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THE USE OF CALENDAR SCHEDULES IN
TEACHING PERSONS WITH DEAFBLINDNESS

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DECLARATION

STUDENT'S DECLARATION

I, NINA AKUORKOR AFUTU, hereby declare that except for references to other people's work which have been duly cited and acknowledged, this thesis is my own independent work as a result of series of research.

SIGNATURE:

DATE:

SUPERVISOR'S DECLARATION

I, WILSON KOFI AGBEKE, hereby declares that the preparation and presentation of this thesis was supervised in accordance with guidelines and supervision of thesis laid down by the University of Education, Winneba.

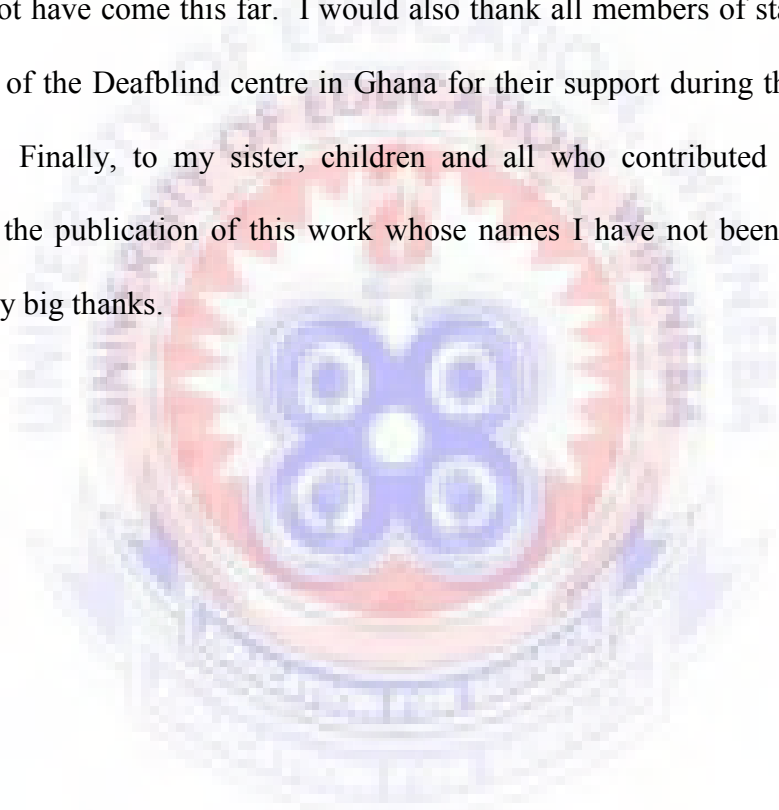
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Thanks to God who granted me grace and piloted me through the research as a contribution towards the education of persons with deafblindness.

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DEDICATION

I dedicate this work to the Glory of God Almighty. To my sister, Akweley, my children Kyeraah and Teiko and all persons with deafblindness.



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ABSTRACT

The study is about the use of calendar schedules in teaching persons with deaf blindness. The research proposed to find out how caregivers use calendars and identify calendar components. Additionally, it was to find out the different communication forms/functions use in calendar routines. The study was also to look at conversational topics using calendars and calendar tips. Finally, it was to identify benefits persons with deaf blindness gain from using calendars. The design took the form of a case study involving the use of interviews and questionnaires administered to a sample of twelve (12) who are teachers at the Centre for deafblind persons. Qualitative analysis was undertaken in response to the emerging items from the interview data. Questionnaires were analyzed using frequency tables and relevant description based on data obtained. The main findings are that all teachers at the deafblind center –Mampong, Akuapim use calendar schedules as a structured routine scheduled in their teaching and learning process with persons who are deafblind. The teachers used both concrete and abstract symbols as components of calendar. It also came out clearly that many communication forms like sign language, speech, gestures and finger spelling were used to support calendar activities so that persons with deaf

blindness are able to gain the following benefits enhanced communication skills, time concept, choice making, emotional and social skills from calendar use. However, it was recommended that calendar design must meet the needs of a particular person who is to use. Deafblind person should be involved in setting the calendar.

CHAPTER ONE

INTRODUCTION

1.0 Background of the study

Communication which is a tool through which people are connected to one another and the environment begins right from the cradle through the developmental stages to adulthood and beyond.

Communication had been described by special educators, professionals, therapist and lay people as the exchange of information between two or more people asking for a request, calling for attention, giving information about events or conversing (Jones, 2002).

Through communication normal people are easily connected to one another and the environment at large.

The ability to communicate provides a primary means of participating in our lives and the lives of others. Therefore, persons with dual sensory and additional disabilities who have disorders of communication have profound impact on the very essence of their lives (Batshaw, 2002). This had been the situation in which persons with deafblindness found themselves very frustrated and isolated.

Persons with deafblindness are faced with communication difficulties in their daily lives as well as in the teaching and learning process. This group of persons form an integral part of society therefore there is the need to teach them to communicate like any other person irrespective of the level of their disability (Miles & Riggio, 1999).

Miles & Riggio (1999) further argued that persons with dual sensory impairment needed a structure to follow in order to be consistent in their everyday learning process. These routine activities provide them the most meaningful occasions for conversation.

In a more practical term the goal is to provide each multi-sensory deprived child an individualized programme that meets the unique needs, abilities, interest, capabilities and level of functioning in all diverse ways of communicating with people and the environment. The use of calendar schedules in all routine activities is one such strategy that teachers and caregivers must focus on.

The staff at the centre for Deafblind children at Mampong Akwapim has since March 2003 received training from Hilton Perkins Programme at Perkins school for the Blind, U.S.A. Also three teachers were sponsored and trained at the Perkins schools for the Blind. The three teachers also gave training to colleagues at the centre in addition to the training given by the team from Perkins. This training upgraded and widened the skills of the staff in the teaching and learning process in the different programmes designed at the centre. One area in which the training was given was on the use of calendar schedules in all routine activities for persons with deafblindness.

This implied that persons with deaf blindness needed to be taught and exposed to diverse ways of establishing conversational topics using calendar schedules in their day to day activities.

1.1 Statement of the problem

Many families, parents, teachers, caregivers and all other people who come in contact with persons who are deafblind are faced with communication difficulties thereby, ignoring and isolating them. This attitude of ignoring and isolation of deafblind persons makes them become disadvantaged in terms of receiving and expressing themselves.

Caregivers/teachers do forget that they are human beings going through the developmental stages and they needed to be taught through well structured routine activities to be good communicators.

1.2 Aim of the study

The researcher wanted to find out how teachers and other caregivers can use calendar schedules in all routine activities consistently with persons who are deafblind effectively to enhance their communicative skills.

1.3 Purpose of the study

As many teachers, parents, families and caregivers find it difficult to communicate with deafblind persons be it expressive or receptive, this study proposed to find out how teachers/caregivers use calendars and identify calendar components. Additionally, it will find out the different communication forms/functions use in calendar routines. It will also look at conversational topics using calendar schedules and calendar tips.

Finally, the study will identify benefits that persons with deaf blindness derive from the use of well structured and appropriate calendars in their day to day activities.

1.4 Research questions

1. How do teachers and caregivers use calendars?
2. What calendar components are in the teaching learning process with deafblind persons?
3. Why use different communication forms and functions in the calendar schedules with persons who are deafblind?
4. How does calendar schedules provide for conversational topics and calendar tips?
5. What benefits do persons with deafblindness derive from the use of calendar schedules?

1.5 Significance of the study

It is envisaged that persons with deafblindness will be the primary benefactors. When these persons have training and education through well structured routine activities both at home and in school their communicative skills will be enhanced and could communicate effectively with their environment at large. It is also hoped that when teachers in collaboration with parents, families and all other people who come in contact with persons who are deafblind are given training in well structured communicative modes and strategies they will support the group of persons under discussion develop their communicative skills to a higher level.

Again the study will add up to personal knowledge of other researchers who use this study for further research. Finally, this study will bring about a change in practice or improve upon existing practice.

