

AAC Intervention: A Core Vocabulary Approach to Implementation in the Classroom

By Erna Alant

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AAC intervention: A Core Vocabulary Approach to implementation in the Classroom

- Why are we here? Problem statement & Definition of AAC
- What is a core vocabulary intervention approach ?
- How can we implement a classroom-based core language approach?
 - How do we fit individual therapy and instruction within this framework?
 - Explicit instruction and application (task vs relational orientation)
- Monitoring progress
- Resources

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Program

- 8:30-10:00: Introduction and Problem statement & Definition of AAC and Language
- 10:00-12:00: What is Core Vocabulary and why is it important?
- 12:00-12:40: Lunch
- 12:40-2:30: Aided Language and Case Study on in Implementing Core Vocabulary
- 2:30-3:00: Core vocabulary – Classroom Implementation
- 3:00-3:15: Next steps and questions
- 3:15-3:30: Feedback on training



Your experiences: Building on what we know and who we are professionally

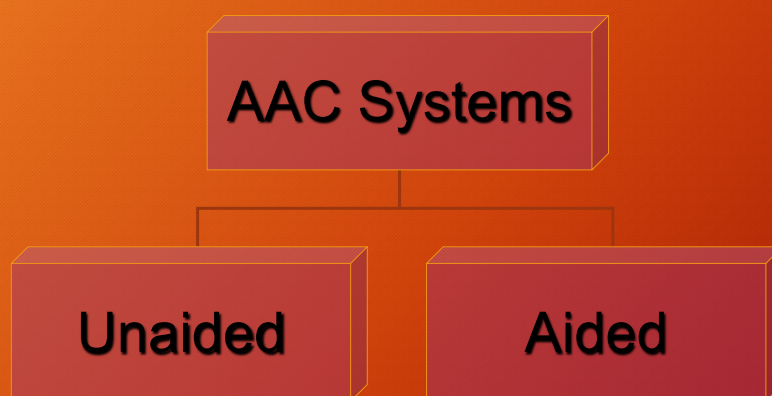
- What have been your experiences in working with students who have little or no speech (and have AAC devices or low tech) in the classroom?
- What have you tried?
- Successes?
- Challenges?



What is Augmentative and Alternative Communication?

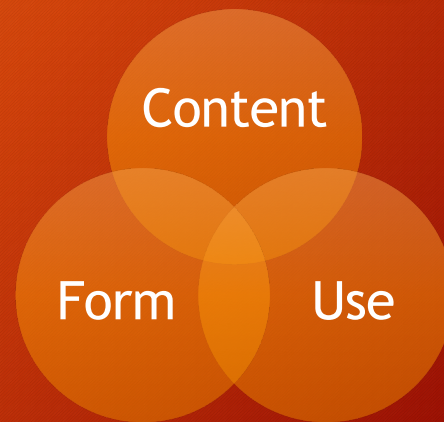
- The use of less frequently used means or modes of communication to facilitate interaction of people who have limited or no functional speech
- What does AAC include?

AAC Classification



What is language? (Bloom & Lahey, 1976).

- Language—use of symbols to facilitate learning and communication
- Content—what I say
- Form—how I say it
- Use—how I can apply it to my benefit in different situations, flexibility



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Language Components

- Form: Spoken or non-speech (AAC modes) — expression
 - Phonology
 - Morphology
 - Syntax
- Content (semantics — what you know)
 - Vocabulary
 - Concept formation
 - Complexity of ideas
 - Levels of meaning: linking of ideas/coherence
- Use (functionality)
 - Pragmatics
 - Applying concepts in different contexts
 - Functional use of language

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Need more help? Check out our [Target Vocabulary Lists and Lessons](#), [Glossary](#) or [Frequently Asked Questions](#).

Different Language Levels: Beginner

Words in Vocabulary	Length of phrase or sentence	Examples
Up to 200 words	Single words to 2-3 word phrases	stop, go, that, want more, need help, want drink juice

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Intermediate language level

Words in Vocabulary	Length of Phrase or Sentence	Examples of Words
From 200 to 2000 words	Typically have sentences 2-3 words or longer	Dad helping, my cars, look it going, I saw bird, I fell down, Where is it?

