2–5.

According to Power, Fell, and Wright (2013), sensitivity + specificity should be at least 1.5 for a test to be considered useful. The positive likelihood value (LR+) is a good indicator for ruling-in diagnosis; the higher the value, the better the indication. The negative likelihood value (LR-) is a good indicator for ruling-out diagnosis, and the lower the value, the better the indication (Simundic, 2009). The odds ratio between LR+ and KR- is a measure of accuracy in prediction and the higher the value, the better the prediction (Shum, Zheng, Wong, Wong, & Lam, 2022). In terms of diagnostic accuracy, an area under the ROC curve
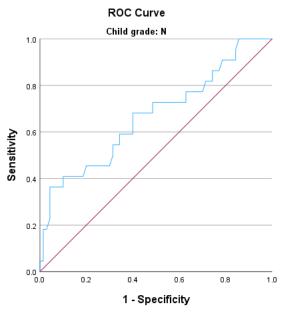
(AUC) value of 0.6 to 0.7 is regarded as sufficient; a value of 0.7 to 0.8 is regarded as good; and a value of 0.8 to 0.9 is regarded as very good (Simundic, 2009). Youlden's Index is a measure of screening accuracy and higher values indicate better accuracy (Shum et al., 2022).

Table 17

Results of ROC Analyses with Service Status as State Variable

	AUC	Sensitivity	Specificity	LR+[5]	LR-[6]	OR[7]	YI[8]	Cut-off
Nursery	.668	.727	.514	1.496	0.531	2.816	0.241	153.5
K1	.760	.718	.640	1.994	0.441	4.526	0.358	200
K2	.815	.762	.709	2.619	0.336	7.801	0.471	230.5
K3	.794	.727	.707	2.481	0.386	6.426	0.434	257

Figure 2

ROC Analysis at Nursery Level

Diagonal segments are produced by ties.

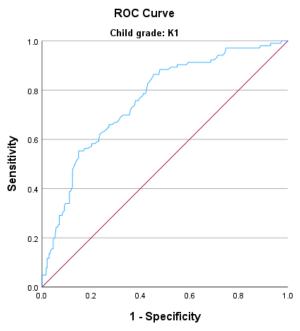[5] Positive likelihood ratio: sensitivity/(1 - specificity)
[6] Negative likelihood ratio: (1 - sensitivity)/specificity
[7] Odds ratio: LR+/LR-
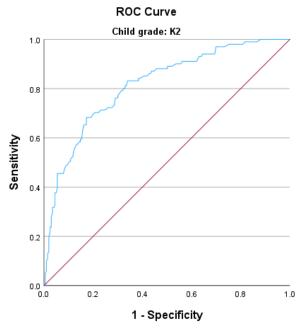[8] Youden's Index: (sensitivity + specificity) - 1

Figure 3

ROC Analysis at K1 Level

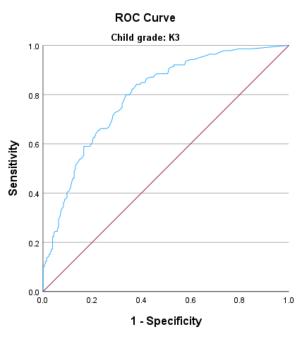Diagonal segments are produced by ties.

Figure 4

ROC Analysis at K2 Level

Diagonal segments are produced by ties.

23

Figure 5

ROC Analysis at K3 Level

ROC Curve
Child grade: K3

Diagonal segments are produced by ties.

A second set of ROC analyses was performed with cognitive ability scores as the state variable. In both cases, students with standardized scores classified as below average according to the test manual were grouped as those in need of support services. The cut-off for GAI was ≤ 79 and for PTONI at ≤ 89. As there was only one K2 student assessed on PTONI, ROC analysis with PTONI as the state variable was only conducted for K1 students. The results are shown in Table 18. Graphical illustrations of the ROC analyses are shown in Figures 6–9. In these analyses, the sample size was small and it was therefore not clear that this sample was representative of the larger sample.

Table 18

Results of ROC Analyses with Cognitive Ability Scores as State Variable

	AUC	Sensitivity	Specificity	LR+[3]	LR-[4]	OR[5]	YI[6]	Cut-off
K1 - COG[a]	.817	.778	.857	5.441	0.259	21.003	0.635	190
K2 – COG[a]	.921	1.000	.905	10.526	0	NA	0.905	191.5
K3 - COG[a]	.694	.750	.550	1.667	0.455	3.667	0.300	264.5
K1 - COG[b]	.865	.875	.769	3.788	0.163	23.303	0.644	196.5

Note. [a] indicating the General Ability Index of Wechsler Preschool & Primary Scale of Intelligence IV Edition (HK) (WPPSI-IV(HK)) for those at or above four years old; [b] indicating the measurement of Primary Test of Nonverbal Intelligence (PTONI) for those below four years old.

Figure 6

ROC Analysis at K1 with GAI as State Variable

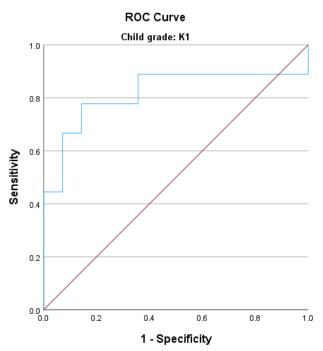**Figure 7**

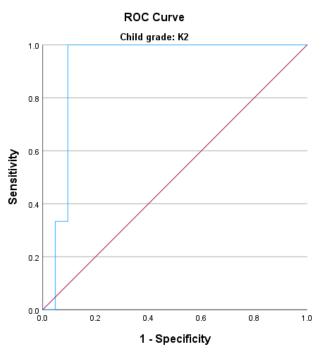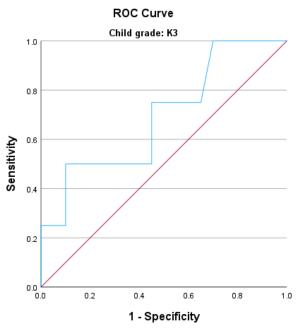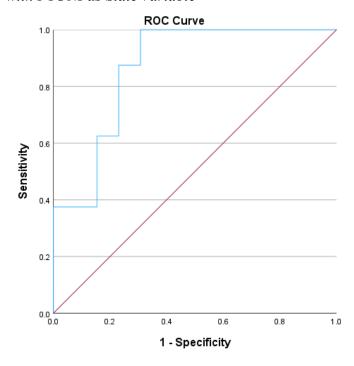*ROC Analysis at K2 with GAI as State Variable*

Figure 8

ROC Analysis at K3 with GAI as State Variable

ROC Curve

Child grade: K3

Diagonal segments are produced by ties.

Figure 9

ROC Analysis at K1 with PTONI as State Variable

ROC Curve

***Comparing Classification by Current Service Status and Individual Assessment
Scores***

When comparing the classification based on individual assessment scores and current
service status, there were some discrepancies, in terms of cut-off points (Tables 17 and 18).
There were also discrepancies in classification (Table 19).

Table 19

Classification by Service Status Versus Individual Assessment Results*

K1 Cognitive Ability (GAI)		
	No service based on GAI scores	**Requires service based on GAI scores**
Not receiving services currently	12 (85.7%)	6 (66.7%)
Receiving services currently	2 (14.3%)	3 (33.3%)
K2 Cognitive Ability (GAI)		
	No service based on GAI scores	Requires service based on GAI scores
Not receiving services currently	17 (81.0%)	0 (0%)
Receiving services currently	4 (19.0%)	3 (100%)
K3 Cognitive Ability (GAI)		
	No service based on GAI scores	Requires service based on GAI scores
Not receiving services currently	10 (50%)	0 (0%)
Receiving services currently	10 (50%)	4 (100%)
K1 Cognitive Ability (PTONI)		
	No service based on PTONI scores	Requires service based on PTONI scores
Not receiving services currently	10 (76.9%)	5 (62.5%)
Receiving services currently	3 (23.1%)	3 (37.5%)

Note. GAI = General Ability Index; PTONI = Primary Test of Nonverbal Intelligence. *Percentage based on
GAI/PTONI classification

Rasch Analysis

Unidimensionality

Undimensionality was evaluated through an examination of infit and outfit mean
square statistics, point measure correlations, and PCA. For infit and outfit mean square
statistics, using a cut-off of 0.6 to 1.4 (Bond & Fox, 2007), there were 11 items with infit
statistics outside the recommended range (SA10, BER1, BER2, BER3, SC5, SC6, SC8, SC9,
MP3, MP8, MP17) and there were nine items with outfit statistics outside the recommended
range (LA11, SA10, BER1, BER2, BER3, SC6, SC8, MP8, MP17). All point measure
correlations were positive. For PCA results, the criteria for unidimensionality are (i) the
variance explained by measures must be 40% or more; (ii) the variance explained by the first
principal component of the residuals must be 15% or less; and (iii) the ratio of variance in
measures to variance in the first principal component of the residuals must be 3:1or more
(McCreary et al., 2013). In the present case the variance explained by measures was 58.0%
and the variance explained by the first principal component of the residuals was 4.5%. The
ratio of variance in measures to variance in the first principal component of the residuals was
12.89:1, fulfilling the criteria set out by McCreary et al (2013).

Category Functioning

For category functioning, Bond and Box (2007) recommended that there should be a at least 10 responses in each category. The average measure (average of the ability estimates of participants endorsing a particular response category) of the categories should increase in size with increases in the value of the underlying variables. The threshold calibrations (difficulty estimates for the choice of one response category over another) should increase monotonically and there should be a difference of at least 1.4 logits between the categories. In the present case, though the average measures increased from -0.92 for category 0 to 2.88 for category 4, and there were more than 10 responses for each category, the threshold calibrations were less than 1.4 logits apart (Table 20). This suggested that the teachers might not be able to adequately distinguish between the five categories. The category probability curve is shown in Figure 10.

Table 20

Category Functioning

Category	Observed count	Andrich threshold	Average measure
0	4,382	None	-0.92
1	6,241	-1.04	-0.44
2	14,182	-0.86	0.32
3	25,356	0.13	1.13
4	32,299	1.77	2.88

Figure 10

Category Probability Curve

Targeting

In terms of targeting, the Wright map indicated that the items concentrated on the lower end and there were not enough items targeting students with higher abilities (see Figure 11).