1.6 Delimitation

The research did not involve persons with deafblindness, itself, parents and other care givers that offer services to persons with deafblindness even though they could have created some impact on the findings of the research. However, their absence has no paramount effect on the results of the study since a lot of views were represented in the findings.

1.7 Limitation of the study

This study is limited to centre for Deafblind children and Youth at Mampong, Akwapim in the Eastern Region. The reason being that this is the only deafblind centre in the country where the researcher is working and using some calendar schedules in their teaching and learning process. This not with standing, mention may be made from views gathered from few friends when the researcher attended a conference on training programme for deaf and deafblind leaders in Africa to buttress some points that will be raised in the study. However, the results may not necessarily apply whole sale to other institution.

1.8 Definition of terms

Calendars: are routine activities schedules designed, structured or programmed that use symbols to represent activities of the deafblind person on daily, weekly or monthly basis. The symbols are put in containers partitioned/segmented boxes or folders with finished containers or pockets.

Symbols: (of something) a person, an object, an event etc. that represents a more general quality or situation. In the context of this thesis an activity symbol represents every activity that the deafblind does.



CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

Literature was reviewed on both theoretical and empirical issues relating to the use of calendar schedules in teaching persons with deafblindness. Specific areas of literature review include:

- 2.1. Calendar usage with persons who are deafblind.
- 2.2. Components of Calendar
- 2.3. Calendar and communication forms/functions
- 2.4. Conversation using calendars and calendar tips
- 2.5. Benefits of calendars

2.1 Calendar usage with persons who are deafblind.

This section will be discussed under the following sub headings.

- Meaning of calendar.

- Types of calendar.
- Points to consider when assessing and implementing calendar.
- Materials use to design calendar schedules.

Meaning of Calendar

There are different meanings given for calendar by different authors. One group of researchers described calendar as discussion activity boxes or tangible symbols which had been structured and used very successfully to teach prediction of coming activities by adding items in the box that represent the coming activities (Rowland & Schweigert, 1990). For instance, bath basket may include soap, sponge or towel (Hagood, 1997) cited by Jones (2002).

Siegel-Causey & Guess (1989) pointed out that calendar is a communication strategy that used the arrangements of objects or picture symbols to inform the learner about upcoming activities. For instance a toy cassette for music, a spoon for eating, or a small plastic ball for physical education and a “finished” container or pocket.

Another school of thought about calendar is that it is a term used to express a process set out to prepare a person with deafblindness for each activity (Karnad, 2000). This implies that calendar is used to help the deafblind person to develop concept, meaning, anticipation and representation of activity in order. It can be inferred from the explanation given by Karnad above that calendars are arrangements of symbols such as objects (partial/whole), pictures, photographs, line drawing, printed words or braille in containers, books, or folders with a “finished” pocket or container to help persons with deafblindness to develop concept and predict upcoming activities in a daily routine.

Types Of Calendars

There are different types or calendar time frames that are used in teaching deafblind persons.

Blaha & Moss (1997); Levack, Rudin, Hagood, Dolan and Hauser (1996) outlined five types or five time frames calendar schedules, they are:

- Anticipation calendar
- Daily calendar
- Weekly calendar
- Monthly calendar
- Annual calendar

All calendars address the same content needs as communication, time concept/time pieces/time vocabulary, emotional support, social and cognitive skills.

Anticipation Calendar

The anticipation calendar as explained by Blaha (2001); Blaha & Moss (1997); Aitken, Buultjens, Clark, Eyre & Pease (1993) is a type of calendar system which could be used in all routines or settings with persons who are deafblind. The anticipation calendar is also referred to as “anticipation shelf”, “concrete calendars” or “object calendar” (Janssen, 2002). This is because of the concrete or object symbols that are used.

However research has shown that for any deafblind person to begin using calendar schedules that person should begin with anticipation calendar (Shevde, 2003).

Research however, cautioned that before initiating anticipation calendar the deafblind person should be involved in a series of various routine activities over a period of time using objects, pictures, words (print) or Braille based on the needs of the deafblind person (Siegel – Causey & Guess, 1989). It should however be borne in mind that it could take a lot of repetition and careful observation for response to accurately determine what actually had been understood for the deafblind person to be able to anticipate events (Miles & Riggio, 1999). For example, during bathing time a deafblind person might use soap, sponge, towel, small bathing bucket and water. As the deafblind person becomes familiar with the activity and the objects involved, the teacher or caregiver might realize that before bathing when given one of the objects he/she will be so excited and then move to the activity area. The excitement then shows that the deafblind person is forming an association between the object and the activity. Research has shown that if the deafblind person should show these signs as described above in all routine activities, the teacher or caregiver can now initiate an anticipation container by putting in one of the objects stated above (Blaha, 2001). The caregiver/teacher however, has to prompt the deafblind person about the object in the container when it is bathing time. When he or she picked the object and anticipated bathing by moving to the activity area it showed that the deafblind person has identified and associated the object with the activity. When this understanding is shown by the deafblind person according to Blaha you then need to introduce a different container which must be placed closer to the first one to be used as “finished” container so that when the activity is ended the deafblind is guided to put the symbol in the “finished” container. As the deafblind becomes consistent in the use

of the object symbol in one routine activity another container and an object for a different activity that the deafblind person is familiar with could be added.

Siegel- Causey and Guess (1989) suggested that the objects in the various containers could be changed one at a time with familiar objects that the deafblind person used in performing the different activities only when he/she consistently anticipated the activity upon getting the object. For instance, if he/she used towel, sponge, soap, water and small pail for bathing; thus if the towel is used at the beginning for some time, it could be replaced by a sponge in the calendar for the deafblind to anticipate that other object could be used for the same activity. The importance of the change of objects is to help the deafblind to understand that objects convey information towards activity performance. By introducing other objects at the beginning of a particular activity prepares the deafblind person for the use of further developed calendars in all routines or settings.

Research by Hagood (1997) clearly showed that anticipation calendar is the beginning and the entry-level for the use of calendars for which the deafblind person must be involved. Blaha(2001); Siegel-Causey and Guess(1989) remarked that repetitive routine activities using different symbols enables the deafblind person to move on to the next time frame or calendar. He/she must be able to anticipate upcoming events when picked an object or picture symbol. For example, move to the play area, when given a small plastic ball to work with and must be able to work with several objects in familiar routines.

Blaha (2001) remarked that the deafblind person must show object permanence, for example he/she remembered where an object is kept, went for it and performed an activity with it.

To sum up it could be said that „anticipatory“ calendar is established to prepare the deafblind person for higher level of calendar. It also provides for conversational topics for the deafblind person and the teacher or caregiver to communicate.

For example, if a deafblind person picked a towel and showed it to a caregiver, he/she is using the object to communicate at the same time requesting for something. This activity in itself is a way of communication between persons who deafblind and their caregivers.

When this back and forth communication between the deafblind person and caregiver in series of routine activities is well established then he/she is ready for the next stage of calendar.

Alsop (1998) remarked that the series of interactions going on between the deafblind person and the caregiver in all routine activities can be opportunities to interact upon picking an activity symbol he/she dialogued with his/her caregiver before moving to the activity area to perform the activity. This shows the consistency in the interaction normally did not stop but carried throughout the activity. It is important to provide this consistency and adequate amount of interaction to the deafblind person as long as is needed (Sacks & Silberman, 1998)

For example, enjoyable play activities like being on the swing which goes a long way to enhance learners social and communication skills.

Daily calendar

The next level of calendar is the daily calendar. Blaha (2001); Shevde (2003); Levack, Rudin, Hagood, Dolan & Hauser (1996); Sacks & Silberman (1998) explained daily calendars as a more structured routine activities with symbols that represent activities often placed in order or sequentially in partitioned sections of a box, container, book /folder to indicate the deafblind person's schedule activities of the day.

However, Blaha (2001) cautioned that for a deafblind person to transit anticipation calendar to daily calendar he/she must be able to recall or recognize locations, sounds or actions after picking an object symbol associated with familiar activities. For example, when he/she anticipates upcoming events from picking object.

Daily calendars can also be used in teaching communication, time concept, emotional support, social skills and cognitive skills to deafblind persons.