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Language level...advanced

Words in Vocabulary	Length or Phrase or Sentence	Examples of Words
2000 to 5000 or more words	Creating sentences that are 4 words or longer and more complex.	Dad will help me. Look at it go. Those are my cars. Where's a pencil I can use? He's mad because I won. Can I have a drink?

Different Dimensions of Language Learning

- Comprehension – understanding
- Expression – ability to externalize ideas
- What are the challenges here?

Hart, B & Risley, T:1995 Meaningful Differences in the Everyday Experiences of young American children. Paul Brooks, p. 176

Table 5. Averages for measures of parent and child language and test scores

Measures and scores	Families					
	13 Professional		23 Working-class		6 Welfare	
	Parent	Child	Parent	Child	Parent	Child
Pretest score ^a	41		31		14	
IQ score at age 3		117		107		79
Recorded vocabulary size	2,176	1,116	1,498	749	974	525
Average utterances per hour ^b	487	310	301	223	176	168
Average different words per hour	382	297	251	216	167	149

^aSee this chapter, endnote 1, for description of the pretest and testing conditions.

^bParent utterances and different words were averaged over 13–36 months of child age. Child utterances and different words were averaged for the four observations when the children were 33–36 months old.

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Language Skills (Cummins, 1984)

- Basic Interactive Communicative Skills (BICS)
- Cognitive Academic Language Skills (CALP)
 - Content, Form and Use in both contexts

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Video Observation: What are the key characteristics of this interaction?

- Interest — engagement
- Rate of interaction
- Type of guidance
- Communication pressure?
- Level of Enjoyment

What is Core Vocabulary?

- Core vocabulary is a small set of simple words in any language that are used frequently and across settings (Cross, Baker, Klotz & Badman, 1997)
- From toddlers to seniors core words make up 80% or more of everyday communication and are the heart of language development

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Core Vocabulary for Various Populations: Great overlap!

- Toddlers
- Pre-school children
- Adults
- People who are elderly
- People with cognitive impairments
- Fluent augmented communicators

Slides 25-35: from Bruce Baker, 2009



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The Vocabulary of Toddlers

- Banajee, DiCarlo & Stricklin, (AAC 2003)
- Participants
 - 50 toddlers between the ages of 2 & 3 years
 - Thirty-four girls and sixteen boys
 - Used a variety of 2- to 3-word utterances



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Toddler Vocabulary Arranged by Frequency


Words	Percentage
I	9.5
No	8.5
Yes/yea	7.6
my	5.8
the	5.2
want	5.0
is	4.9
it	4.9
that	4.9
a	4.6
go	4.4
mine	3.8
you	3.2
what	3.1
on	2.8
in	2.7
here	2.7
more	2.6
out	2.4
off	2.3
some	2.3
help	2.1
all done/finished	1.0
	96.3%

26 core words shown at left comprise 96.3 percent of the total words used by toddlers in this study

Are any of these words picture producers?

Are these words commonly seen on language boards?

Banajee et al.

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333 Most Frequently Occurring Preschool Words: The Marvin Sampling

"Vocabulary-Use Patterns in Preschool Children: Effects of Context and Time Sampling"