Figure 11

Item Map

```
MEASURE     Person - MAP - Item
               <more>|<rare>
    7     .#########  +
                      |
                      |
                      |
            .###  |
    6                 +
                      |
                     T|
            .##  |
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    1 .############  +   b17     c5      e17
       ############  |   a13     b18     c11     c4      e18
        .#########  |    b20     b5      c10     c9
       .#########  |S a12        b15     e14     e16
        .#######  |    a8        b16     b4      d7      d8      e12     e4      e6
       .########  |    b10       b14     b3      b6      b9      c12     d10     d11
                      |    d9     e3      e8
    0    .#######  +M a10        a5      a7      a9      b12     b8      c7      d6
                      |    e15
       .#########  |    a11       a2      a6      b11     b13     b2      b7      c8
           .### S|    a4        c13     c3
          #####  |S a3        b1      c2      c6      d1      d12     d4      e10
                      |    e13     e5      e9
          .###  |    d2
         .####  |    c1
   -1     .##  +    e11     e2
          .##  |T d5        e1      e7
          ##  |    a1        d3
            -  |
            -  |
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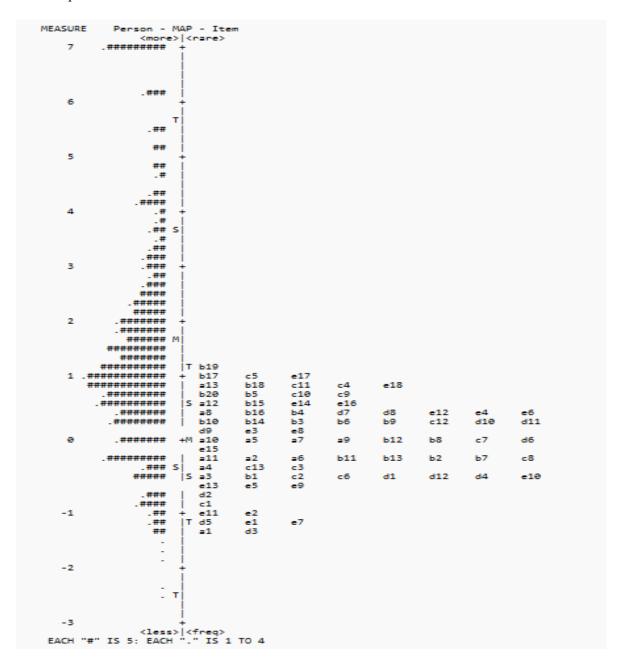
Summary Statistics

The mean infit mean square was 1.06 (sd: -.23) and the mean outfit fit mean square was 1.05 (sd: -.25). The person reliability was .97 and the person separation was 6.03.

Reliability

The internal consistency of the COC was examined using Cronbach's Alpha. All estimates were above .90. Test-retest reliability was estimated using Intraclass Correlation (ICC) and all estimates were above .80. The details are illustrated in Table 21. Inter-rater reliability was measured using parent and teacher versions of the COC and the ICC was .737 (based on 985 pairs).

Table 21

Reliability Estimates

	Internal consistency (*N* = 1,085)	Test-retest reliability (*n* = 147)
LA	.96	.91
SA	.98	.94
BER	.94	.88
SC	.94	.92
MP	.96	.94
Total	.99	.96

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.
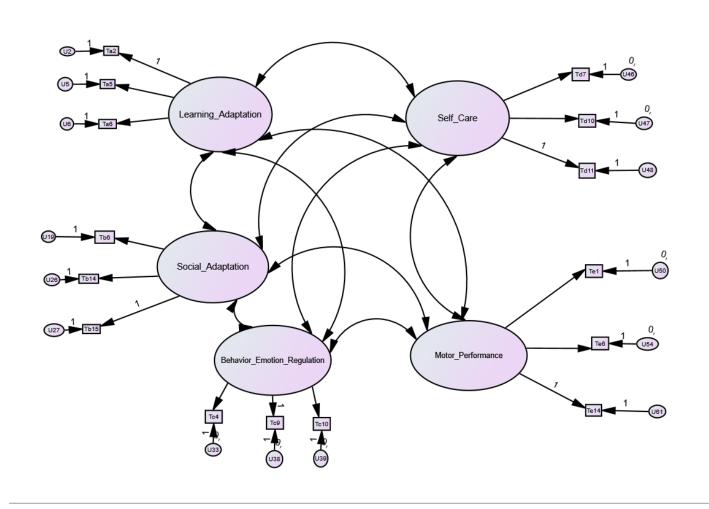
The 5 Factor, 15-Item Version (COC-15)

The 76-item, 5 Factor model (see Appendix A) was revised because of the unsatisfactory outcomes from the CFA and Rasch analyses. Based on the results of a further Rasch analysis, 13 items with unsatisfactory infit and outfit statistics were removed from the original 76-item model with the remaining 63-item version having fit statistics within 0.6 to 1.4. The construct validity of the new 63-item model was further examined using CFA. Guided by the process of modification indices and the associated examination of factor loadings and covariances, a final model version comprised 15 items (COC-15) and was acceptable in terms of model fit (see Figure 12) was derived. The COC-15 items are shown in Table 22 (see Appendix B for full COC-15 checklist).

Table 22

COC-15 Items

Sub-scale	Item
Learning Adaptation	上課時能主動參與不同課堂活動 (2)
	回答老師的提問 (5)
	依從老師特定的指令 (6)
Social Adaptation	進行假想遊戲，模擬日常簡單生活步驟 (6)
	有恆常喜歡的玩伴/ 朋友 (14)
	能理解朋輩或老師的情緒及需要，並作出恰當回應 (如：幫助有需要的朋輩，安慰別人) (15)
Behaviour and Emotional Regulation	恰當地以語言或非語言的方式表達和解釋自己的情緒（如:我覺得好嬲因為...）(4)
	能在活動/遊戲過程中與他人協商 (9)
	遇到難題時，會主動尋求解決方法 (10)
Daily Self-care	如廁後，自行整理衣物（例如：將衫攝於褲子內）(7)
	能穿上和脫掉沒有鈕扣的衣物（如：開胸大褸）(10)
	能辨認衣服的前後或底面 (11)
Gross and Fine Motor Performance	能平穩走路/跑步，不容易跌倒 (1)
	能以雙手接由 5 呎遠拋至的中型膠球 (約 7-8 吋直徑) (6)
	能在範圍內填色,不出界 (14)

Figure 12

CFA 5-Factor 15 Item Model

Table 23

Standardized Coefficients and Associated Data

Item SubScale	Coefficient	SE	Z value	P-Value	95% CI
*Ta2 (LA)	.83			< .001	
Ta5 (LA)	.89	.032	35.770	< .001	0.83; 0.95
Ta6 (LA)	.83	.029	32.102	< .001	0.77; 0.89
Tb6 (SA)	.85	.022	40.012	< .001	0.81; 0.89
Tb14 (SA)	.85	.025	39.992	< .001	0.80; 0.90
*Tb15 (SA)	.90			< .001	
Tc4 (BER)	.82	.024	36.709	< .001	0.77; 0.87
*Tc9 (BER)	.90			< .001	
Tc10 (BER)	.86	.022	40.624	< .001	0.82; 0.90
Td7 (SC)	.86	.027	38.994	< .001	0.81; 0.91
Td10 (SC)	.89	.024	42.225	< .001	0.84; 0.94
*Td11 (SC)	.88			< .001	
Te1 (MP)	.59	.022	20.620	< .001	0.55; 0.63
Te6 (MP)	.78	.032	29.558	< .001	0.71; 0.84
*Te14 (MP)	.85			< .001	

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.
*Regression weight fixed to 1

As with previous 5 Factor, 76-Item Model, the coefficients of relationships, together with their *z*-values, standard errors, 95% confidence intervals and *p*-values (see Table 23) indicated high and significant loadings with each item across the five factors.

Table 24

Goodness of Fit Statistics (5-Factor. 15 Item Model)

Fit Statistic	5-Factor Model (15 Items)
ChiSq (df), prob	330.896 (79) $p < .001$
RMSEA	.054
(90% CI)	(0.183;.0.287)
CFI	.982
TLI	.977
SRMR	.0229

Note. Df = degrees of freedom; RMSEA = Root Mean Squared Error of Approximation; CI = Confidence Interval; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = Standardized Root Mean Squared Residual

The Fit statistics associated with the 5 Factor, 15-item Model (COC-15) were strong (see Table 24). The CFI and TLI Goodness of Fit indices values at .982 and .977 are greater than the recommended cut-off values (MacCallum et al., 1996)). In addition, the RMSEA at .054 was considered 'good' cut-off at <.06 (Hu, & Bentler, 1999).

Association with Student Behaviour and Individual Assessment

The total COC-15 and sub-scale scores correlated positively with SDQ prosocial behaviour ($p < .001$) and negatively with SDQ behaviour problems ($p < .001$). The same pattern was observed in the total sample and by grade level. The results are shown in Table 25.

Table 25

Correlation Between Teacher Rating on the COC-15 and SDQ

SDQ	LA	SA	BER	SC	MP	Total
Complete sample (*N*=1085)						
Prosocial	.67***	.75***	.71***	.63***	.61***	.76***
Problem	-.63***	-.63***	-.61***	-.51***	-.53***	-.65***
Nursery (*n* = 92)						
Prosocial	.58***	.63***	.41***	.52***	.52***	.65***
Problem	-.64***	-.50***	-.53***	-.34***	-.37***	-.59***
K1 (*n* = 345)						
Prosocial	.67***	.74***	.69***	.63***	.57***	.74***
Problem	-.63***	-.63***	-.59***	-.59***	-.55***	-.67***
K2 (*n* = 304)						
Prosocial	.64***	.73***	.68***	.53***	.51***	.71***
Problem	-.67***	-.63***	-.62***	-.49***	-.51***	-.67***
K3 (*n* = 344)						
Prosocial	.62***	.68***	.67***	.49***	.49***	.70***
Problem	-.56***	-.61***	-.62***	-.53***	-.50***	-.67***

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.
*** $p \le .001$

The correlations between general cognitive abilities of individual assessment results and teacher rating on the COC-15 is shown in Table 26. The correlations, though in the right direction, were largely non-significant for K2 and K3 students and in any case needed to be considered cautiously due to the small sample size.

Table 26

Correlations Between Teacher Rating on COC and WPPSI IV (HK) and PTONI

	LA	SA	BER	SC	MP	Total
K1 COG[a] (*n* = 23)	.57**	.62**	.51*	.52*	.52*	.60**
K2 COG[a] (*n* = 24)	.40	.45*	.35	.44*	.00	.39
K3 COG[a] (*n* = 24)	.40	.34	.20	.43*	.27	.36
K1 COG[b] (*n* = 21)	.73***	.61**	.53*	.61**	.45*	.63**

Note. COG = Cognitive Ability; LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.
[a] indicating the General Ability Index of Wechsler Preschool & Primary Scale of Intelligence IV Edition (HK) (WPPSI-IV(HK)); [b] indicating the measurement of Primary Test of Nonverbal Intelligence (PTONI).
* $p \le .05$, ** $p \le .01$, *** $p \le .001$

Students were divided into two groups according to their GAI and PTONI scores. Students with GAI: 79 or below; PTONI: 89 or below were rated as below average; those with scores above GAI:79; PTONI; 89 were rated as average or above. Mann-Whitney U Test results indicated that there were significant differences in teacher rating on the COC-15 between the two groups of students in K1 and K2 but not with K3 students on GAI. The overall pattern was that those with average or above average scores in GAI/PTONI were rated higher on the COC-15 by their teachers than those with below average GAI/PTONI scores. The results are shown in Table 27.

Table 27

COC Scores by Cognitive Ability Status

	Average or above	**Below average**	*p* **level**
K1 COG[a] (*n* = 23)	41.93	28.11	.023
K2 COG[a] (*n* = 24)	47.86	26.00	.013
K3 COG[a] (*n* = 24)	51.65	42.25	.185
K1 COG[b] (*n* = 21)	40.92	25.13	.019

Note. COG = Cognitive Ability; LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.
[a] indicating the General Ability Index of Wechsler Preschool & Primary Scale of Intelligence IV Edition (HK) (WPPSI-IV(HK)); [b] indicating the measurement of Primary Test of Nonverbal Intelligence (PTONI).

Differentiation of Students by Service Status

As explained in the Participants sub-section, there were three groups of students. First, students receiving subvented preschool rehabilitation services such as OPRS, IP, EETC, TSP, and other services (Tier 2); second, students receiving Tier 1 services (Tier 1); third, students not receiving any services (No service). ANOVA results indicated that there was a significant difference in COC-15 scores by service status among the complete sample, $F(2, 1082) = 68.29$, $p < .001$; K1 students, $F(2, 342) = 36.88$, $p < .001$; K2 students, $F(2, 301) = 58.70$, $p < .001$; and K3 students, $F(2, 341) = 53.12$, $p < .001$; but not Nursery students, $F(2, 89) = 2.96$, $p = .057$. Post-hoc test (Scheffe) results indicated that the COC-15 differentiated Tier 1 and Tier 2 students from the No service group among K1, K2, and K3 students. The results are shown in Table 28. Overall, the No service group students were rated higher by their teachers than the Tier 1 and Tier 2 groups.

Table 28

Differentiation of Students by 3 Service Status Groups

Service	**Complete sample (*N*=1085)**	**Nursery (*n* = 92)**	**K1 (*n* = 345)**	**K2 (*n* = 304)**	**K3 (*n* = 344)**
No service	45.28 (*n* = 720)	28.56 (*n* = 70)	40.59 (*n* = 242)	49.10 (*n* = 203)	52.75 (*n* = 205)
Tier 1	34.89 (*n* = 180)	22.20 (*n* = 20)	30.49 (*n* = 57)	35.98 (*n* = 51)	43.52 (*n* = 52)
Tier 2	36.34 (*n* = 185)	16.00 (*n* = 2)	25.26 (*n* = 46)	35.84 (*n* = 50)	42.94 (*n* = 87)

An Independent t test was used to examine the capacity of the COC-15 to differentiate between the No service group and the combined Tier 1/Tier 2 group. The results were significant for the complete sample, $t\ (1,083) = 11.64$, $p < .001$; Nursery, $t\ (90) = 2.34$, $p = .021$; K1, $t\ (343) = 8.29$, $p < .001$; K2, $t\ (302) = 10.85$, $p < .001$; and the K3 groups, $t\ (342) = 10.31$, $p < .001$. In all cases, teachers rated the No service group higher than the Tier 1/Tier 2 group. The results are shown in Table 29.

Table 29

Differentiation of Students by 2 Service Status Groups

Service	Complete sample (*N*=1,085)	Nursery (*n* = 92)	K1 (*n* = 345)	K2 (*n* = 304)	K3 (*n* = 344)
No service	45.28 (*n* = 720)	28.56 (*n* = 70)	40.59 (*n* = 242)	49.10 (*n* = 203)	52.75 (*n* = 205)
Tier 1/Tier 2	35.62 (*n* = 365)	21.64 (*n* = 22)	28.16 (*n* = 103)	35.91 (*n* = 101)	43.16 (*n* = 139)

Differentiation of Students by Grade Level

ANOVA results were significant for differentiation by grade level for LA, $F\ (3, 1081) = 25.42$, $p < .001$; SA, $F\ (3, 1081) = 53.08$, $p < .001$; BER, $F\ (3, 1081) = 83.11$, $p < .001$; SC, $F\ (3, 1081) = 203.15$, $p < .001$; MP, $F\ (3, 1081) = 135.07$, $p < .001$; and the total score, $F\ (3, 1081) = 112.97$, $p < .001$. Post-hoc analyses results indicated that there were significant differences across the grades, with students from higher grades being rated with higher scores. The details are shown in Table 30.

Table 30

Differentiation by Grade

Grade	LA	SA	BER	SC	MP	Total
Nursery (*n* = 92)	7.77	5.86	4.13	3.48	5.66	26.90
K1 (*n* = 345)	8.30	7.35	6.43	6.91	7.88	36.88
K2 (*n* = 304)	9.16	8.66	8.09	9.17	9.64	44.72
K3 (*n* = 344)	9.81	9.55	8.99	10.36	10.15	48.87

Note. COG = Cognitive Ability; LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.

Sensitivity and Specificity

ROC analysis was performed separately for each grade to identify the cut-off point that could best identify students requiring support services at each grade. Teacher report of student service status (No service vs Tier 1/Tier 2) was the state variable. The results of the ROC analyses are presented in Table 31. Graphical illustrations of the ROC analyses are shown in Figures 13–16.

Table 31

Results of ROC Analyses with Service Status as State Variable

	AUC	Sensitivity	Specificity	LR+[3]	LR-[4]	OR[5]	YI[6]	Cut-off
Nursery	.662	.727	.443	1.305	0.616	2.118	0.17	30.5
K1	.756	.757	.616	1.971	0.394	4.997	0.373	38.5
K2	.819	.772	.739	2.958	0.309	9.587	0.511	44.5
K3	.786	.741	.693	2.414	0.374	6.458	0.434	49.5

Figure 13

ROC Analysis at Nursery Level

Diagonal segments are produced by ties.

Figure 14

ROC Analysis at K1 Level

ROC Curve

Child grade: K1

Diagonal segments are produced by ties.

Figure 15

ROC Analysis at K2 Level

ROC Curve

Child grade: K2

Diagonal segments are produced by ties.

Figure 16

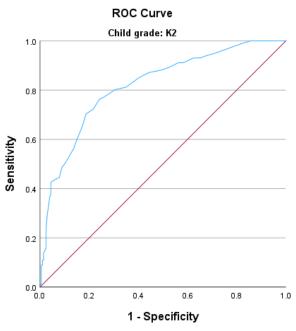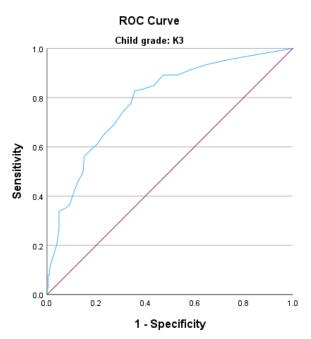*ROC Analysis at K3 Level*

ROC Curve

Child grade: K3

Diagonal segments are produced by ties.

A second set of ROC analyses was performed with cognitive ability scores as the state variable. In both cases students with standardized scores classified as below average according to the test manual were grouped as those in need of support services. The cut-off for GAI was ≤ 79 and for PTONI at ≤ 89. As there was only one K2 student assessed on PTONI, ROC analysis with PTONI as the state variable was only conducted for K1 students. The results are shown in Table 32. Graphical illustrations of the ROC analyses are shown in Figures 17–20. In these analyses the sample size was small and therefore it was not clear that it was representative of the larger group.
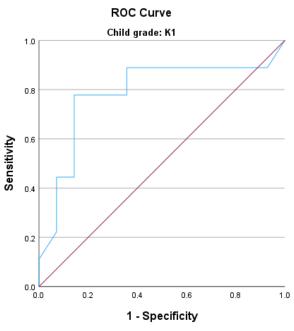
Table 32

Results of ROC Analyses with Cognitive Ability Scores as State Variable

	AUC	Sensitivity	Specificity	LR+[3]	LR-[4]	OR[5]	YI[6]	Cut-off
K1 - COG[a]	.786	.778	.857	5.441	0.259	21.003	0.635	34.0
K2 - COG[a]	.952	1.00	.905	10.526	0	NA	0.905	34.0
K3 - COG[a]	.712	.750	.650	2.143	0.385	5.571	0.4	49.5
K1- COG[b]	.813	.750	.769	3.247	0.325	9.987	0.519	34.0

Note. COG = Cognitive Ability; LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.
[a] indicating the General Ability Index of Wechsler Preschool & Primary Scale of Intelligence IV Edition (HK) (WPPSI-IV(HK)); [b] indicating the measurement of Primary Test of Nonverbal Intelligence (PTONI).

Figure 17

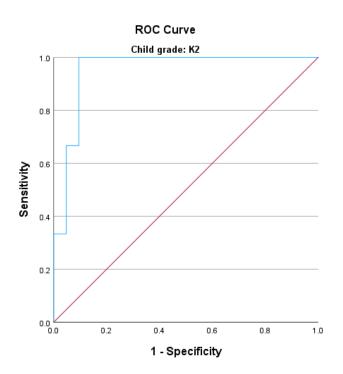*ROC Analysis at K1 with GAI as State Variable*

ROC Curve

Child grade: K1

Diagonal segments are produced by ties.

Figure 18

ROC Analysis at K2 with GAI as State Variable

Figure 19

ROC Analysis at K3 with GAI as State Variable

Figure 20

ROC Analysis at K1 with PTONI as State Variable

Diagonal segments are produced by ties.

Rasch Analysis

Unidimensionality

Undimensionality was evaluated through an examination of infit and outfit mean square statistics, point measure correlations, and PCA. For infit and outfit mean square statistics, all items were within 0.6 to 1.4 (Bond & Fox, 2007). All point measure correlations were positive. The PCA results reported that the variance explained by measures was 62.50%, and the variance explained by the first principal component of the residuals was 7.1%. The ratio of variance in measures to variance in the first principal component of the residuals was 8.93:1, fulfilling the criteria set out by McCreary et al. (2013).

Category Functioning

In the present case, though the average measures increased from -1.59 for category 0 to 2.93 for category 4, and there were more than 10 responses for each category, the threshold calibrations were less than 1.4 logits apart (Table 33). This suggested that the teachers might not be able to adequately distinguish between the five categories. The category probability curve is shown in Figure 21.

Table 33

Category Functioning

Category	Observed count	Andrich threshold	Average measure
0	864	None	-0.1.59
1	1550	-1.69	-0.71
2	3228	-0.92	0.32
3	4934	0.37	1.36
4	5699	2.25	2.93

Figure 21

Category Probability Curve

Targeting

In terms of targeting, the Wright map showed that the items concentrated on the lower end, and there were not enough items targeting students with higher abilities (see Figure 22).

Figure 22

Item Map