Organizing/setting the Daily calendar

In organizing/setting the daily calendar Beukelman and Mirenda (1998); Blaha et al (1996) suggested the following points: teachers/caregivers must identify all of the daily activities across relevant home, school and community environments. For example, bathroom, circle time, desk work, shopping, eating and gardening. Select symbols that can be used to represent each activity into a bin, basket/container or folder so that they are readily available and can be used consistently each time the activity occurs. Those deafblind persons who use book or folder calendars must have a file to keep all of the pictures/photographs/line drawings symbols to be used when needed.

Using the set calendar

In use of set calendar Beukelman and Mirenda (1998); Shevde (2003) suggested that the teacher or caregiver cues the child to go to the calendar. For instance, caregiver says and signs to the learner "Let's check your schedule". Caregiver/teacher shows the child the activity symbols arranged in sequence on a shelf or table. Both

caregiver/teacher and learner review by dialoguing or discussing all the activity symbols for the day. The deafblind person then arranges them in the containers or segmented boxes in order. If pictures or line drawings or words are used they are arranged in order that the activities will occur on a textured board. He/she then arranges them in sequence in the calendar book or folder for the activity to begin.

Weekly calendar

Weekly calendar according to Levack, Hulse, Newton and Stephenson (1996) is among a group of calendars known as expanded calendar. Weekly calendar is the next higher level calendar after daily calendar which is used for the deafblind person who has gone through routine activities consistently using daily calendars. Weekly calendars teach communication, time concept/time pieces/time vocabulary, provide emotional support, social skills and cognitive skills like anticipatory and daily calendars.

The topics for discussion in the weekly calendar are more extensive, elaborate and a discussion of some of the highlighted events in the future.

Blaaha and Moss (1997) stressed that in the use weekly calendar each day of the week must need a distinct visual and tactual marking so that the deafblind person learns to distinguish one day from another. This will help the deafblind person to understand that one day of the week is different from another by the particular activity.

For example, Thursday – library can be tied with ring, Friday - tie/dye/batik making tie with star, Saturday –laundry tie with cone and so on. Select major activities and tie them to particular days of the week and do not choose activities that occur daily like bathing or lunch. The goal is for the deafblind person to eventually use a traditional calendar if possible. Caregiver/Teacher should remember to include Sunday and Saturday as well.

Levack et al (1996) has suggested some traits that the deafblind person must exhibit to show that he/she is ready for the use of weekly calendar. They are:

- To set the daily calendar independently.

- To pick a symbol; get to the activity area for the task to be performed.
- To remember activities that took place a few days ago upon picking the symbol from the finished container and then go to where the activity occurred.
- To anticipate a number of activities in response to object cues and associates certain events on the day.
- To respond to the calendar activity which represents “present” that is the activity in the section in the calendar about to take place.

Designing/using the weekly calendar

The weekly calendar can be designed to highlight one significant activity per day and use in conjunction with more detailed daily calendar.

As a caregiver identify all the activities that occur once a week at the Centre or in the school. For instance the following activities occur once a week on different days.

- ❖ Music and dance – Thursday
- ❖ Tie/dye/batik making – Monday
- ❖ Field trip to a poultry farm – Tuesday
- ❖ Library – Wednesday
- ❖ Church service – Sunday
- ❖ Laundry – Saturday
- ❖ Physical education - Friday

These activities are slotted into the weekly calendar and incorporated into the specific routine activities. Using the same weekly activities mentioned earlier, the calendar can be designed to show daily routine activity strips connected to the weekly calendar as shown in the diagram below.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

This implies that activities planned in the weekly calendar can be slotted into the daily calendar schedule on each specific day. For instance, if the deafblind person goes to

tie and dye /batik every Monday this will be slotted into the Monday calendar set up in conjunction with other activities that will be performed on Monday.

In other words a weekly calendar include what is happening in the daily routine. The calendar should be kept in a consistent place so that the user has access to it and can find it when needed (Blaha, et al, 1996).

The weekly calendar also teaches advance time concepts/time pieces/time vocabulary. Research revealed that in teaching the concept of “Past” in the weekly calendar the learner can use the same material for “finished” in the daily calendar for effective transfer such as the “finished” container or “flaps” (Blaha,2001).

Monthly Calendar

As the name suggests a monthly calendar is series of activities planned for a deafblind person to perform for a month which will give the deafblind person the time concept of month (Aitken et al, 1993).

In monthly calendar what happens is that conversation about various activities includes extensive use of time vocabulary with its corresponding sign. For example, introduce words/sign for „yesterday“ and pair them with previous words learnt like “finished” or “past” for activities ended. Additionally, introduce words/signs like “last”, “ago”, tomorrow. For example, “last” Monday and a month “ago” can be used to dialogue about past events. “Tomorrow” can be used for future events. In monthly calendar what happens is that you need to always use all the words that were introduced earlier in all calendar conversations. One important thing one need to remember in the use monthly calendar is that the teaching of words should be based on the needs of the learner. Another important thing to take into account when using monthly calendar is that you need to take record of the various things that happened (Aitken et al, 1993).

However, Blaha and Moss (1997); Blaha (2001) remarked that the monthly calendar can be mounted on a wooden board or pasted on the wall left to right sequence as the

year progresses this makes it easier for the learner to refer to past events and talk about them.

Annual calendar

Observation has shown that this is the highest level of all the calendar schedules use in the teaching and learning process with persons who are deafblind. The annual calendar is designed to include all events that happen once a year in the learner's life. For example, birthday's, festivals, sport events, school's open days, Christmas, Easter etc. In other words annual calendars give persons who are deafblind the time concept of events that happen once in a year.

For example Independence Day in Ghana which falls in March; festivals like Homowo – in September; Odwira – October. Observation has shown that special pictures can be used to distinguish the different months.

The different types of calendars or time frames discussed above form the type of calendars that are designed for persons who are deafblind based on their needs. As deafblind persons move from one transition in the use of calendar to another in the learning process they demonstrate some key characteristics of each time frame which suggests that they can proceed to a new time frame.

This implies that the learner is expected to show understanding and meaning to the symbols in relation to the various activities before preceeding on to a new time frame.

Points to consider when assessing and Implementing calendars:

As teachers and caregivers before you design calendars for learners who are deafblind, there is the need to assess the following of the child. They are vision, hearing, touch and cognition so that appropriate calendar is designed for the learner at different stages of the learning process to achieve maximum result.

Vision

One of the primary avenues through which learning and gathering information take place through vision. When this avenue is impaired learning becomes very difficult. Aitken et al (1998); Alsop (1998); Jacobs (2003); Heller and Bigge (1996); Utley, Roman & Nelson, (1998) suggested some areas of functional vision to consider before implementing/designing a calendar schedule for a deafblind person.

They are:

- Visual field and acuity: This provides information on the learner's use of central, peripheral or tunnel vision of viewing or working at near and distance tasks as regards the size and distance of objects viewed. Knowing the degree of vision left will help place the calendar set closer or far and at the level that the learner can see.
- Contrast is determined by the background colour on which symbols are mounted. It is important that when selecting materials to be used in the calendar routines backgrounds on which symbols are pasted or written in relation to the symbols must be visible to meet the need of the individual learner. For example black symbol on a white background or yellow symbol on a black background. The authors further remarked that to increase visual efficiency and visibility in all routines, colours used in making symbols and materials for learning in all schedule activities must be appropriate to meet the need of the learner. For instance a deafblind person who has cortical visual impairment (CVI) in designing the calendar colours like red, yellow and other preferred colours which are strong can be used. Like plastic pebbles of red, yellow and green put into a small plastic bag of jelly sealed and used as gym symbol.
- Size of symbols is very important. In setting up the calendar as well symbols used in performing activities must be sizeable to meet the needs of the learner. For, example a deafblind person whose vision is 3/60 which means at a

distance of 3 metres he/she can see print which can be seen by people who have good vision when standing 60 metres away from the print size.