a	bite	doesn't	goes	hum	maybe	or	still	today	we're
about	black	dog	going	I	me	our	some	together	well
after	blue	doing	gonna	I'll	mean	ours	somebody	too	went
again	both	don't	good	I'm	messy	out	someone	top	were
all	box	done	great	if	middle	over	something	toys	what
almost	boy	door	green	in	mine	paint	sometimes	trees	what's
already	bugs	down	guys	inside	mom	people	somewhere	try	when
also	but	drink	had	is	mommy	pet	stop	trying	where
an	buy	duck	hair	isn't	more	name	stuff	turn	where's
and	by	eat	hand	it	most	pick	swing	turtles	which
another	bye	eating	hands	it's	move	piece	tape	two	while
ant	call	else	has	juice	much	play	tell	um	who
any	came	even	have	jump	must	please	than	up	who
are	can	everybody	haven't	jumped	my	push	that	us	whole
aren't	can't	everything	he	jumping	myself	put	that's	use	why
around	candy	face	he's	just	Name	ready	the	used	with
as	car	fall	her	kind	name	really	their	very	won't
at	catch	find	head	know	named	red	them	wait	would
away	cause	finger	hear	last	need	remember	then	want	ya
baby	chair	fire	hello	leaves	never	ride	there	wanted	yes
back	come	first	help	let	new	right	there's	was	yet
bad	comes	five	here	let's	next	room	there's	wasn't	you
bad	cookie	fixed	here's	lift	nice	run	these	watch	you'll
ball	corn	fly	hi	like	no	said	they	water	you're
bathroom	could	foot	high	little	not	same	they'll	way	your
be	couldn't	for	hill	long	of	saw	they're	we	yours
bean	cup	from	him	look	off	say	thing	we'll	
because	cut	found	his	looking	oh	see	things		
before	day	get	hold	lot	other	she	this		
being	did	gets	home	lunch	ok	she's	those		
bet	didn't	getting	horse	made	old	show	three		
better	different	girl	hot	make	on	shut	threw		
big	do	girls	house	man	one	side	through		
bird	does	give	how	many	only	sit	time		
birds	doctor	go	huh	may	open	so	to		

Christine A. Marvin,
David R. Beukelman,
Denise Bilyeu
AAC, Vol. 10, Dec., 1994

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Adult Vocabulary Usage in
Sydney, Australia

The Balandin Sampling

- Conversational samples were collected from 34 non-disabled subjects across four work sites.
- There was a small stable core vocabulary of 347 words which accounted for 78% of the conversational sample.

Susan Balandin
Teresa Iacono
AAC, Volume 14, No. 3,
September, 1999





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Composite List of 347 Core Words

a	break	eight	got	I've	morning	people	some	thirty	well
about	but	either	gotta	job	much	person	someone	this	went
actually	buy	eleven	had	just	mum	phone	something	those	were
after	by	else	half	keep	must	pick	sorry	though	we're
afternoon	cake	end	happened	kids	my	place	sort	thought	we've
again	came	enough	hard	know	name	play	start	three	what
ago	can	er	has	last	need	pretty	started	through	what's
ah	can't	even	have	left	new	probably	still	til	when
all	car	ever	haven't	like	new	put	straight	time	where
alright	Catholic	every	having	little	next	quite	street	times	which
always	cause	everyone	he	live	nice	ready	stuff	to	who
an	close	everything	her	long	night	really	sure	today	who's
and	cold	ey	here	look	no	remember	take	told	why
another	come	fair	he'll	looking	not	right	talk	tomorrow	will
any	coming	feel	he's	looks	nothing	road	talking	too	with
anything	could	find	him	lost	now	round	tea	try	won
anyway	couldn't	finished	his	lot	of	said	tell	trying	won't
are	couple	first	home	love	off	same	ten	twelve	work
around	crew	five	hour	lovely	oh	Saturday	than	twenty	working
as	day	for	hours	lunch	ok	say	thanks	two	would
ask	days	four	house	made	old	saying	that	um	wouldn't
at	dear	Friday	how	make	on	says	that's	up	wrong
away	did	from	hundred	many	once	school	the	us	yeah
back	didn't	f_cking	I	married	one	see	their	used	year
bad	get	if	me	ones	ones	seen	them	very	years
be	different	gets	in	mean	only	seven	then	want	yep
beautiful	do	getting	into	might	or	she	there	wanted	yes
because	does	give	is	mind	other	she'll	there's	wants	yesterday
been	doesn't	go	isn't	mine	our	she's	these	was	you
before	doing	god	it	minutes	out	sh_t	they	wasn't	your
being	dollars	goes	its	mm	over	shoes	they're	way	you're
better	done	going	it's	Monday	own	should	they've	we	you've
big	don't	gone	I'd	money	o'clock	sit	thing	week	
bit	down	gonna	I'll	months	past	six	things	weekend	
bloody	dunno	good	I'm	more	pay	so	think	weeks	
	eat								