```
MEASURE    Person - MAP - Item
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  6 .############ T+
                   |
                   |
                   |
                   |
                   |
  5         .#### +
                   |
                   |
            ####   |
  4              +
            .### S|
             .##  |
             .##  |
  3          .### +
            .###  |
             .#   |
             .##  |
            .###  |
  2         .#### +
            .####  |
            .### M|
          .####### |
            .###  |
            .###  |
  1    .####### +T
            .###  |
          .####### |  c4      c9
             .#   |S c10
            ###### |  b15     e14
            .####  |  d7
  0          .#### +M b14    b6      d10     d11     e6
             .###  |
             .###  |  a5
             .# S|S a2      a6
             .##  |
             .#   |
 -1          .##  +T
             .##  |
             .##  |
             .    |  e1
             .#   |
             .    |
 -2          .#   +
             .    |
             .    |
             .    |
             . T|
 -3              +
             .    |
             .    |
             .    |
 -4              +
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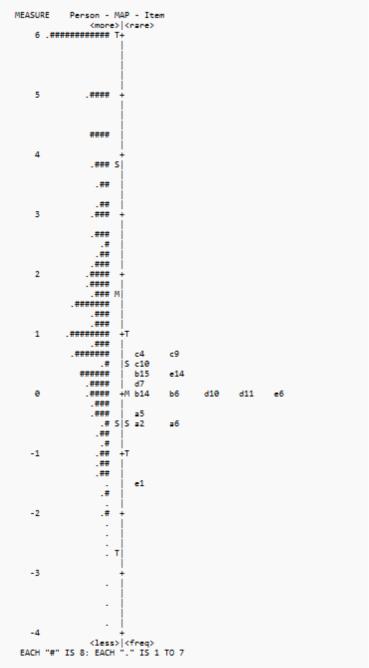
Summary Statistics

The mean infit mean square was 1.00 (sd:-.17) and the mean outfit fit mean square was 1.01 (sd:-.14). The person reliability was .92 and the person separation was 3.47.

Reliability

The internal consistency of the COC was examined using Cronbach's Alpha with estimates all above .70 (see Table 34). Test-retest reliability was estimated using ICC and all estimates were above .80 (see Table 34). Inter-rater reliability was measured using parent and teacher version of the COC-15 and the ICC was .740 (based on 985 pairs).

Table 34

Reliability Estimates

	Internal consistency (N = 1,085)	**Test-retest reliability (n = 147)**
LA	.88	.87
SA	.90	.89
BER	.90	.88
SC	.91	.80
MP	.77	.87
Total	.96	.94

Note. LA = Learning Adaptation; SA = Social Adaptation; BER = Behaviour Emotion Regulation; SC = Self Care; MP = Motor Performance.

Establishment of Norms and Cut Off Scores

Establishment of Norms

We use normative data consisting of raw data, Z-scores, T-Scores[9] and percentile ratios to ready-reference and compare the characteristics or specific conditions of a group of people or an individual person with data for the average person of that reference group. In our case, we reference the children according to grade (Nursery, K1, K2 & K3) relative to the normative average of that reference group. This data enables the identification of variations in the measured characteristics of the child in comparison to the distribution of these characteristics in the reference population. The reference population indicates what is "normal" and an assessment of the normative data helps the practitioner to identify deviations from these norms. This in turn enables the practitioner to tailor support services to accommodate the needs of the child as identified through this assessment of the norms. The shorter version COC-15 with an equal number of items in each sub-scale and strong psychometric properties is adopted for use in identifying preschool students who may need support services. Norm tables (see Appendix C) are provided across grades for use by professionals and practitioners working with preschool children. It is strongly recommended that the interpretation of scoring and comparison of norm tables should be confirmed by professional psychologists.