- Learner's position in all activities in relation to the position of the calendar is vital. If the calendar is not positioned in conformity with that of the learner the use of the calendar will not be effective. As teachers/ caregivers it is important to position the calendar in a way that will be convenient to the learner through out his/her routine activities.
- Light/darkness perception: learners with visual disability may have discomfort related to too much or too little light in their daily task performance. In setting up a calendar the required amount of light that the learner needs must be provided so that he/she will be able to access and utilize the calendar in all activities (Utley et al, 1998). For example if a deafblind person requires natural lighting he/she as well as the calendar set up must be near the window. In the same way if the learner needs a dim/dark area the calendar must be set up in a place/corner where there will be less light.

Hearing

According to Alsop (1998) hearing is one of the major and distant senses through which individual's access information in learning to communicate about themselves and the environment in which they function. When this sense is impaired it brings a lot of challenges in learning situations. In designing a calendar or any routine activity for a deafblind person know the level of the residual hearing he/she has. Based on this, appropriate materials that produce sound can be incorporated into the calendar for him/her to use whatever hearing is left.

- Awareness of sound as contended by Alsop (1998); Karnad (2003) is the ability to adhere to sound when one comes in contact with materials that produce sounds. This implies that when a deafblind person has some level of hearing and can adhere to sound then symbols that provide sound and meet the needs of the learner must be well chosen before putting them in the calendar schedule. For example musical toys as symbols must be tuned on to the level

that the learner can hear. Teachers/Caregivers who use calendar conversation and other routine activities are to adjust their voices to be louder, softer and clearer for the learner to understand and follow instructions since the use of total communication approach is paramount in the learning process (Alsop, 1998). This enhances and strengthens the use of residual hearing.

- Location to speech is considered to be very important. Speech is a communication mode used in conjunction with any symbol in the calendar routine and form part of the conversation (Miles & Riggio, 1999). Therefore in setting up a calendar schedule for the deafblind learner materials that provide sound must be clear, distinct and the distance at which they are placed should either be closer or further based on learner's level of hearing. Similarly, the teacher or caregiver talking must either be closer or farther in proximity with the deafblind person so that he/she would be able to tell the source or location where a sound is coming from and move to that direction (Karnad, 2003). For example, if a learner needs to follow a particular sound to an activity area, when the sound is provided and the learner fails to follow the direction of the sound he/she becomes distracted. It is important that as teachers /caregivers who work with persons who are deafblind we should not forget the learner's position in relation to hearing in the learning process. Learners position themselves to the better ear when listening, when this is noticed in any conversational activities allow the learner to be in that posture to be able to hear whatever is being said as learning goes on.

Touch

Limited or absence of vision and hearing, hands take over the function of the eyes and ears for the person who is deafblind. Touch becomes the major source of information concerning size, shape, texture, temperature, hardness and consistency use of materials (Alsop, 1998). Whatever the deafblind person learns is mostly through touch. To design a calendar for a deafblind person you need to consider how often he/she uses touch as a way of exploring things in the environment and in different learning situations. Sacks and Silberman (1998) explained that many learners who

have visual impairment with other challenges may exhibit tactile defensiveness and may not touch any object or, even allow people to touch them. Sacks and Silberman (1998) again, said that persons with visual impairment and additional disability may require order and structure in their daily routines in order to anticipate people, objects and activities. It is important that opportunities must be provided for the deafblind person to touch different textures in their routine activities. Textures like fluffy, soft, hard, smooth, rough or shiny must be provided in the calendar for the learner to make learning comfortable and enjoyable. Remember that symbols that are harmful or dangerous must be avoided. This means that in any work environment the deafblind person must interact with the teacher or caregiver. Who ever interacts with persons who are deafblind using touch must do that in a non-threatening manner so that trust can be established (Sacks & Silberman, 1998).

- Teachers and caregivers must know how well the learner handles objects and other materials when working on various tasks. Campbell and Truesdell, (2000) contend that if a learner whose hands shake and cannot handle materials firmly that learner may need some adaptations on symbols that he/she uses. By knowing that the learner cannot handle object, all symbols in the calendar schedule must be adapted to meet the needs of the learner. For example, a learner who cannot hold a spoon to eat, an adaptation can be made and attached to the spoon that will hold firmly to the wrist of the learner to be able to eat independently.
- The manipulation of objects by a deafblind person shows how the learner works with objects in every learning situation. Miles (1998) explained that some deafblind persons/learner have the skill of using their fine motor in picking, reaching or grabbing objects and those on a higher level are able to dismantle and assemble objects they work with. Therefore as a teacher/caregiver provide opportunities in the calendar that will allow the learner to make the best use of whatever skills he/she has.

Cognition

Persons with deafblindness experience varying degrees of cognitive delay as compared to their age peers without disabilities. Aitken et al (1993) explained that

one needs to have some ability to retain the information he/she gains and use it in communication in all activities in the environment. It then means that which ever level of cognition a deafblind person has opportunities must be provided for them to retain and recall information gained. Monaco (1998) outlined the following points that needed to be considered when structured schedules are designed for persons with deafblindness.

- The ability to understand symbols used in the calendar is important. This suggests that if a deafblind person picks a symbol from the calendar and then moves to the location where materials for a particular task are kept, collected and worked with and then sent them upon completion it meant object permanence is in focus. For example, picking a pair of socks from a drawer and sending it back after using. Here again, the deafblind person must show some basic concept in sequencing of activity in different settings. If a learner fails to follow an activity in sequential order and keeps on skipping the order or cannot give meaning to a symbol and an activity learning becomes stressful.
- The awareness of symbols and people by the deafblind person must be encouraged all the time.
- It would be very difficult for a deafblind learner to use unfamiliar symbols and even work with persons who they are not familiar with. Monaco (1998) stressed that all symbols or materials used in the calendar or any structured activity with a deafblind person must be concrete enough and familiar as well. When a deafblind person works with familiar symbols, in familiar activities as well as people, the learner's activity becomes meaningful and enjoyable. This will help him/her to use the calendar effectively when objects and people are known and cognition will be enhanced. For example, in a swing activity which him/her enjoys doing upon picking the symbol that he/she is aware of and the caregiver to assist there is some joy in performing the activity. Some concepts like more, fast, slow, or sit can be taught as well.
- Persons with deafblindness must have the ability to anticipate coming events. Persons with deafblindness may not have much ability to anticipate upcoming event. Monaco (1998); Aitken et al (1993) stressed that people with dual sensory impairment needed to be taught anticipation of upcoming events in a

more structured and repetitive routine activities as he/she moves from one transition to another. This suggests that the use of symbols in the calendar must be consistent in all routine activity. If there should be a shift from the use of one symbol to another it must be gradual. For instance, if a whole object is used and there should be a shift to use part of the object as a symbol in the calendar it should be gradual. This is because the deafblind person needs additional time to take information and it has been remarked by Gee (1994); McInnes & Treffrey (1982); Welch & Cloninger (1995) that persons with deafblindness must be allowed added time both in general interaction and in interaction with instrument to take in information, interpret and execute their responses. Therefore allow the learner time to observe and understand which ever symbol is being used to represent the activity.

- The deafblind learner is expected to follow routine activity in order, but it will take him/her a considerable length of time to be able to follow routine activity consistently. From experience few brilliant deafblind persons take shorter time to follow routine activity while others take longer time. If a learner is unable to follow routine activity in order, there is the need to involve the deafblind learner in series of repetitive activities before designing a calendar. Freeman (1985) remarked that without access to visual and auditory information persons with deafblindness need repetition in whatever they do to gain direct experience as much as possible in the process of learning. It is important that in the calendar schedule routine activities that take fewer steps to accomplish must be introduced, when learners gain perfection then other activities can be added.

Materials use to design calendar schedules.

Calendars can be constructed out of a variety of materials that are less expensive found in the environment or commercial. The following materials include a few that research and observation suggested can be used to design calendars. They are empty shoe boxes, plastic baskets/containers, wooden compartments, coffee cans or hard paper cartons, rice sack and strips of card board (Shevde, 2003; Blaha & Moss, 1997).