S. Balandin, et al.





Manual

Composite List of 347 Core Words

Compared with a's and s's from Marvin Sampling

a	eight	I've	got	morning	people	some	thirty	well
about	either	job	gotta	much	person	someone	this	went
actually	eleven	just	had	mum	phone	something	those	were
after	else	keep	half	must	pick	sorry	though	we're
afternoon	end	kids	happened	my	place	sort	thought	we've
again	enough	know	hard	name	play	start	three	what
ago	er	last	has	need	pretty	started	through	what's
ah	even	left	have	never	probably	still	til	when
all	ever	like	haven't	new	put	straight	time	where
alright	every	little	having	next	quite	street	times	which
always	everyone	live	he	nice	ready	stuff	to	who
an	everything	long	her	night	really	sure	today	who's
and	ey	look	here	no	remember	take	told	why
another	fair	looking	he'll	not	right	talk	tomorrow	will
any	feel	lost	he's	nothing	road	talking	too	with
anything	find	lost	him	now	round	tea	try	won
anyway	finished	lot	his	off	said	tell	trying	won't
are	first	love	home	of	same	ten	work	working
around	five	lovely	hour	oh	Saturday	than	twenty	would
as	for	lunch	hours	ok	say	thanks	two	wouldn't
ask	four	made	house	old	saying	that	um	wrong
at	Friday	make	how	on	says	that's	up	yeah
away	from	many	hundred	once	school	the	us	year
back	f_cking	married	I	one	see	their	used	years
bad	get	me	if	ones	seen	them	very	want
be	mean	mean	in	only	seven	then	want	yep
beautiful	gets	might	into	or	she	there	wanted	yes
because	getting	mind	is	other	she'll	there's	wants	yesterday
been	give	mine	isn't	our	she's	these	was	you
before	go	minutes	it	out	sh t	they	wasn't	your
being	god	mn	its	over	shoes	they're	way	you're
better	going	Monday	it's	own	should	they've	we	you've
big	gone	money	I'd	o'clock	sit	thing	week	
bit	gonna	months	I'll	past	six	things	weekend	
bloody	good	more	I'm	pay	so	think	weeks	

S. Balandin, et al.

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How Many "A" Words are Picture Producers? (The Marvin Sampling)

- a
- about
- after
- again
- all
- almost
- already
- also
- an
- and
- another
- ant
- any
- are
- aren't
- around
- as
- at

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How Many “S” Words are Picture Producers? (The Marvin Sampling)

- Said
- Same
- Saw
- Say
- See
- She
- She’s
- Show
- Shut
- Side
- Sit
- So
- Still
- Some
- Somebody
- Someone
- Something
- Sometimes
- Somewhere
- Stop
- Stuff
- Swing

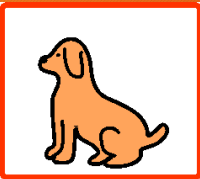



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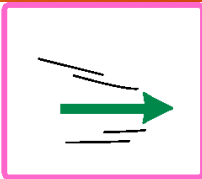
What do these mean?

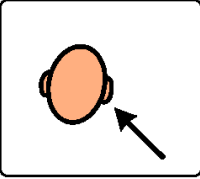



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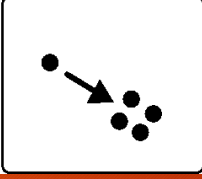















dog

you

hurry

someone


vacation

nightmare

and

with

how



What is Core and Fringe Vocabulary ?

Characteristic	Core Vocabulary	Fringe Vocabulary
Applicability across topics	Small number of words	Very large number of words
Frequency of use	High frequency	Low frequency
Applicability across environments	Applicable to all environments	Applicable to limited environments
Applicability across topics	Applicable to all topics	Applicable to limited topics
Types of words	Includes a variety of parts of speech	Includes mostly proper names and other nouns
Usefulness in a single message	Approximately 80% of the words in a sample of 100 total words will be core, but many of the core words will be used repeatedly, so the number of different words is small.	Approximately 20% of the words in a sample of 100 total words will be fringe. The number of different words will be large, as fringe words are repeated with much lower frequency than core words.