Establishment of Cut Off Points

A two-thronged approach was used to identify the most appropriate cut-off point for identifying students who might need support service, based on the T score of COC-15. First, the sensitivity and specificity of a cut-off point based on one standard deviation below the mean (T score=40) was examined. This was because in current professional practice, one standard deviation below the mean is often regarded as an indicator for need for some form of

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[9] A T score is a special type of standard score. T scores result from a transformation of raw scores to standard scores. The formula for a standard score (i.e., a z score) is $Z = (x\text{-}M)/SD$ where: x is a raw score to be standardized; M is the mean of the normative sample; and SD is the standard deviation of the normative sample. T scores have a mean of 50 and a standard deviation of 10. Standard z scores can be converted to T scores using the formula $T=10*z+50$ (e.g., $z = -1$, $T = 40$; $z = 1$, $T = 60$).

support service. Second, the best cut-off as identified through the ROC analysis was examined.

Power et al (2013) suggested that sensitivity + specificity should be at least 1.5 for a test to be considered useful. In this case, a sensitivity of at least 0.700 was aimed for. In all analyses, the state variable was service status (see Table 35). Graphical illustrations of the ROC analyses are shown in Figures 23–26.

Figure 23

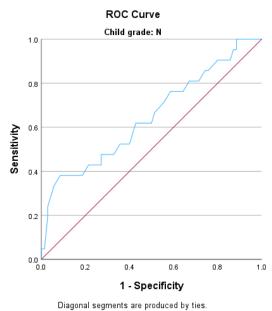*ROC Analysis at Nursery Grade with Service Status as State Variable*

Figure 24
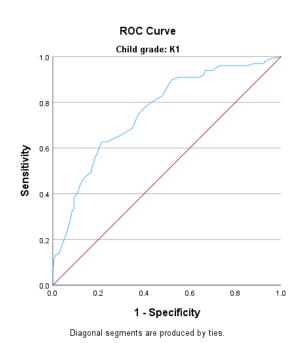
ROC Analysis at K1 with Service Status as State Variable

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Figure 25

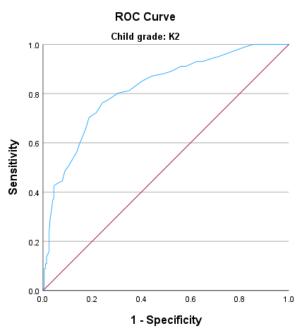*ROC Analysis at K2 with Service Status as State Variable*

Figure 26

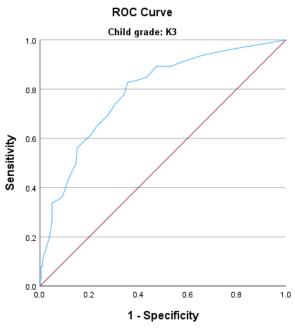*ROC Analysis at K3 with Service Status as State Variable*

Table 35[10]

Results of ROC Analyses with Service Status Scores as State Variable and COC-15 T Scores as Predictor Variable

	AUC	Sensitivity	Specificity	LR+[3]	LR-[4]	OR[5]	YI[6]	Cut-off (T score)
Nursery (1 *sd*)	.647	.381	.871	2.953	0.711	4.156	0.252	39.75
Nursery (sensitivity ≥ .700)		.714	.443	1.282	0.646	1.986	0.157	52.76
K1 (1 *sd*)	.758	.384	.908	4.174	0.678	6.152	0.292	39.41
K1 (sensitivity ≥ .700)		.747	.626	1.997	0.404	4.942	0.373	50.69
K2 (1 *sd*)	.819	.416	.956	9.455	0.611	15.477	0.372	39.6
K2 (sensitivity ≥ .700)		.772	.739	2.958	0.309	9.587	0.511	49.81
K3 (1 *sd*)	.786	.338	.951	6.898	0.696	9.909	0.289	39.28
K3 (sensitivity ≥ .700)		.741	.693	2.414	0.374	6.458	0.434	50.65

As mentioned previously, LR+ is a good indicator for ruling-in diagnosis and the higher the value, the better the indication while LR- is a good indicator for ruling-out diagnosis with the lower the value constituting a better indication (Simundic, 2009). The odds ratio is a measure of accuracy in prediction and the higher the value, the better the prediction (Shum et al., 2022). Youlden's Index is a measure of screening accuracy and higher values indicate better accuracy (Shum et al., 2022).

A cut-off of one standard deviation below the mean strategy results in higher LR+ and OR in all grades. However, using sensitivity ≥ .700 (see Table 35) as a strategy results in lower LR- in all grades, as well as higher YI in K1, K2 and K3. The sensitivity of the "one standard deviation below the mean" strategy results in low sensitivity, meaning that among those who are currently offered service, only about 40% were correctly identified using such a cut-off point. On the other hand, the cut-off points with sensitivity of at least .70 are close to the mean, with almost 50% of students identified as needing services. Most of the specificity values are less than .700. To maximize the chance that students who need help are offered support as early as possible, it is proposed that a two-point system be adopted.

1. Students whose scores are at or below a *T* score of 40 (one standard deviation below the mean) should be offered support services immediately as their scores are below 84% of the students.

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[10] Rounding the decimal-numbered T-score cut off as in Table 35 to the nearest whole number integer may lead to slight variations in the estimation of sensitivity and specificity values.

2. Students with *T* scores between the cut-off with sensitivity of at least .700 and *T* score above 40:
   a. Those with other additional difficulties such as lack of family support etc should be considered for immediate support.
   b. The progress of others should be monitored and support should be offered if needed. A "light touch" support could also be offered as needed.

Conclusion

It is important to note that the COC-15 is a tool to help professionals understand the needs of students and to decide on services fitted to the preschool student's needs. Decisions should NOT be made solely based on the recommended cut-off scores. Decisions should be made in consideration of the context of the student, together with observation and discussions with teachers and parents, and the use of other assessment tools as needed. The student's progress should be observed and monitored continuously to provide the best possible service for the student.

The COC-15 is best used with students in K1 and K2 as there are not enough items targeting K3 students. The use of observation and additional assessment tools may be or should be used in this instance.

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English version

Please read the following description, and choose the answer that fits best based on child's performance in the past four weeks:
Never means it did not happen;
rarely means it happened once a week;
occasionally means it happened twice a week;
often means it happened 3-4 times a week;
always means it happened 5 times or more per week.

I. Learning Adaptation (Routine, Switch, Focus, Engagement）

	Never	Rarely	Occasionally	Often	Always
a1. Be able to respond to their own names	❏	❏	❏	❏	❏
a2. Can actively participate in different classroom activities during class	❏	❏	❏	❏	❏
a3. Imitate movements with other children under the leadership of an adult	❏	❏	❏	❏	❏
a4. Imitate speech with other children (e.g. barometer/sing along) under the leadership of an adult	❏	❏	❏	❏	❏
a5. Answer the teachers' questions	❏	❏	❏	❏	❏
a6. Follow the teachers' specific instructions	❏	❏	❏	❏	❏
a7. Can follow the whole-class instruction (e.g., look at the whiteboard, read together)	❏	❏	❏	❏	❏
a8. Be able to arrange the sequence of activities at the self-selected activity time	❏	❏	❏	❏	❏
a9. Be able to select the required materials according to different activities at the self-selected activity time	❏	❏	❏	❏	❏
a10. Can switch between activities smoothly	❏	❏	❏	❏	❏
a11. Can follow the teacher's instructions to move within a specific range without running or climbing inappropriately	❏	❏	❏	❏	❏
a12. Can recognize and read Chinese words and English	❏	❏	❏	❏	❏

letters/words that are just learned	❏	❏	❏	❏	❏
a13. Can distinguish between some similar Chinese characters and English letters, such as：「力」 and「刀」,「p」and「q」	❏	❏	❏	❏	❏

II.   Social Adaptation (joint focus, communication, interaction)

	Never	Rarely	Occasionally	Often	Always
b1. Can give appropriate social responses (e.g. waving, "morning", "Hello")	❏	❏	❏	❏	❏
b2. Make eye contact when interacting with people, (e.g., eyes follow the direction indicated by the teacher's fingers, can make requests to the teacher by gestures or language with appropriate eye contact)	❏	❏	❏	❏	❏
b3. Ask an adult for help when having troubles	❏	❏	❏	❏	❏
b4. Respond appropriately to other people's questions and not off the topic	❏	❏	❏	❏	❏
b5. Take the initiative to ask questions to other people	❏	❏	❏	❏	❏
b6. Play imaginary games to simulate simple daily life routine	❏	❏	❏	❏	❏
b7. Take part in parallel games with peers	❏	❏	❏	❏	❏
b8. Can share toys/teaching materials with peers	❏	❏	❏	❏	❏
b9. Can join in other people's games	❏	❏	❏	❏	❏
b10. Can take turns in the game	❏	❏	❏	❏	❏
b11. Can make simple conversation	❏	❏	❏	❏	❏
b12. Can play cooperative games / games with rules with peers peacefully	❏	❏	❏	❏	❏
b13. Can name multiple classmates	❏	❏	❏	❏	❏
b14. Have playmates/friends that they always like to play with	❏	❏	❏	❏	❏

	Never	Rarely	Occasionally	Often	Always
b15. Can understand the emotions and needs of peers or teachers, and respond appropriately (e.g., helping peers in need, comforting others)	❑	❑	❑	❑	❑
b16. Can understand the meaning of time nouns, such as: yesterday, tomorrow, a while	❑	❑	❑	❑	❑
b17. Can explain things or give reasons to convince others	❑	❑	❑	❑	❑
b18. Can describe how to do something, e.g. making a sandwich	❑	❑	❑	❑	❑
b19. Can use imagination to create simple stories	❑	❑	❑	❑	❑
b20. Can express themselves with a proper tone (intonation) and speed	❑	❑	❑	❑	❑

III. Behavior and Emotional Regulation (Self-control, Emotional Relief, Problem Solving)

	Never	Rarely	Occasionally	Often	Always
c1. After school starts for a period of time, can separate from caregivers and enter the school with a calm mood	❑	❑	❑	❑	❑
c2. Can calm down with the help of an adult	❑	❑	❑	❑	❑
c3. Can calm down on their own within a reasonable amount of time	❑	❑	❑	❑	❑
c4. Can express and explain one's emotions appropriately, verbally or non-verbally (e.g., I feel angry because...)	❑	❑	❑	❑	❑
c5. Can use different methods to regulate emotions (e.g., deep breathing, counting, etc.)	❑	❑	❑	❑	❑
c6. Emotions remain generally stable and positive	❑	❑	❑	❑	❑
c7. Willing to wait for a response when request cannot be met immediately	❑	❑	❑	❑	❑
c8. Keep the volume at the appropriate level when studying or playing	❑	❑	❑	❑	❑
c9. Be able to negotiate with others during activities/games	❑	❑	❑	❑	❑

c10. Can actively seek solutions when facing problems	❏	❏	❏	❏	❏
c11. Can restrain impulses and think before responding to questions or taking action	❏	❏	❏	❏	❏
c12. Be able to accept winning and losing in the game and continue to participate	❏	❏	❏	❏	❏
c13. Can keep a generally stable mood when facing changes (e.g., supply teacher, event rehearsal)	❏	❏	❏	❏	❏