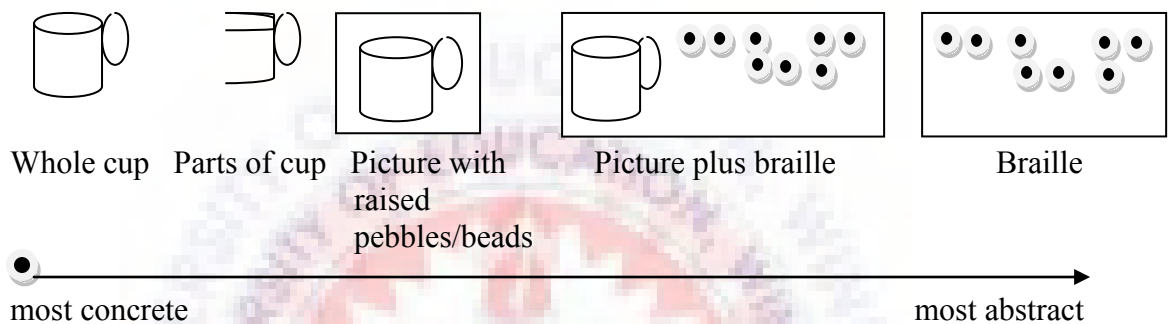
2.2 Components of calendars

Blaha, Levack, Rudin, Hagoood, Dolan and Hauser (1996) remarked that component of calendar and what will work best for an individual deafblind person ranges from the most concrete symbol to the most abstract symbol. This implies that development of calendar components for children who are deafblind should start with materials that will help the deafblind person to understand many people in his/her life for effective communication. From the explanations of components of calendars above every calendar should have concrete and abstract symbols as components. Blaha et al (1996) further stressed that the concrete symbols should be simple, portable, familiar and recognizable by the deafblind person. The deafblind person gets to know these concrete symbols well if he/she has been taken through repetitive routine activities using the concrete symbols. The concrete symbols can be real things that can be whole or part of objects, for example of some are a whole cup or part of the cup; towel or part of it; a whole belt or part. After the learner associates numerous objects with their respective activities one of the object can be selected to represent an activity. For example in a tooth brushing activity the cup, tooth brush and toothpaste, one of these could be used as a symbol. This helps the learner to develop flexibility and the real or concrete symbols are easy to recognize because they are actually used in an activity (Miles, 1998). For example, a concrete symbol like diaper or key will be taken to the activity area and a real diaper or key will be given out for the performance of the actual activity. The concrete symbols according to Rowland and Schweigert (1990) are relatively portable, easily manipulated to show to another person by pointing to or holding out, and allow the deafblind persons using them to communicate with others, either expressively or receptively.

Miniature objects according to Aitken et al (1993) do not give real life objects that they represent. Teachers/caregivers must be careful when using miniature objects in their calendars since they do not have any resemblance with the real objects.

This implies that care must be exercised in the use of miniature symbol as symbolic representation to persons who are deafblind because they do not have the same tactile qualities and resemblance with the real objects.

Research and experience showed that at the picture section sticker/ thread/glue/starch are put on the out line of the picture and tiny pebbles/beads are arranged on it. This helps the deafblind person to get the same shape like the cup as he/she runs the fore finger on it so that the representation of a symbol to an activity is understood. This is later paired with brailled word and eventually brailled label is used. Smith and Levack (1996) gave the following as an example.



Finally, Smith and Levack (1996) contend that symbols such as letters, words/print, Braille or an

Unrelated design would be the most abstract. The over riding principle is to take the deafblind person as far as he/she will go in symbolic representation all the while checking to see if understanding is being gained.

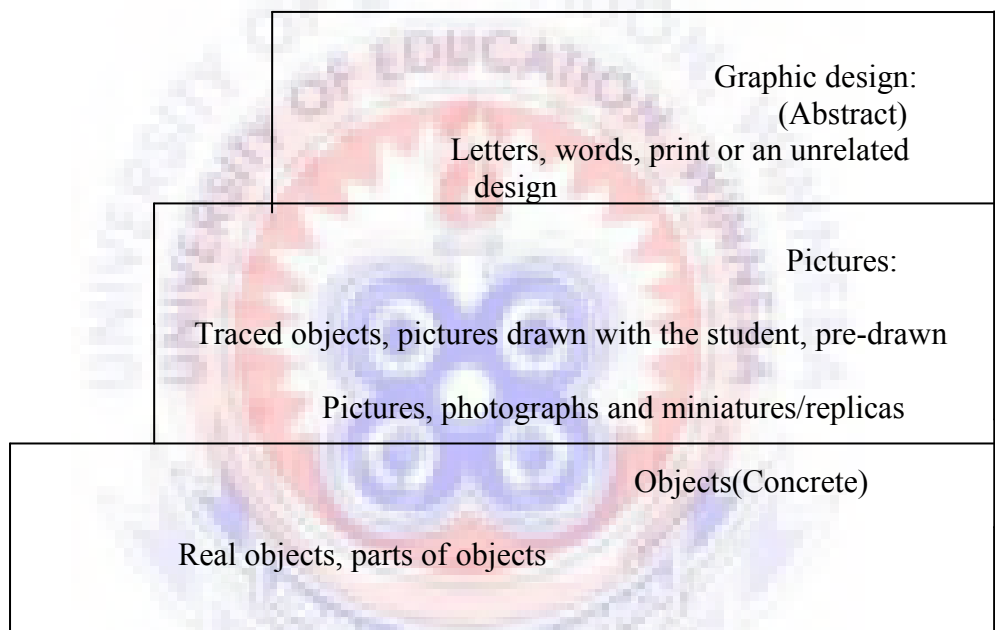
The calendar schedule is built around the deafblind person's level of communication and could be expanded to meet the needs of the individual deafblind person as thinking skills developed. Blaha and Moss (1997) are of the view that the complexity of the calendar depended upon the ability of the deafblind persons understanding which could be expanded later to include several representation of concepts. Calendars could have a variety of sections and could include several communication forms such as objects, pictures, photographs, printed or Braille but speech, signs,

gestures or finger spellings are communication modes used in conjunction with the other forms as part of the conversation (Blaha, 2001).

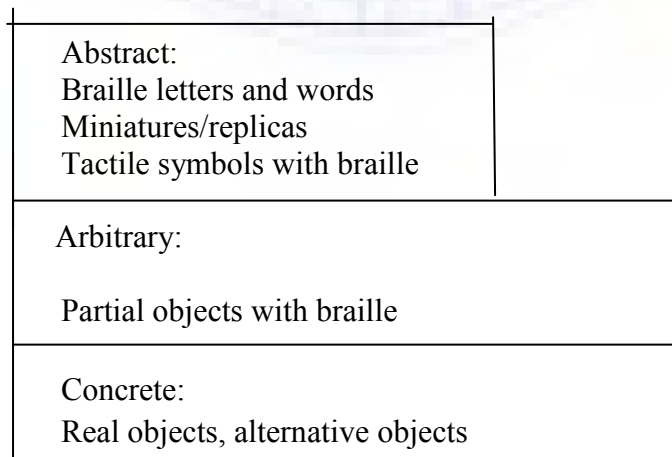
Calendars therefore could be used to communicate information about many routine activities such as music, mathematics, science, daily living, vocational and others.

Blaha et al (1996) gave the following hierarchies of symbols for learners who can see and the blind.

Hierarchy of symbols for Learners who can see



Hierarchy of symbols for Learners who are blind



2.3 Calendar and communication forms/functions

In the regular educational setting non-disabled students follow their schedules, timetables or activity chart in any learning process with little or no prompts. Persons with sensory impairments and additional disability need a structure and routine activities to follow in order to be consistently involved in their daily activities.

Miles & Riggio (1999) argued that the consistent repetition of daily routine is the cornerstone for communication development and could be best done when the deafblind person had a fixed routine every day. The researchers further explained that this daily routine strategy is the use of calendar in the meaningful occasions for communication. One such routine strategy is the use of calendar in the teaching/learning process with deafblind persons.

“Normal” people use calendar for their day to day activities, in the same way persons with deafblindness use calendar in their day to day teaching and learning process (Shevde, 2003).