CORE VOCABULARY — BRUCE BAKER, SEMANTIC COMPACTION

- Here is a video of Bruce talking about the Value of Core Vocabulary.
https://youtu.be/Td50csRu_ml
- And here is a recent video of Chris Klein and the Pittsburgh AAC Language Seminar Series participants discussing “Teaching Reading First.”
https://www.youtube.com/watch?v=ox_sRqYfZ0M

How is a core vocab approach different from what we have always done?

- BEFORE
 - Focus on specific vocabulary (naming and labelling)
 - Pre-recorded messages and phrases: I want to go to the toilet
 - Get the student to “use messages”: I am happy
 - Teaching vocab fringe vocabulary: what the student will need for each activity or setting
- NOW
 - Focus on most frequently used vocab
 - Focus on combining concepts and words
 - Students compile own messages
 - Teach core vocab + fringe (in that sequence)

Labeling vs. more descriptive language use

Traditional	Core - more descriptive in nature
T: Where did you go? Place names (e.g. Fair).	T: What did you do at the fair?
T: She has new ____? (shoes).	T: What is special about her shoes?
T: What do you want to eat?	Tell me something about what you want to eat?
T: What do we do next? Art.	T: What do we do when we do art?
T: What you want to eat? Chips.	T: Tell me about what you want to eat: something Round, thin, not sweet! (descriptive)

Labeling of Environment

Traditional approach	Core vocab approach
Door	Open, close, not open, flat, not round, big
Light	On, off
Window	See, through
Table	It, on, flat, not big

What are the basics of a Core Vocabulary Approach to AAC Intervention?

- Select a core vocabulary list — enough scope to not limit the child's receptive and expressive language development
- Combining vocabulary to formulate ideas: creative process of meaning-making
- Core vocabulary vs. Fringe vocabulary approach: Is it either or?

Examples of core vocabulary lists

- 20 location
- 30 location
- 50 location
- 135 location
- Different symbol sets

Practice

- How can I communicate using a core vocabulary communication board?
 - Please use the communication board provided and work with the person next to you.
- Guidance:
 1. Familiarize yourself with the vocabulary on the board
 2. Choose one or two concepts as a basis to create messages
 3. How many message could you create using these two concepts?

Video 1: Child 1, video 1

- What types of core vocabulary boards are they using here?
- How is she using the individual communication board with the student?
 - Input (comprehension)
 - Output (expression)
- Importance of Aided Language Input

Video 2, Child 1

- Observations from this video?
- What Type of Activity is she using?

What is Aided Language Input/Stimulation?

Aided Language Input/Stimulation is a communication strategy where a communication partner demonstrates the use of symbols and models language by simultaneously combining his or her own verbal input with vocabulary selected on the AAC system.

- <https://www.youtube.com/watch?v=vUY6oQoSTXw>
- <https://youtu.be/flFNMky22-U>

Aided or Augmented Input: Why is it important?

- Augmented Input (Ronski & Sevcik, 1996)
- Aided AAC Modeling (Binger & Light, 2007)
- Aided language modeling (Drager et al., 2006)
- Aided language stimulation (Goossens, 1989)
- Natural aided language (Cafiero, 2001)

Evidence for Impact of Aided Language Input

- Allen, A. A., Schlosser, R. W., Brock, K. L., & Shane, H. C. (2017). The effectiveness of aided augmented input techniques for persons with developmental disabilities: A systematic review. *Augmentative and Alternative Communication*, 33(3), 149-159.
- Sennott, S. C., Light, J. C., & McNaughton, D. (2016). AAC modeling intervention research review. *Research and Practice for Persons with Severe Disabilities*, 41(2), 101-115.
- O'Neill, T., Light, J., & Pope, L. (2018). Effects of Interventions That Include Aided Augmentative and Alternative Communication Input on the Communication of Individuals With Complex Communication Needs: A Meta-Analysis. *Journal of Speech, Language, and Hearing Research*, 1-23.