IV.   Daily Self-care

	Never	Rarely	Occasionally	Often	Always
d1. Be able to tidy up the desktop and organize personal belongings according to the instructions (such as: put homework in the homework bag, put the school bag in the school bag cabinet), and can put and take items at the designated location	❏	❏	❏	❏	❏
d2. Can demonstrate basic hygiene habits (e.g., wearing a mask, using hand sanitizer, taking a tissue to blow nose, etc.)	❏	❏	❏	❏	❏
d3. Can clean hands by oneself (including: turning on and off water tap, washing hands with soap and wiping)	❏	❏	❏	❏	❏
d4. Can express the need to use the bathroom (verbal, gesture, or movement)	❏	❏	❏	❏	❏
d5. Can urinate on the toilet or urinal	❏	❏	❏	❏	❏
d6. Can poo on the toilet	❏	❏	❏	❏	❏
d7. After using the toilet, can dress oneself (e.g., tuck the shirt into the pants)	❏	❏	❏	❏	❏
d8. Willing to try different foods	❏	❏	❏	❏	❏
d9. Can keep clothes/surfaces generally clean while eating	❏	❏	❏	❏	❏
d10. Able to put on and take off clothes without buttons (e.g., open-chested coat)	❏	❏	❏	❏	❏

	Never	Rarely	Occasionally	Often	Always
d11. Can identify the front and back or inside of clothing	❏	❏	❏	❏	❏
d12. Able to put on and take off shoes and socks on one's own	❏	❏	❏	❏	❏

V.   Gross and Fine Motor Performance

	Never	Rarely	Occasionally	Often	Always
e1. Able to walk/run steadily without falling down easily	❏	❏	❏	❏	❏
e2. Able to walk and run normally, not oddly	❏	❏	❏	❏	❏
e3. Able to jump forward 3-5 times with one foot in a row	❏	❏	❏	❏	❏
e4. Can stand on one foot for 5-8 seconds with a stable body	❏	❏	❏	❏	❏
e5. Able to walk forward with alternating feet along the ground line	❏	❏	❏	❏	❏
e6. Can catch a medium-sized rubber ball (about 7-8 inches in diameter) that is thrown from a 5 feet distance, using both hands	❏	❏	❏	❏	❏
e7. Ability to engage in rhythmic games or large muscle group activities in the classroom	❏	❏	❏	❏	❏
e8. Able to ride a tricycle	❏	❏	❏	❏	❏
e9. Able to skilfully pick up small objects with the tips of the fingers	❏	❏	❏	❏	❏
e10. The development of the dominant hand has stabilized	❏	❏	❏	❏	❏
e11. Can accept objects of different materials when making crafts (such as: glue, paste, hairy balls, etc.)	❏	❏	❏	❏	❏
e12. Can hold the pen correctly	❏	❏	❏	❏	❏
e13. Can open and merge objects using enough force (e.g., Lego, box lid, etc.)	❏	❏	❏	❏	❏
e14. Can fill in the color within the range, not out of bounds	❏	❏	❏	❏	❏

e15. Both hands can move well, knowing how to use non-dominant hand to fix objects, such as holding down paper when drawing	❑	❑	❑	❑	❑
e16. Able to write with appropriate amount of force, not too hard or too light	❑	❑	❑	❑	❑
e17. Can use scissors correctly	❑	❑	❑	❑	❑
e18. Can copy simple figures and words	❑	❑	❑	❑	❑

Chinese version

兒童觀察量表 (COC)

請細閱以下陳述，並根據幼兒過去四星期內的表現，選出最合乎幼兒表現的答案：

沒有表示沒有出現；甚少表示一星期出現 1 次；間中表示一星期出現 2 次；經常表示一星期出現 3-4 次；總是表示一星期出現 5 次或以上。

I. 學習適應（常規、轉換、專注、投入度）

	沒有	甚少	間中	經常	總是
a1. 能對自己的名字作出反應	❑	❑	❑	❑	❑
a2. 上課時能主動參與不同課堂活動	❑	❑	❑	❑	❑
a3. 在成人領導下，與其他兒童一起模仿動作	❑	❑	❑	❑	❑
a4. 在成人領導下，與其他兒童一起模仿說話 (如：晴雨表/sing along)	❑	❑	❑	❑	❑
a5. 回答老師的提問	❑	❑	❑	❑	❑
a6. 依從老師特定的指令	❑	❑	❑	❑	❑
a7. 能跟從全班性的教學指示（如：望住白板、一起讀）	❑	❑	❑	❑	❑
a8. 能夠於自選活動時間編排活動進行次序	❑	❑	❑	❑	❑
a9. 能於自選活動時間按不同活動選取所需物資	❑	❑	❑	❑	❑
a10.　能流暢地轉換活動	❑	❑	❑	❑	❑
a11.　能跟從老師指示在特定範圍內活動，不會不適當的奔跑或攀爬	❑	❑	❑	❑	❑
a12.　能認讀剛學過的中文字詞和英文字母/字詞	❑	❑	❑	❑	❑
a13.　能分辨一些字形近似的中文字和英文字母，例如：「力」和「刀」及「p」和「q」	❑	❑	❑	❑	❑

II. 社交適應（共同專注、溝通、互動）

	沒有	甚少	間中	經常	總是
b1. 能給予合宜的社交回應（如：揮手、「早晨」、「Hello」）	❑	❑	❑	❑	❑
b2. 與人互動時有目光接觸，(如：眼睛會跟隨老師手指指示的方向，能以手勢或語言向老師提出要求，配合適當的目光接觸)	❑	❑	❑	❑	❑

	沒有	甚少	間中	經常	總是
b3. 遇到困難會向成人求助	❏	❏	❏	❏	❏
b4. 恰當地回應別人問題，說話對題	❏	❏	❏	❏	❏
b5. 主動向別人發問	❏	❏	❏	❏	❏
b6. 進行假想遊戲，模擬日常簡單生活步驟	❏	❏	❏	❏	❏
b7. 能與朋輩進行平行遊戲	❏	❏	❏	❏	❏
b8. 能與朋輩分享玩具/教材	❏	❏	❏	❏	❏
b9. 能加入別人的遊戲	❏	❏	❏	❏	❏
b10.　能在遊戲中輪流作轉	❏	❏	❏	❏	❏
b11.　能進行簡單交談	❏	❏	❏	❏	❏
b12.　能和平地與朋輩進行合作/規則性遊戲	❏	❏	❏	❏	❏
b13.　能說出多個同學的名字	❏	❏	❏	❏	❏
b14.　有恆常喜歡的玩伴/ 朋友	❏	❏	❏	❏	❏
b15.　能理解朋輩或老師的情緒及需要，並作出恰當回應(如：幫助有需要的朋輩，安慰別人)	❏	❏	❏	❏	❏
b16.　能明白時間名詞的意思，例如：尋日，聽日，陣間	❏	❏	❏	❏	❏
b17.　能解釋事情或說出原因以說服別人	❏	❏	❏	❏	❏
b18.　能形容怎樣做一件事，例如：製作一件三明治	❏	❏	❏	❏	❏
b19.　能運用想像力，創作簡單故事	❏	❏	❏	❏	❏
b20.　能用恰當的聲調（語調）及語速作表達	❏	❏	❏	❏	❏

III. 行為及情緒調控（自控、舒緩情緒、解難）

	沒有	甚少	間中	經常	總是
c1. 開學一段時間後，能與照顧者分離並以平穩的情緒進入校園	❏	❏	❏	❏	❏
c2. 能在成人協助下平復情緒	❏	❏	❏	❏	❏
c3. 能在合理時間內自行平復情緒	❏	❏	❏	❏	❏
c4. 恰當地以語言或非語言的方式表達和解釋自己的情緒（如:我覺得好嬲因為...）	❏	❏	❏	❏	❏

c5. 能運用不同情緒調節方法(如:深呼吸、數數等)	❑	❑	❑	❑	❑
c6. 情緒大致保持穩定和正面	❑	❑	❑	❑	❑
c7. 當自己的要求未能即時被滿足時，願意等候回應	❑	❑	❑	❑	❑
c8. 學習或玩耍時，保持聲量恰當	❑	❑	❑	❑	❑
c9. 能在活動/遊戲過程中與他人協商	❑	❑	❑	❑	❑
c10.　遇到難題時，會主動尋求解決方法	❑	❑	❑	❑	❑
c11.　能抑制衝動，思考後,才回應問題或作出行動	❑	❑	❑	❑	❑
c12.　能在遊戲中接受贏輸，持續參與	❑	❑	❑	❑	❑
c13.　面對轉變時能大致保持平穩的情緒（如：代課老師、活動綵排）	❑	❑	❑	❑	❑

IV.日常自理

	沒有	甚少	間中	經常	總是
d1. 能按指示收拾桌面、自行整理個人物品（如：將功課放進功課袋、將書包放進書包櫃），能到指定位置擺放及拿取物品	❏	❏	❏	❏	❏
d2. 能展現基本的衛生習慣（如：戴口罩、使用搓手液、取紙巾擤鼻涕等）	❏	❏	❏	❏	❏
d3. 能自行清潔雙手（包括：開關水龍頭、用肥皂洗手和抹手）	❏	❏	❏	❏	❏
d4. 能表示如廁需要（語言、手勢或動作）	❏	❏	❏	❏	❏
d5. 能在馬桶或小便兜上小便	❏	❏	❏	❏	❏
d6. 能在馬桶上大便	❏	❏	❏	❏	❏
d7. 如廁後，自行整理衣物（例如：將衫攝於褲子內）	❏	❏	❏	❏	❏
d8. 願意嘗試不同的食物	❏	❏	❏	❏	❏
d9. 進食時能大致保持衣物/檯面乾淨	❏	❏	❏	❏	❏
d10. 能穿上和脫掉沒有鈕扣的衣物（如：開胸大褸）	❏	❏	❏	❏	❏
d11. 能辨認衣服的前後或底面	❏	❏	❏	❏	❏
d12. 能自行穿脫鞋子和襪子	❏	❏	❏	❏	❏

V.大肌肉及小肌肉表現

	沒有	甚少	間中	經常	總是
e1. 能平穩走路/跑步，不容易跌倒	❏	❏	❏	❏	❏
e2. 走路或跑步的姿勢正常，沒有異樣	❏	❏	❏	❏	❏
e3. 能連續單腳向前跳 3-5 下	❏	❏	❏	❏	❏
e4. 能單腳企 5-8 秒，身體保持穩定	❏	❏	❏	❏	❏
e5. 能沿地線交替腳向前步行	❏	❏	❏	❏	❏
e6. 能以雙手接由 5 呎遠拋至的中型膠球(約 7-8 吋直徑)	❏	❏	❏	❏	❏
e7. 能參與課堂上的律動遊戲或大肌肉活動	❏	❏	❏	❏	❏

e8. 能踏三輪車	❏	❏	❏	❏	❏
e9. 能靈巧地用手指尖去拾起細小的物件	❏	❏	❏	❏	❏
e10.　　主力手發展已穩定	❏	❏	❏	❏	❏
e11.　　做圖工時能接受不同質料的物件(如：膠水,漿糊,毛毛球等)	❏	❏	❏	❏	❏
e12.　　能正確地握筆	❏	❏	❏	❏	❏
e13.　　能運用足夠力度去打開和合併物(如：lego,盒蓋等)	❏	❏	❏	❏	❏
e14.　　能在範圍內填色,不出界	❏	❏	❏	❏	❏
e15.　　有良好的雙手活動,懂得用非主力手去固定物件,如畫畫時按住紙	❏	❏	❏	❏	❏
e16.　　能運用合適力度去書寫,不要過大力或過輕力	❏	❏	❏	❏	❏
e17.　　能正確地運用剪刀	❏	❏	❏	❏	❏
e18.　　能抄寫簡單圖形及文字	❏	❏	❏	❏	❏

Appendix B
Child Observation Checklist (COC-15)
The 5 Factor, 15-item Version

English version

Please read the following description, and choose the answer that fits best based on child's performance in the past four weeks:
Never means it did not happen;
rarely means it happened once a week;
occasionally means it happened twice a week;
often means it happened 3-4 times a week;
always means it happened 5 times or more per week.