Research has shown that there are various forms and functions of the calendar when it comes to communication (Blaha & Moss, 1997; Karnad, 2000; Afutu, 2004). Communication as a term is a big umbrella under which calendar is a subset or component. When the person with deafblindness has something to talk about communication goes on. This implies that one way of receiving and expressing information by deafblind persons is through the use of calendar schedules in all routine activities as part of the teaching and learning process.

The calendar provides an all day long communication activity for the deafblind person. For example, if a deafblind person uses five (5) items calendar container or

folder plus a “finished” container or pocket using the following activity symbol: bib for eating, small writing pad for library, small ball for physical education, crayon for art work and plastic blocs for mathematics, it provides the child with conversation. These five (5) symbols should be arranged on a table or shelf near the calendar set up within the deafblind persons reach. Teacher and the deafblind dialogued about the activity symbols in sequence after which the learner would be prompted to put in the symbols into the calendar container or folder (Blaha & Moss, 1997). All these activities are done using communication modes like sign language, speech, gestures or tactile sign that meet the needs of the deafblind person. As the deafblind person picked the first symbol to the activity area communication goes on until the activity is ended and the activity symbol is put back in the “finished” container or pocket. All modes of communication that the deafblind person needed are woven around the activity symbols and the activities to be performed (Karnad, 2000; Afutu 2004). There is review of schedule every now and then as the deafblind person moved from one transition to another.

This implied that communication and calendars are interwoven and inseparable in the teaching and learning process with persons who are deafblind, and a well structured routine activity provided them the most meaningful occasions for communication. As communication and calendars are interwoven and inseparable this brought to the fore the use of communication forms and functions in all calendar routine activities. Blaha (2001); Mcletchie (2005); Miles & Riggio (1999); Stremel (1999); Orelove, Sobsey and Silberman (2004) explained that communication forms are the different ways one receives and expresses information. These forms could be gestures, sign, pictures,

objects, speech, part of objects, written words/print, Braille, fingerspelling, body movements, low or high tech devices.

Blaha (2001); page 11 suggested that both the use of static and dynamic forms of communication must be structured into the calendar as learning process goes on. The „static“ forms of communication are those that „stay put“ which the deafblind person could examine and referred to as often as needed. These are objects, photograph, tactile symbols, Braille, drawings or printed words.

The „dynamic“ forms are also important as they provide on the spot information. These forms disappear as soon as they are produced and used (Blaha, 2001). If one wanted to refer to the message they conveyed they would be retrieved from memory or the information repeated. Such forms are signs, gestures, spoken words or finger spelling.

Similarly, communication functions are not done separately from the forms that the deafblind person uses, the forms go alongside, the functions. For instance, if a deafblind picked a calendar symbol like a plate to a caregiver the activity could be interpreted as requesting for food. Opportunities should be given in the calendar all day long for the deafblind person to use communication functions like requesting, protesting, commenting, asking and answering questions, sharing information, refusing or labeling (Miles & Riggio, 1999; Stremel, 1999). It is then suggested that as a caregiver the use of “dynamic“ and static” forms of communication in both receptive and expressive communication help provide for the needs of the deafblind person’s communication skills using the calendar. These forms of communication provide the deafblind person with the most concrete to the most abstract use of symbols.

2.4 Conversation using calendars and calendar tips

Conversation using calendars

Conversation could be termed as a dialogue between two partners consisting of multiple turns that are balanced between partners around topics of shared interest (Karnad, 2000).

The non-disabled persons are surrounded by rich conversational interaction in all environments long before they acquire language or other forms of communication (Miles & Riggio, 1999). For example, exchanges of smiles, body movement or any facial expressions between the child and mother or caregiver are conversational exchanges.

The sad aspect of conversational exchange with persons who are deafblind is that they never had the opportunity to enjoy conversational interaction as a result they tend to withdraw or isolate themselves from people, the environment or experience frustration. As such this group of persons needed to be taught and directed by adults, teachers or caregivers who would converse with them using their hands, bodies'' objects, and pictures in routine activities (Miles & Riggio, 1999; Miles, 1998).

In conversation with non-disabled communicators words are mostly used to take turns. However when conversing with persons who are deafblind gestures, body movement, sign, speech, objects, written words or Braille are used. In this respect Siegel-Causey & Guess (1998) shared the view that calendar can provide a good context for teachers or caregivers to engage deafblind learners in conversation.

Research by Miles and Riggio (1999); Miles (1998) the following considerations are suggested for good conversation using calendars mutual respect; topic of shared interest and use of same communication forms; or being an attentive partner; physical contact and comfortable pacing.

- Mutual respect is what is expected from families, teachers or caregivers in dealing with persons who are deafblind. No one would like to be looked down upon or regarded as inferior, so to enter into conversation with a deafblind you need to respect their abilities to converse through well structured routine activities. The use of calendar schedules provides opportunities for such respect between a deafblind person and the caregiver.

This is because the deafblind person knows the order in which his/her activities occur moment by moment rather than doing things haphazardly.

- In calendar conversation there is topic of shared interest, this is so because the structure allows the deafblind person and the caregiver to be talking about the same topic. For example as he/she picks a symbol there is conversational interaction till the activity is done. This means that the two partners have a topic of interest to talk about and each of them pays attention to each other in order to have a successful interaction.
- The use of same communication forms in any conversation keeps conversation going. In the non disabled world, persons enjoy conversation when using the same communication form because they understand one another. Similarly conversational partners of persons with deafblindness must understand the communication mode that the deafblind child uses so that conversation can go

on. For example the use of objects, pictures, photographs, word or Braille must be used in the calendar depending on his/her needs.

- The use of calendar schedule allows both the deafblind person and the caregiver to be very attentive in what ever is being done. No one will like to have a conversation with a partner who has no time to listen and respond as such in having a conversation with a deafblind person one must be attentive so that the focus is on the topic being talked about. This will help the conversation to be on track for comments and responses between the deafblind person and the caregiver.
- For a person who is deafblind the perceived world extends only as far as the fingertips reach and most of his/her attention will be on his/her own body. Using calendar schedules according to Miles (1998) provide occasions for both caregivers and deafblind persons to have physical contact in what ever they are doing to bring about successful interaction. This means that the deafblind person needs to be in position that allows maximum opportunity for expression and contact. For example, as the learner picks a symbol from the calendar the caregiver and the deafblind dialogue about it, conversation continues to the activity area and through out the activity. When the activity is going on it allows for physical contact. If a deafblind person is in a seated position, this will mean maintaining light physical touch with hands or shoulders as you talk about the activity symbol and the activity.
- Comfortable pacing in calendar conversation with persons who are deafblind is important. Non-disabled people get out of tune when they are not given the chance to insert a word or re-act in conversation. Having conversation with a

deafblind person, one need to adjust the pacing to consider the learner's hearing loss, amount of visual loss and the rate at which information is processed. If a learner picks a symbol and converse about it and the activity to be performed, there should be pacing in all the interaction so that the learner can process the information to give responses. By doing this the learning becomes enhanced and enjoyable.

It is then suggested that calendars provide a structure for good conversational topics. It is important that in dealing with persons who are deafblind we must provide topics in all schedules, daily routines and natural settings that would encourage the deafblind person to come out with meaningful conversation.

Calendars did support and develop conversation with persons who are deafblind in that the deafblind person would be able to anticipate events, become time conscious and establish a sequential way of performing daily activities (Afutu, 2004). Calendar conversation made the teacher or caregiver available as a partner for the whole period in the learning process. Conversation using calendar schedules encourage the learner always to make efforts to communicate in some way. Calendar gives the person with deafblindness opportunities every moment to have an interesting and well organized conversation.

Calendar tips

Calendar tips highlight what research and observation suggest as important hints for better and perfect design in the use of calendars as a learning strategy for persons who are deafblind. This section will focus on the following: steps for success, creation of

space, avoiding common errors, information for parents on calendars and assessing and evaluation when using calendars.