O'Neill, Light & Pope, 2018

1. AAC interventions that included aided AAC input, in isolation or as part of a multicomponent intervention were found to be highly effective across participants of various ages, disabilities and language abilities
2. Interventions typically is used with strategies like expectant delay, direct prompting (using different modes), contingent responding and open ended questions
3. Interventions are highly effective in supporting expression and receptive language abilities across all domains of pragmatics, semantics and morphology.

Conclusion

- Aided AAC input may reduce the input-output asymmetry and enhance expression and comprehension of individuals who use AAC
- More research needed on the long-term impact on language development.

PIXON Project – Application

Case study:

You have a new child in your class (caseload) who has little or no speech: Cindy has a receptive language age of 3 years (CA: 8ys). Although she only says a few words, she shows intent to communicate.


Her existing communication attempts include:

- Points to what she wants.
- Screams when she is frustrated and doesn’t get what she wants.
- Verbalizes “no” and shakes her head.
- She likes to play hide and seek.

How will you use this 25 location communication board (PIXON) to facilitate her communication?



Attach Supplemental and or Extended Vocabulary Here.				

I- 	it 	who 	what 	when 
me-myself 	my-mine 	not-don't 	come 	do-does-did 
you-your 	drink 	eat 	get 	give 
hear-listen 	help 	like 	look-see 	make 
say-tell 	stop 	take 	turn 	want 



Guiding steps:

1. What additional information would you like to obtain before you start with communication intervention?
2. Please list some target utterances using this communication board
 - Let's focus on "it" and "get"
 - List the types of utterances you can make using "it" and "get"
 - Keep in mind Reception and Expression and different levels of language development

Case study continued...

3. How would you use this communication board to facilitate interaction with this client?
 - What activities will you use? (games, art, cooking...etc)
 - What would you expect the child to do? Remember: Language Content, form and use
 - <https://tarheelreader.org>
 - How will you encourage the child to use these words?
4. What would be the basic goals for intervention?
 - IEP goals (content, form and use)
5. What are the underlying issues that you would keep in mind?

Implementation of Core Vocabulary in the Classroom: Examples

<http://youtu.be/sOY6QQqhH6g>

<https://youtu.be/IKLclFS8GDg>

What do you see?

1. What symbol set is she using?
2. How is the vocabulary board constructed?
3. Comments about the set-up?
4. Comments about the activity?
5. What core word(s) is she focusing on?
6. Rate of interaction?
7. Comments on Monitoring of progress

What do you need to make a core vocabulary board for the classroom?

- https://youtu.be/_ivlCrYKkC4

Small group discussion

- What are the main points made in this video?
- How would you go about making a core vocabulary board for your classroom?
 - Size?
 - Where to position it?
 - Big static board + loose cards?
 - Flexibility?

Five tips for starting with Core vocabulary implementation in the Classroom

- https://youtu.be/pGw3_Msx854

Resources — Core vocabulary

- <https://www.youtube.com/watch?v=qZv8TWOy6KA&feature=youtu.be>
- Pixon Project:
<http://www.vantatenhove.com/files/handouts/ThePixonProject.pdf>
- Book: Jacobs, Jennifer (2018). Core Words for Classroom and Home. Blue Lake Publishing

Resources – Aided language input

- <http://praacticalaac.org/praactical/aac-strategies-round-up-aided-language-input/>
- <https://aaclanguagelab.com/files/130627aidedlanguagestimulationresource.pdf>

Questions?

- Main takeaways?

Next time...January 31

Please write to me to give me your reflections of how this first day training impacted on your work as a SLP or teacher

- What insights did you get relevant to your own teaching or therapy context?
- What have you tried since the training? Small steps...
- What questions do you have?

Please send your reply to me by Friday January 25, at 10 pm
at info@ErnaAlantConsultancy.com.

We will discuss your comments at the next training on January 31.

I will send a reminder to submit your ideas by January 22.



Please complete the feedback form

- *Thank you*