I.   Learning Adaptation (Routine, Switch, Focus, Engagement）

	Never	Rarely	Occasionally	Often	Always
a1. Can actively participate in different classroom activities during class	❏	❏	❏	❏	❏
a2. Answer the teachers' questions	❏	❏	❏	❏	❏
a3. Follow the teachers' specific instructions	❏	❏	❏	❏	❏

II.   Social Adaptation (joint focus, communication, interaction)

	Never	Rarely	Occasionally	Often	Always
b1. Play imaginary games to simulate simple daily life routine	❏	❏	❏	❏	❏
b2. Have playmates/friends that they always like to play with	❏	❏	❏	❏	❏
b3. Can understand the emotions and needs of peers or teachers, and respond appropriately (e.g., helping peers in need, comforting others)	❏	❏	❏	❏	❏

III.   Behavior and Emotional Regulation (Self-control, Emotional Relief, Problem Solving)

	Never	Rarely	Occasionally	Often	Always
c1. Can express and explain one's emotions appropriately, verbally or non-verbally (e.g., I feel angry because...)	❏	❏	❏	❏	❏
c2. Be able to negotiate with others during activities/games	❏	❏	❏	❏	❏
c3. Can actively seek solutions when facing problems	❏	❏	❏	❏	❏

IV.   Daily Self-care

	Never	Rarely	Occasionally	Often	Always
d1. After using the toilet, can dress oneself (e.g., tuck the shirt into the pants)	❏	❏	❏	❏	❏
d2. Able to put on and take off clothes without buttons (e.g., open-chested coat)	❏	❏	❏	❏	❏
d3. Can identify the front and back or inside of clothing	❏	❏	❏	❏	❏

V.   Gross and Fine Motor Performance

	Never	Rarely	Occasionally	Often	Always
e1. Able to walk/run steadily without falling down easily	❏	❏	❏	❏	❏
e2. Can catch a medium-sized rubber ball (about 7-8 inches in diameter) that is thrown from a 5 feet distance, using both hands	❏	❏	❏	❏	❏
e3. Can fill in the color within the range, not out of bounds	❏	❏	❏	❏	❏

Chinese version

兒童觀察量表 (COC-15)

請細閱以下陳述，並根據幼兒過去四星期內的表現，選出最合乎幼兒表現的答案：
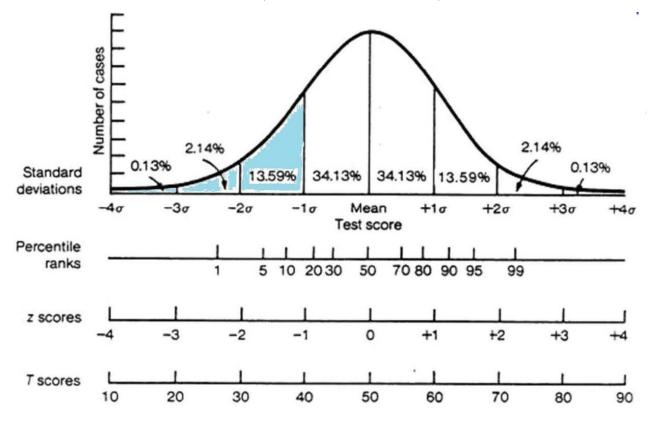沒有表示沒有出現；甚少表示一星期出現 1 次；間中表示一星期出現 2 次；經常表示
一星期出現 3-4 次；總是表示一星期出現 5 次或以上。

I. 學習適應（常規、轉換、專注、投入度）

	沒有	甚少	間中	經常	總是
a1. 上課時能主動參與不同課堂活動	❏	❏	❏	❏	❏
a2. 回答老師的提問	❏	❏	❏	❏	❏
a3. 依從老師特定的指令	❏	❏	❏	❏	❏

II. 社交適應（共同專注、溝通、互動）

	沒有	甚少	間中	經常	總是
b1. 進行假想遊戲，模擬日常簡單生活步驟	❏	❏	❏	❏	❏
b2. 有恆常喜歡的玩伴/ 朋友	❏	❏	❏	❏	❏
b3. 能理解朋輩或老師的情緒及需要，並作出恰當回應(如：幫助有需要的朋輩，安慰別人)	❏	❏	❏	❏	❏

III. 行為及情緒調控（自控、舒緩情緒、解難）

	沒有	甚少	間中	經常	總是
c1. 恰當地以語言或非語言的方式表達和解釋自己的情緒（如:我覺得好嬲因為...）	❏	❏	❏	❏	❏
c2. 能在活動/遊戲過程中與他人協商	❏	❏	❏	❏	❏
c3. 遇到難題時，會主動尋求解決方法	❏	❏	❏	❏	❏

IV. 日常自理

	沒有	甚少	間中	經常	總是
d1. 如廁後，自行整理衣物（例如：將衫攝於褲子內）	❏	❏	❏	❏	❏
d2. 能穿上和脫掉沒有鈕扣的衣物（如：開胸大褸）	❏	❏	❏	❏	❏
d3. 能辨認衣服的前後或底面	❏	❏	❏	❏	❏

V.大肌肉及小肌肉表現

	沒有	甚少	間中	經常	總是
e1. 能平穩走路/跑步，不容易跌倒	❏	❏	❏	❏	❏
e2. 能以雙手接由 5 呎遠拋至的中型膠球(約 7-8 吋直徑)	❏	❏	❏	❏	❏
e3. 能在範圍內填色,不出界	❏	❏	❏	❏	❏

Appendix C

Table of Norms (Model: 5 Factor, 15 items)

Z-Score	T-Score	Percentile Rank	Nursery Raw Score	K1 Raw Score	K2 Raw Score	K3 Raw Score
<-3.0						
-3.0	20	0.1			9-10	20
-2.9	21	0.2			11	21
-2.8	22	0.3			12	22
-2.7	23	0.3		1-2	13	23
-2.6	24	0.5		3	14	24
-2.5	25	0.6		4	15	25
-2.4	26	0.8		5-6	16-17	26
-2.3	27	1		7	18	27
-2.2	28	1		8	19	28
-2.1	29	2	1	9-10	20	29
-2.0	30	2	2-3	11	21	30
-1.9	31	3	4	12	22	
-1.8	32	4	5	13-14	23-24	31
-1.7	33	4	6	15	25	32
-1.6	34	5	7-8	16	26	33
-1.5	35	7	9	17-18	27	34
-1.4	36	8	10	19	28	35
-1.3	37	10	11	20	29-30	36
-1.2	38	11	12	21-22	31	37
-1.1	39	14	13-14	23	32	38
-1.0	40	16	15	24	33	39
-0.9	41	18	16	25-26	34	40
-0.8	42	21	17	27	35	41
-0.7	43	25	18-19	28	36-37	42
-0.6	44	27	20	29-30	38	43
-0.5	45	31	21	31	39	44
-0.4	46	34	22	32	40	45
-0.3	47	38	23-24	33-34	41	46
-0.2	48	42	25	35	42	47
-0.1	49	46	26	36	43-44	48
0	50	50	27	37-38	45	49
0.1	51	54	28	39	46	50
0.2	52	58	29-30	40	47	51
0.3	53	62	31	41-42	48	52
0.4	54	66	32	43	49-50	53
0.5	55	69	33	44	51	54
0.6	56	73	34-35	45-46	52	55
0.7	57	75	36	47	53	56
0.8	58	79	37	48	54	57
0.9	59	82	38	49-50	55	58

Z-Score	T-Score	Percentile Rank	Nursery	K1	K2	K3
1.0	60	84	39-40	51	56-57	59
1.1	61	85	41	52	58	
1.2	62	88	42	53-54	59	60
1.3	63	90	43	55	60	
1.4	64	92	44	56		
1.5	65	93	45-46	57-58		
1.6	66	95	47	59		
1.7	67	95	48	60		
1.8	68	96	49			
1.9	69	97	50-51			
2.0	70	98	52			
2.1	71	98	53			
2.2	72	98	54			
2.3	73	99	55-56			
2.4	74	99.2	57			
2.5	75	99.4	58			
2.6	76	99.5	59			
2.7	77	99.7	60			
2.8	78	99.7				
2.9	79	99.8				
3.0	80	99.9				
>3.0						

Note 1: Based on a Cut-off for services of a Standard Deviation of 1.0 (Z-Score = -1, T score of 40), students with a T score of 40 or below qualify for services. These students fall within the bottom 16% of participants in their respective population group.

Note 2: Students with a T score above 40 but below the cut-off with sensitivity of at least .70 (a Nursery student with a T Score of ≤53, a K1 student with a T Score of ≤51, a K2 student with a T Score of ≤50, a K3 student with a T Score of ≤51) should be considered for services if there are additional difficulties, or their progress should be monitored and be offered services as appropriate.

香港復康聯會 ／ 香港社會服務聯會
到校學前康復服務 – 第一層支援服務人力資源檢討及建議

參與草擬此計劃書機構：協康會、香港耀能協會、東華三院、保良局、香港基督教服務處及香港明愛

建議內容：

1. 於 20 個月的試驗計劃期內，在 6 間營辦機構接受服務的兒童類別分佈如下：

● 01 類兒童 (Suspected case)：72%

● 02 類兒童 (Waitlisted for CAC assessment)：13%

● 03 類兒童 (Assessed by CAC to have borderline developmental problems or single disability but not eligible for Tier 2 services (i.e. EETC, IP and OPRS))：3%

● 04 類兒童 (Children on the waiting list for subvented pre-school rehabilitation services (i.e. EETC, IP and OPRS))：11%

2. 6 間營辦機構對第一層支援服務(Tier 1)有以下人力建議：

社署於 2020 年開展「幼稚園／幼稚園暨兒童中心第一層支援服務試驗計劃」，為正在輪候兒童體能智力測驗中心評估，或經該些中心評估為有邊緣成長發展問題等的兒童提供早期介入服務。政府在 2021 年的施政報告中表示，會考慮探討把試驗計劃與到校學前康復服務融合的可行性，故此，我們為試驗計劃與到校學前康復服務的融合，就合併人力編制作如下建議：

建議一：

維持現時 OPRS 100%資助額(服務名額 100 名)及第一層支援服務 100%資助額個案(224 個案)。

合併人力編制：OPRS 人手不變，但 Tier 1 人手建議由 7.75 加至 9.25，以提供更到位的服務。

建議二：

現時第一層支援服務試驗計劃內 02 輪候評估服務兒童類別及 04 輪候學前康復服務兒童類別，曾於 2015 年期間包括在 OPRS 的對象內。這些類別日後可彈性運用每隊 OPRS 10%的名額以提供服務，而 Tier 1 會處理 01 懷疑個案類別及 03 單一特殊需要兒童類別(現時 01 及 03 類別佔第一層支援服務試驗計劃約 72-75%人數，即約 160 個案)，可更有效善用資源。

合拼人力編制：OPRS 人手不變，Tier 1 訓練人手則以 0.7 隊試驗計劃的支援隊作計算(服務個案改為 160 位)。OPRS 維持 100%資助額(服務名額 100 名)；此外，由於 Tier 1 的治療師服務需求殷切，為加強相關治療師的服務，建議 Tier 1 訓練人員資助額改至約現時試驗計劃的 85%。

職位	備註: OPRS 服務名額 100 位		建議一： • 維持 OPRS 100%資助額及第一層支援服務 100%資助額 • 維持 OPRS 名額 100 名及第一層支援服務個案 224 位 • 修訂第一層支援服務人力編制	建議二： • 維持 OPRS 100%資助額；及修訂第一層支援服務至 70%資助額 • 維持 OPRS 服務名額 100 名；及修訂第一層支援服務個案至 160 位[1] • 修訂 OPRS 及第一層支援服務合併人力編制
	現時 Tier 1 人力編制	現時 OPRS 人力編制	修訂 Tier 1 之建議人力編制	OPRS 及 Tier 1 合併後之建議人力編制
教育心理學家(EP)	1.25	0.25	1	1 (0.25 + 1 x 0.7)
高級幼兒教師(SSCCW)	3	1	1	2
幼兒老師(SCCW)	3.5	5.5	4.5	9.5
物理治療師(PT I)		0.5	0.25	0.75
職業治療師(OT I)		1	0.5	1.5
言語治療師(ST)		2	0.5	2.5
助理社會工作主任(ASWO)		1.5	0.5	2
社會工作助理(SWA)		1		1
福利工作員(WW)		1		1
職業治療助理(OTA)		1		1
助理文員(CA)		1	1	2
總數:	7.75	15.75	9.25	24.25