Steps for success

Blaha (2001) suggested some steps that when followed can yield better results in the implementation of calendars as follows:

- To design a calendar look for information from books, articles, handouts and if possible the internet that addresses calendars before beginning to design.
- Invite experts to give in-service training to teachers/caregivers and all who work with persons who are deafblind. This training can enlighten you more to gain practical experience from the experts.
- Have time to visit other schools in the locality that are using calendars so that you can see their design and share ideas for more information.
- Gather all symbols/materials for the calendar in a bin or container, the collection of materials in a bin must be very close to the learner so that he/she can easily reach or access with out moving to and fro.
- The calendar must be done daily as this allows the learner to participate in scheduling, and change or cancellation should be tactful for understanding without upsetting the learner.
- Allow him/her to honour whatever had been scheduled in order without allowing him/her to skip any part of the schedule. If a learner skips direct him/her to follow the sequence.
- Involve all those who work with the learner to do the calendar together with the learner so that it is consistent among staff.

- Families/parents must also have calendar schedules for their kids at home for continuity of whatever the learner learns at school.
- Change one item of the calendar at a time. For example, moving from objects to pictures this can better be done by pairing the picture with the object for sometime for learner to get the understanding. Allow the learner to use the picture symbol, when he/she gets the understanding fade the object.
- Calendar schedule is on going as the learner moves from one transition to another. The process does not stop or end, in the same way change in staff should not mean stop of calendar.
- Having photographs or videotapes of learner's calendar so that when a new staff takes over he/she knows exactly what to provide for the learner.

Creation of space:

Blaha et al (1996); Miles and Riggio (1999) remarked that to set up a calendar the following points must be considered.

- Observation has shown that a calendar area does not need to be large or small but sizeable as good and effective calendar can work in any setting.
- The space must be physically and visually accessible to the deafblind person. This is because the space where the calendar is set should not be clustered with material things that will make it difficult for the learner to access.
- The calendar must be kept in a consistent place so that the learner can locate it all the time. It means that the position of the calendar should not be change from one corner of the area to another when it happens like that learner becomes confused.

- If the room is shared with other group of learners creates a space by partitioning a section of the space for the learner and his/her calendar.
- Do not set the calendar in a closet. The calendar must always be available to the learner when ever he/she needs it, if it is set in a place where it is locked it will be difficult for the learner any time he/she wants it.
- Try to minimize sound that can cause distraction to the learner in the environment in which he/she functions. As deafblind persons take time to process information if the calendar is set where there is sound this can distract attention and the learner may become confused and frustrated.

Avoiding common errors

In the quest of using calendar schedules as a teaching/learning strategy with persons who are deafblind teachers/caregivers with little or no experience make common errors. Afutu (2007) observed and suggested the following to avoid such errors:

- It is inappropriate to design a calendar without a container signifying the end of the activity. The container signifying the end of the activity should have a different texture or size from all the other containers. On the other hand, those using calendar books or folders must have a finished pocket attached to the back of the book or folder where activity symbols should be put when the activity is ended.
- Symbols in the calendar should not be used to perform the actual activities. The deafblind person can carry the symbol to the activity area. For example, if a spoon is used as a symbol for lunch in the calendar that same spoon as a

symbol should not be used by the learner for the activity. Another spoon should be given to the learner to use.

- All calendar segments/compartments must be filled with the appropriate symbols for the day's activities. Do not leave a section of the calendar blank. For instance, if you have four-items calendar, do not fill three of the segments and leave one. If sections of the calendar are left blank it does not make it complete and the learner may not understand why there should be a blank section and would take it that calendar schedules are designed that way.
- Teachers, caregivers, families/parents and all who work with persons who are deafblind must remember to design the calendar in a sequence with the finished container always on the extreme right and must be different from the other containers.
- Do not use different symbols for one activity. For example, if a spoon is used for lunch time maintain it. Do not use spoon, another time bib or plate, use of different symbols for the same activity creates confusion to the learner.
- One symbol should not be used for different activities; For example, do not use a toy earphone for music as well as audiology, or a towel as a symbol for cleaning the hands and then the same symbol as towel for bathing. The learner may become confused and the meaning associated with a symbol to an activity would not be comprehended.
- Do not display all activity symbols on the shelf to create mess but organize only those that the learner will need at a time.
- Use of different symbols in a calendar set up must be avoided. For instance, if you have three item calendar: gardening, mobility and mathematics the

symbols use must be uniform. That is, if picture symbols are used it must be used for gardening, mobility and mathematics. It should not be picture symbol for gardening; a small stick as a symbol for mobility and then print or Braille for mathematics all the symbols should be uniform.

- Do not allow the deafblind person to skip the sequence, guide him/her to follow the sequence the way it has been ordered to be consistent. When it is allowed learners would like to pick and do interested activities leaving others.
- Involve the learner in scheduling of the calendar. This will help the learner to be consistent in using the calendar, any time the learner accomplishes an activity review the schedule before he/she moves on to the next activity.
- Concrete symbols should not be changed instantly without making the learner aware of the change. For example, if a learner uses objects and is to move on to use print or Braille as a calendar symbol, the objects and the print/braille must be paired until such a time the learner understands the print/braille it is then that object symbols can be faded out.

Information for parents on calendars

Blaha (2001) remarked that parents are members of their deafblind learner's educational team because they have essential information to share. Therefore the author suggested some hints that will help parents/families to design and use calendars effectively with their deafblind learners:

- As a parent be an active participant in the development of your child's calendar. If your child has a calendar at school you may want to support the effort at home a simplified version of the calendar may be more appropriate to

be designed and used at home for continuity. For example, getting to know the symbol use for eating at school so that the same symbol can be provided at home too.

- It is important to engage all family members to take part in the use of the calendar with the learner who is deafblind. This helps to enhance social interaction among all family members there by removing rejection, isolation or neglect on the part of the deafblind.
- An accessible spot for the calendar set up must be found so that it is easy for the family members as well as the learner to use as needed.
- Parents/family members should use the symbols being used at school for the activities as much as possible. Sometimes when symbols are needed regarding people or situation at home that does not come up at school, parents are to seek the help of the teacher to make new symbols for that particular activity. For example in visiting grandma a different symbol for travelling to the place should be used rather than the symbol for travelling from home to school everyday.
- Parents/families are to focus on immediate need at home that can be scheduled in the calendar. For instance, bathing, brushing or eating. Have the schedule review from one transition to another as is being done at school so that the learner can anticipate up coming event without being upset.

Assessing and evaluation, when using calendars.

Assessment and evaluation are two different words. Observation and experience has shown that assessment and evaluation in the use of calendar with persons who are

deafblind provide an over all information about how the learner understands and uses the calendar in the learning process. It also offers the teacher/caregiver the opportunity to improve upon the learner's strengths in the use of calendar as well as finding solutions to the challenges the learner faces whilst using the calendar schedule (Blaha, 2001). Thus the teacher/caregiver must take time to observe the learner's responses to a symbol from day to day to see if there is a change in the understanding of a symbol as a representational item. Miles and Riggio (1999) explained that the calendar schedule allow the teacher/caregiver to systematically assess and monitor the learner in different learning situations during every activity. The assessment of the calendar schedule can be used to document progress of learning across all settings and can also help the teacher/caregiver to design the next higher level of calendar for the learner as he/she moves from one transition to another.

The evaluation process in the use of calendar by a deafblind person begins from the time the learner starts using a calendar through out the time he/she is consistent in the use of that calendar before moving on to the next stage of calendar (Blaha, 2001) . For example if the learner begins with anticipatory or daily calendar the evaluation starts from any of these schedules. This means that evaluation helps the teacher/caregiver to know the learner's strengths and challenges in the use of the calendar design for the particular learner so that the schedule is improved upon. The author has developed a check list for effective evaluation of calendars. See Appendix C (page 89).

2.5 BENEFITS OF CALENDARS

The following are some suggested benefit that persons with deafblindness gain from the use of calendars:

- Choice making is one important need that should not be ignored by any teacher/caregiver. The caution is that choice is not made in the calendar set up

but choice is allowed in the use of materials that the learner works with what to eat or wear. For example, in a writing activity the deafblind learner can be given two writing materials like a marker and crayon to choose from. If it is snack time the learner can be given orange juice and milk shake to choose from. Kaiser (1995); Kaiser (2000) remarked that learners should be exposed to choices throughout the day to allow them to indicate their preferences. This means that the deafblind learner must be offered countless opportunities to make choice in any setting, thus the calendar structure provide occasions to the deafblind learner to choose desired objects, partners to play with and encourages the learner to make a selection and not just point. Whether it is a choice between which game to play, which snack to eat, which pants to wear or what colour toy to pick the individual learner is encouraged to demonstrate control over the immediate situation, promoting decision making and increased independence (Guess et al, 1985; Shevin & Klein, 1984) cited by (Siegel – Causey & Guess, 1989).