[1] 根據上列第一項之分佈數字，現時第一層支援服務試驗計劃內 02 輪候評估服務兒童類別及 04 輪候學前康復服務兒童類別，曾於 2015 年期間包括在 OPRS 的對像內，這些類別日後可彈性運用每隊 OPRS 10%的名額以提供服務；01 懷疑個案類別及 03 單一特殊需要兒童類別佔現時第一層支援服務試驗計劃內 72-75%人數(不曾包括在 OPRS 服務對象)，即約 160 個案，故就未來 OPRS 及第一層支援的綜合隊的人手編制，建議以 0.7 隊試驗計劃的支援隊作計算。此外，由於 Tier 1 的治療師服務需求殷切，為加強相關治療的服務，建議 Tier 1 訓練人員資助額改至約現時試驗計劃的 85%。

3. 修訂上述人力編制之理據詳述如下：

項目	第一層支援服務現況／困難	建議
1) 治療師人力	• 服務在試驗期內並沒有治療師人力，但現實上，在6間營辦機構處理的個案中，很多兒童都有不同程度的治療介入需要，當中包括： ■ 01類兒童:初步評估後，45% 兒童有言語及發音方面的需要；31% 兒童有小肌、書寫及自理方面的困難；6% 兒童有大肌、體能方面的支援需要；30% 兒童有進一步轉介予 CAC 評估的需要；20% 兒童需要 OPRS／EETC／ICCC／SCCC 服務 ■ 02、03 及 04 類兒童:初步評估後，45% 兒童有言語及發音方面的需要；24% 兒童有小肌、書寫及自理方面的困難；9% 兒童有大肌、體能方面的支援需要 • 針對上述兒童的需要，有經驗的 EP／SSCCW／SCCW 或許可以提供一些相應的支援，但遠不能取代治療師的專業職能，特別是在評估兒童的需要及訂定針對性的介入方案時，必須有治療師的參與才能更準確及到位 • 有機構反映，正正因為看到兒童的需要，而在現時服務未能配合的情況下，機構只好額外調撥資源，增加少量治療師支援時數予部份有需要的學校及兒童，但相關資源確實有限	• 增加至少1位治療師人力 (PT／OT／ST)，至於 PT／OT／ST 的人力比例，建議可由機構按學校及兒童需要靈活安排 • 治療師會按需要訪校及為兒童進行評估、為 SSCCW／SCCW 提供介入及訓練意見，並支援學校老師及家長。治療師專業到位的意見，有助提升介入成效，對兒童、家長、學校均十分重要 • 治療師的參與可以令整個第一層支援服務更加全面及到位，更能兼顧各方所需，最重要是兒童得到更適切的服務，例如：在服務經驗中，有些兒童只是有單一的發音問題，透過 ST 的介入，為訓練人員及家長提供練習建議，經過訓練後，兒童的問題便能在短時期內得到改善，亦不需要輪候進一步的康復服務，達到了第一層支援服務的目的－為有邊緣成長發展問題的兒童提供短期的訓練
2) 與 OPRS 合併教師培訓及校本諮詢服務，並精簡 EP 及 SSCCW 人力	• 現時第一層支援服務的支援包括校本的老師諮詢節數，由 EP 及 SSCCW 負責提供。而 OPRS 則需要每年為每間學校提供平均 20 小時的校本諮詢，及為老師提供培訓及講座，由 EP、SSCCW 及治療師負責提供 • 上述兩項服務均針對相同的學校甚至是相同的老師，在日常工作繁重的情況下，過多的支援可能會令學校及老師吃不消。同時，經過多年與學校溝通協作，明白每間學校對教師培訓及校本諮詢服務會因應個案數量及兒童需要而有所不同，宜更靈活	• 建議合併處理兩項服務的校本/老師支援內容及節數，此舉不但能兼顧老師的實際工作情況及需要、精簡兩項服務的重疊部份，包括 EP 及 SSCCW 人手，並透過善用服務隊的人力，發揮更大協同效應，令成效更佳 • 同時，若日後第一層支援服務常規化時能增加治療師人力，則可支援原本只由

	和彈性地處理	EP 及 SSCCW 負責的校本老師諮詢，令相關諮詢工作更全面
3）維持 SCCW 人力	- 現時人力只能基本滿足服務量的需求,但有些機構仍按需要自行增加 SCCW 的人力，以滿足服務需要 - SCCW 較多採取入班支援的服務模式 - SCCW 須與班老師保持良好的溝通及協作關係 - SCCW 必須要有相當的資歷及前線實務支援 SEN 兒童的經驗，才能有效及有信心地在課室支援 SEN 兒童,並得到學校老師的信任與配合，在課室內共同協作	- 建議 SCCW 人力維持現時人手比例 - SCCW 聽取 EP / SSCCW / 治療師的意見，安排相應的介入計劃予兒童，定期進行進度評估及檢討計劃的成效 - 建議繼續大部份時間採取入班支援的介入模式。針對較高需要的兒童，則可以配合適度的個別或小組訓練 - SCCW 應預留時間，向老師及家長交代兒童進度及預備家居訓練建議予家長
4）社工人力	- 服務在試驗期內並沒有社工人力編制 - 服務的兒童中，有 72% 屬於 01 類兒童，很多家長都不掌握孩子的情況及學習需要，有些甚至表現十分抗拒，故當學校老師及服務隊人員在處理相關個案時,需要特別注意及遷就家長的步伐和接受程度 - 服務的兒童當中，約有 21% 兒童家長需要社工支援服務，特別是家長在剛得悉孩子有特殊需要時，無論在接納兒童、提升育兒技巧及促進親子關係等各方面，都需要不同的支援。部份個案更有複雜家庭問題，需要作出轉介 - 現時主要由 EP 及 SSCCW 向家長講解兒童情況，較多是從兒童在學情況及學習困難/需要方面入手，較難兼顧家長及家庭的個別情況及需要。也因著工作範疇及工作量所限，難以和家長作深入互動及輔導，部份家長或因未能接納兒童情況而延誤為其安排評估及支援服務 - 現時學校的教職員面對繁重的教學工作，而幼稚園社工先導計	- 增加 0.5 社工人力，支援特殊需要的兒童家長及其家庭 - 我們相信家庭作為孩子重要的成長搖籃，家庭關係及家長的管教方式對孩子的成長、情緒及行為表現有直接影響，SEN 兒童之家長在面對沉重的親職壓力下，較難充份發揮家長應有的角色 - 建議除關注兒童的訓練需要外，亦需要增加社工人手，加強家長支援工作 - 社工可以為家長提供個案支援及輔導服務,協助家長及早知悉及接納兒童情況，讓兒童盡早接受合適的支援服務。如遇有較高需要的兒童時，鼓勵家長盡快為兒童安排正式評估，以達到第一層支援服務及早識別及介入的目的

	劃主要是預防家庭暴力(例如虐兒)或其他家庭問題的產生,故兩者皆未能兼顧個別懷疑有特殊需要的兒童的個人特別狀況及家庭需要在沒有家長的同意下,服務隊人員未能直接為兒童提供支援,只能從支援老師入手,有機會影響兒童的進度	● 針對個案的類別及家長的需要,社工可以為家長舉辦資訊性及技巧性的講座 / 小組,如:轉介及評估須知、正向親職技巧等,讓家長更有信心去跟進兒童的需要及進行家居訓練
5) 管理及行政支援人力	● 服務在試驗期內並沒有行政支援的人力編制 ● 每間機構每年約需要處理 300 多個個案,由個案的收納、訂定支援計劃、提供介入服務、退出服務,以至統計服務數據,與學校作服務協調等事務,都牽涉大量行政工作 ● 現時主要靠 OPRS 服務隊的現有主管及行政人員兼顧及提供相關支援,為他們造成了很沈重的負擔及工作壓力 ● 部份行政及文件工作亦無可避免由訓練人員協助分擔,令他們無法專注及集中精力在前線支援服務上,工作量亦大大增加	● 建議增加 1 位行政支援人力,協助主管處理日常行政及文件工作 ● 在新增行政支援人力的協助後,主管可以更集中精力,處理及協調與學校的協作事宜,而訓練人員則可以更專注在個案介入及老師支援方面,各盡其責,相信服務的成效定必更理想

Literature Review of Consultancy Services for Research on Evaluation

the Pilot Project on Tier 1 Support Services

Comparison Table

US	Australia	Singapore
1. Brief Background		
1.1 Legislation		
Part C of Individuals with Disabilities Education Act (IDEA) • The Program for Infants and Toddlers with Disabilities (Part C of IDEA) is a federal grant program that assists states in operating a comprehensive state-wide program of early intervention services for infants and toddlers with disabilities, ages birth through age two years, and their families. (Early Childhood Technical Assistance Center, 2020) **Coordinated Early Intervening Services (CEIS)** • Services provided by the IDEA to students in kindergarten through grade 12 (with a particular emphasis on students in kindergarten through grade three) who are not	**The National Disability Insurance Scheme Act 2013** • It is a piece of legislation that provides for the National Disability Insurance Scheme (NDIS). The act aims to affect Australia's obligations under the Convention on the Rights of Persons with Disabilities and improve people's lives with disabilities in Australia. (People with Disability Australia, 2018) **National Disability Insurance Scheme (NDIS)** • The National Disability Insurance Scheme (NDIS) is a single national scheme that funds reasonable and necessary support for	**Early Childhood Development Centres Act 2017** • An Act to regulate the operation of early childhood development centers, provide for other connected or incidental matters, repeal the Child Care Centres Act (Chapter 37A of the 2012 Revised Edition), and make consequential and related amendments to certain other Acts. (Singapore Statutes Online, 2021) **Early Intervention Programme for Infants and Children (EIPIC)** • The EIPIC programmes support children who require medium to high levels of EI support and aim to increase the child's developmental

currently identified as needing special education or related services but who need additional academic and behavioural supports to succeed in a general education environment. (U.S. Department of Education, 2008) **The Individualized Family Service Plan (IFSP)** • A written document that outlines the early intervention services that a child will receive when s/he is eligible for early childhood special education services. • The IFSP is developed to provide assistance for families with a child with diagnosed disabilities or at-risk. (California State University, 2021) If the child is not eligible (typically from low-income families) for IDEA services: **Head Start and Early Head Start programs**	children with disabilities or developmental delay and adults with disabilities. NDIS support helps people reach their individual goals and chooses the support they need to live the life they want. • The NDIS helps the parents and their children with developmental delays or significant and permanent disabilities get services and support. It also gives funding for early childhood intervention therapies and supports or one-off items like wheelchairs or communication devices. (Raising Children Network (Australia) Limited, 2021)	growth potential, minimise the development of secondary disabilities, and maximise integration in mainstream settings. This is to be achieved through evidence-based, timely, right-sized, right-sited intervention and support services for the child and the family. (Early Childhood Developmental Agency, 2021)

• Services for children with disabilities who qualify for services under the Individuals with Disabilities Education Act (IDEA). • However, programs also need to support children who may have developmental delays or be at risk for disabilities but don't qualify for services under IDEA. (Head Start Early Childhood Learning & Knowledge Center, 2021)		
1.2 Identification of children with suspected special needs		
<u>**Coordinated Early Intervening Services (CEIS)**</u> • An LEA (Local Education Agency) determines which students need additional support. For example, an LEA might consider factors such as performance on reading or math assessments, disciplinary referrals, or suspension and expulsions. (U.S. Department of Education, 2008) <u>**The Individualized Family Service Plan (IFSP)**</u> • The assessment should stem from a multidisciplinary play-based evaluation.	<u>**National Disability Insurance Scheme (NDIS)**</u> • Children under seven years don't need a diagnosis to get early intervention support from the NDIS. • The first step is to call the National Disability Insurance Agency (NDIA) on 1800 800 110, and the NDIA might tell you to call a local NDIS early childhood partner or organize for one to call you. • You might be referred to the NDIA or an early childhood partner by your GP (General Practitioner), child and family health nurse or	<u>**Early Intervention Programme for Infants and Children (EIPIC)**</u> • Assessed by a paediatrician to be at risk of a developmental, intellectual, sensory, or physical disability or a combination of disabilities (a referral). (SG Enable, 2015)

• The assessment component of the IFSP will look at five areas of development: 1. Physical 2. Cognitive 3. Communication 4. Social/emotional 5. Adaptive (Heartland Community College, 2021) **Head Start and Early Head Start programs** • Selection is based on an interview, age, income, etc. (Head Start Early Childhood Learning & Knowledge Center, 2021)	paediatrician, or by your child's preschool or child care educator. • The next step is meeting with the early childhood partner to talk about your child's and family's needs and goals. • You don't have to pay to meet with the early childhood partner, or for the information, referrals, or early intervention support the early childhood partner provides. (Raising Children Network (Australia) Limited, 2021)	

2. Key features of the Service Delivery Mode
2.1 Frequency and form of training for children

Coordinated Early Intervening Services (CEIS) • Professional development for teachers and other school staff to enable such personnel to deliver scientifically-based academic and behavioural interventions, including scientifically based literacy instruction, and,	**National Disability Insurance Scheme (NDIS)** • Therapies or interventions, including: 1. Occupational therapy 2. Physiotherapy 3. Speech therapy	**Early Intervention Programme for Infants and Children (EIPIC)** • **EIPIC Under-2s**: This programme is targeted at children under two years old. It emphasises the training of parents/caregivers so that they

where appropriate, instruction on the use of adaptive and instructional software

- Providing educational and behavioural evaluations, services, and supports, including scientifically based literacy instruction.

(U.S. Department of Education, 2008)

The Individualized Family Service Plan (IFSP)

- Early intervention services for young children with special needs are required to be provided in the child's natural environments, places where children and families spend their time in settings typical for infants and toddlers who have no disabilities.
- Services included:
- Developmental early intervention
- Speech/language therapy
- Occupational therapy
- Physical therapy
- Behavioural therapy
- Nutrition counselling
- Social work

4. Psychological therapy

- Children often benefit from a combination of therapies – this is called a multidisciplinary approach. And children often need different therapies or therapy combinations at different stages of their development.
- Other services: respite services, social and recreational programs or peer support programs.
- Services might be specialist disability or early intervention services. This includes specialised support for people with specific disabilities like autism spectrum disorder, cerebral palsy, hearing impairment, and vision impairment.
- Services might also be mainstream services that all families can use, like child and family health services, kindergartens, community health centers, regional parenting services, child care services, playgroups, and occasional care.

(Raising Children Network (Australia) Limited, 2021)

can effectively carry out intervention strategies in the child's daily routines at home. Such intervention strategies will help the child learn through his/her daily activities and lead to early and more effective intervention. The EIPIC Under-2s programme requires the parent/caregiver to accompany the child. At two years old, the child will transition to the EIPIC@Centre programme.

- **EIPIC@Centre**: This program provides therapy and educational intervention services, typically in small groups. The child's progress will be assessed regularly and the intervention goals and strategies customised to the child's individual requirements.

- **DS-Plus**: This program is provided in preschools targeted at children who have made sufficient progress under the EIPIC@Centre programme and are attending a preschool. EI professionals from the EI centre will work with the child in his/her preschool for an average of 2 to 4 hours per

• Service coordination (Jennings et al., 2012) **Head Start and Early Head Start programs (Child Action Plan (for children with no formal diagnosis))** • Plan and strategies for the adults to try with the child created by disability services coordinator, mental health consultant, or education staff. • Example: A child without a formal diagnosis struggles to control his emotions and becomes upset easily. During these times, he often stomps his feet and yells, which typically escalates to crying loudly for five to 10 minutes. A teacher might use a Child Action Plan to plan ways to teach him how to cope when he becomes frustrated (say to himself, "That's okay, I can play with something else instead"). She also focuses on strategies to help him calm down (taking deep breaths). Introducing and implementing these strategies may be documented in a Child Action Plan.		week, co-teaching the child alongside the preschool teacher. This mode of intervention helps the child adapt to the preschool setting to continue learning and be equipped with skills to interact and learn within a larger class setting. There is no need to apply for DS-Plus. As part of regular progress reviews, the child's EI professionals will use the Early Intervention Benchmarking Framework (a framework comprising a standard combination of tools used to assess children in EI services, at entry and exit, and periodically throughout the programme) to identify children who are suitable for transition to DS-Plus. EI professionals will engage parents if the child is assessed to be suitable for DS Plus. (SG Enable, 2015)

(Head Start Early Childhood Learning & Knowledge Center, 2021)		
2.2 Involvement of parents/carers in the rehabilitation plan		
The Individualized Family Service Plan (IFSP) • Parents/Caregivers are directly involved in the program • Parents/Caregivers are involved in discussing the developmental outcomes • Parents/Caregivers are informed every six months (or sooner if requested) for the review and information about progress toward outcomes. (Jennings et al., 2012) **Head Start and Early Head Start programs (Child Action Plan)** • Parents may work with staff, consultants, and other providers by sharing information about the child's needs, naming target goals, and discussing strategies to support the	**National Disability Insurance Scheme (NDIS)** • Caregivers work together with an NDIS representative on developing a plan that's tailored to the child's individual needs and circumstances**.** (Raising Children Network (Australia) Limited, 2021)	**Early Intervention Programme for Infants and Children (EIPIC)** • **EIPIC Under-2s**: The parents/caregivers directly carry out the intervention strategies. (SG Enable, 2015)

child. (Head Start Early Childhood Learning & Knowledge Center, 2021)		
2.3 Frequency and form of training for parents		
Parent Center • Parent Center that serves each state or a given region within the state. Every state has at least one such center. Parent Centers specialize in connecting parents and others with local resources and providing them with information and training on disability topics, such as what rights you and your child have under federal and state law, how to work with service providers and schools to support your child's development and learning, the network of knowledge associated with your child's disability, and much, much more. (Center for Parent Information and Resources, 2021)	**The Developing Foundation** • This service provides information and support to families who have a child with developmental delay. **The Umbrella Network** • Is based in Rockhampton and is a network of support and information for families who have a child with disability, including developmental delay. **Raising Children Network website** • Is an Australian Government initiative that provides a web-based source of information about parenting and child development activities for children, including children with disabilities.	**Early Intervention Programme for Infants and Children (EIPIC)** • Early Intervention (EI) Centres commonly offer training to equip parents with the necessary skills and knowledge to better support the child. For a more successful intervention outcome, parents are encouraged to actively work with the Early Intervention Centre to practice what the child has been taught during EI sessions in his/her home environment. (Enabling Guide, 2019)

	Triple P — Positive Parenting Program • Triple P — Positive Parenting Program can help families who have a child with support needs to problem solve and develop flexible and supportive family routines creatively and strategies to support their child's learning and development. (The State of Queensland (Department of Communities, Child Safety and Disability Services, 2014))	
2.4 The mode of communication and collaboration with teaching personnel		
<u>The Individualized Family Service Plan (IFSP)</u> • When developmental outcomes are considered, early childhood educators should be included in conversations with specialists and families/guardians. Teachers benefit from hearing other team members' perspectives and knowledge about children's skills and abilities. (Jennings et al., 2012)	<u>National Disability Insurance Scheme (NDIS)</u> • NDIS plan will be reviewed regularly, this is called a scheduled review. • Scheduled reviews check that the funding for services and supports in your child's plan are still: 1. meeting your child's needs 2. helping your child work towards their goals.	<u>Early Intervention Programme for Infants and Children (EIPIC)</u> • The EIPIC centre will keep parents updated on their child's progress and provide them with their assessment. Appropriate education planning can then be made, whether it be for mainstream primary or special education (SPED) schools. Parents may wish to do this planning in consultation with their child's EIPIC teachers. (Enabling Guide, 2020)

	(Raising Children Network (Australia) Limited, 2021)	
2.5 Frequency and form of training for teachers		
The Individualized Family Service Plan (IFSP) • The IFSP service plan states that the early childhood program teacher or occupational therapist will demonstrate how services will be supported to coordinate team member efforts. • If therapists are not able to come to the center, they can videotape the techniques being used with the child for the staff to view together and follow up by phone to discuss how to make the service routines-based. (Jennings et al., 2012)	**Developmental Educators Australia Inc (DEAI)** • Various forms of professional development are offered by the DEAI, including online modules, workshops, webinars, etc. (Developmental Educators Australia Inc, 2021)	**The Early Childhood Development Agency (ECDA)** • All early childhood educators are trained in the development milestones of young children. As part of their pre-service training, they are also introduced to various forms of special needs in young children, including cognitive, behavioural, emotional, and sensory characteristics. They are also briefed on the availability of community resources and professionals that provide support for these children. • ECDA has also worked with educational institutes and training providers to offer Continuing Professional Development modular courses to existing early childhood educators to be equipped with further skills to better support children with a range of developmental needs. • In addition, early childhood educators may take up the Advanced Diploma in Early Childhood Intervention (Special Needs) or the

		Specialist Diploma in Early Childhood Learning Support at the National Institute of Early Childhood Development campus to gain specialised knowledge and skills to identify and work with children with additional needs. The Specialist Diploma will allow early childhood educators to become Learning Support Educators (LSEds), who are able to identify children with developmental needs in relation to their peers and to deliver the appropriate intervention in the preschool setting, also known as the Learning Support (LS) and Development Support (DS) programmes. LS and DS are Government-funded early intervention programmes for children with mild developmental needs and provide targeted short-term support through LSEds and therapists in the preschools. LSEds also collaborate with the main early childhood educators of preschool classes to better adapt teaching methods and activities to engage children with mild development needs in the classroom. This is critical in sustaining the progress made by the child after the interventions.

		(Ministry of Social and Family Development, 2020)
2.6 Mechanism to track progress of individual cases		
<u>**Coordinated Early Intervening Services (CEIS)**</u> • To ensure consistency across LEAs in a State, each state should develop a method for its LEAs to count and track students who are served by personnel who participated in professional development activities supported with CEIS funds. (U.S. Department of Education, 2008) <u>**The Individualized Family Service Plan (IFSP)**</u> • Using a data collection system to track interventions and child responses in order to monitor progress (or lack of it). This can be documented within an activity matrix or on a separate chart by caregivers each day or week. • A child's IFSP is reviewed every six months (or sooner if requested by parents), and information about progress toward outcomes from teachers and early childhood staff should be included in the process. As it is	<u>**National Disability Insurance Scheme (NDIS)**</u> • About three months before the child's NDIS current plan is due to end, the NDIS early childhood partner or NDIS local area coordinator (LAC), or an NDIA planner will contact the parents to arrange a review meeting. • After the NDIS plan review, the child will get a new NDIS plan that outlines the funding for the child's services and supports for the new plan period. (Raising Children Network (Australia) Limited, 2021)	<u>**Early Intervention Programme for Infants and Children (EIPIC)**</u> • Once EIPIC teachers and therapists have had a chance to work with the child during the first few weeks of EIPIC, an Individualised Education Plan (IEP) will be developed. • The IEP sets out measurable/observable goals for the child and also monitors the child's progress for each goal. An IEP is typically reviewed by the child's EIPIC teachers every semester (every six months). • Parents may learn more about how their chosen EIPIC center develops and implements an IEP, during the screening interview with the EIPIC center. (Enabling Guide, 2019)

developmentally appropriate for young children, outcomes are measured on a functional basis (i.e., holding a cup independently when hand is placed on the handle). • If an outcome has not been achieved, the team identifies how to address it differently. During this process, child outcomes change or are modified. Each IFSP review changes child outcomes and services that require alterations to implementing routines-based interventions in the early care and education program. (Jennings et al., 2012)		

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