- Turn taking is an important strategy in the communication process. According to Alsop (1998) turn taking keeps interaction going and it allows both players to know they are important to the interaction. Pausing often within every conversational interaction allows the learner to take turns. For example, in an activity game like oware or ludo teacher/caregiver and learner take turns in performing the task. This means that teachers and caregivers must provide conversational topics that are interesting and familiar that will allow the learner to participate and learn to take turns. Learners must be taught to wait and take turn in any conversation or activity performance.

- The deafblind learner's social skills are developed everyday as the calendar provides the way for the learner to interact with the teacher or caregiver. Anytime the learner picks a symbol from the calendar and performs an activity interaction goes on between him/her and the caregiver. Stremel, Perreault and Welch (1995); Stremel and Schutz (1995) remarked that it is important to teach peers and all who interact with a learner who is deafblind how to use the learner's calendar so that effective interaction goes on. This makes the interaction between teacher/caregiver and learner through out the activity and the learning process becomes meaningful, fun and enjoyable to persons with deafblindness.
- In using calendar schedules, learner's communication skills are enhanced as series of topics are clearly highlighted for discussion. Blaha (2001); Nikam (2003) remarked that the structure of the calendar schedule supports dialogue about activity symbols and activities. For example, upon picking a gym symbol, teacher and learner dialogue about the symbol and then at the activity area communication goes on through out the activity. Learners are encouraged to learn and use more communication functions like requesting, rejecting/refusal, asking of questions or commenting about activity symbol and activities. All these help in communication development.
- Calendar provides emotional support for the learner. The learner has a sense of security and confidence because he/she knows what will happen from one activity to another through out the day (Blaha, 2001; Blaha & Moss, 1997; Shevde, 2003). Welch and Cloninger (1995) explained that a consistent schedule, activity symbols, consistently sequenced activities and well

organized environments are just a few ways to establish predictability and assist a deafblind learner to feel more secure and at ease. This means that the learner becomes less frustrated, withdrawn and reduce emotional stress for learning to go on.

- Time concept/time pieces/time vocabulary are introduced with the use of calendars by deafblind persons. Blaha and Rudin (1981) explained that deafblind person becomes aware of time concept and time pieces as he/she begins the activity right from the time of picking the symbol to the activity area, performed the task until the time the activity is done and the symbol ends in the “finished” container or pocket. The person with deafblindness is also taught time vocabulary like “finished”, “all done” or past” which is the activity just ended and the “future” which is the activity about to take place (Blaha, 2001).
- Calendar schedules according to Shevde (2003); Blaha and Moss (1997) give the person with deafblindness the opportunity to recall the actions, objects or location which is associated with the various activities. If the deafblind person is able to act appropriately with one or two objects when engaged in a familiar routine, For example, if a deafblind person is given a spoon as a eating symbol during lunch time and he/she used the spoon for eating then it is taken that the object associated with the activity is comprehended.

This means that all the benefits highlighted make the use of calendars very meaningful and effective in the teaching/learning process of learners who are deafblind. Teachers and caregivers should tap and develop all these benefits

derive from using calendars in the teaching and learning process of learners who are deafblind.



CHAPTER THREE

METHODOLOGY

This section discusses the various methods and procedures used in gathering data of the study. The following sub-topics were discussed: research design, population, sample, sampling techniques, data collection procedure, instrumentation and methods of analyzing the data obtained.

3.1 Research design

The design for this research was case study Cosby (1997); Cohen, Manion and Morrison (2005); and Shanghnessy and Zechmister (1997) argued that case studies provide a description of an individual, persons, settings as business, school, community or neighbourhood. Similarly, Fraeknel and Wallen (2003) contended that in a case study a single individual, group or important case is studied extensively and varied data are collected and used to formulate interpretation applicable to the specific case. The deafblind centre falls within a small group or setting within which an extensive and varied data can be collected that can be used to formulate interpretations applicable to persons with deafblindness. The deafblind center provides a unique example of real people and real situations such that the case study approach will enable readers to understand ideas more clearly than presenting them with abstract theories.

Taking into account what these authors mentioned above about case study, and the intent of this research about the use of calendar schedules with persons who are deafblind, it would be appropriate to use a case study.

3.2 Population

The population for the study was made up of all teachers at the Deafblind centre numbering about fourteen (14).

3.3 Sample

Fraeknel and Wallen (2003) explained sample as any group on which information was obtained. To obtain information for this study a total sample of twelve (12) respondents who were teachers at the Deafblind centre used in the study. The break down is as follows: 5 female teachers and 7 male teachers.

3.4 Sampling Technique

The purposeful sampling technique was used in selecting the teachers. The researcher used purposeful sampling because the respondents were teachers of children who are deafblind and were working at the deafblind centre and were in position to provide useful data for the study. Cohen, Manior and Morrison (2005); Creswell (2005); Sarantakos (1998) contend that in purposeful sampling respondents are picked to form sample that is satisfactory in relation to researchers need. The above mentioned authors went on to say that in purposeful sampling the sample is chosen for a specific purpose.

3.5 Instrumentation

The following instrument were used for data collection.

- Interview
- Questionnaires

Interview

Six (6) out of the twelve (12) respondents was interviewed. The one-on-one interview was used to elicit information from the respondents. The researcher choose one on one interview because she hopes to collect wide range of responses from the respondents since they might have different experiences to share in using calendar schedules with persons who are deafblind. The open-ended/semi- structured interview type was used to allow participant to construct their own responses. The open ended/semi-structured interview procedure was used so that additional information which might be relevant to the study can be obtained. Avoke (2005) is of the view that predetermined questions can be modified based upon the interviewer's perception of what seems most appropriate. All the interviews were tape recorded and each interview lasted thirty (30) minutes. In tape recording the researcher engaged in informal and semi structured interviews and can also capture long verbatim responses and the conversational style becomes natural. Participants were assured that their views on the research questions raised would be confidential.

Questionnaire was used to gather information from the remaining six (6) respondents who used calendar schedules with persons who are deafblind in their daily routine activities because they have experiences and other relevant information to share. The researcher chose questionnaire for the remaining six (6) respondents to help cross examine the responses from the interview.

The open-ended/semi-structured was used to collect data because Cohen et al (2005:247)

Contend that the smaller the size of the sample, the less structured, more open and word based the questionnaires maybe. These authors further said that if a site-specific

case study is required, then qualitative, less structured and open-ended questionnaires may be more appropriate and suitable. Cozby (1997) also contends that in open-ended questions respondents are permitted to generate their answers freely and these are useful when the researcher wanted to know what people are thinking and how they view their world.

3.6 Data collection procedure

Before embarking on the data collection exercise the researcher obtained permission from the head of the school and discussed what the study is about. The head agreed that the exercise could be carried out.

The researcher made it known to participants first at a staff meeting and finally individually as a reminder where objectives of the study discussed and consent of participants obtained.

Questionnaires were given out to respondents by the researcher personally and one week was agreed upon for collection.

Teachers for the interview were selected and briefed, dates for conduction for the interview fixed with participants.

The interviews were conducted individually with participant at the office of the deafblind centre on different date/days during break time and lasted for twenty five to thirty minutes with each participant.

The researcher encountered a number of interruptions from some of the deafblind students as they kept entering the office where the interview was being conducted.

The interviewer and interviewee had to pause for some seconds before continuing. At the end of each interview the recorded conversation was played back to participants

for confirmation and accuracy. This gave the chance to elaborate more on some points earlier said.

3.7 Data analysis

Data analysis is a process of drawing conclusions and explanations on findings in words about a study (Creswell, 2005). Data from interviews on the total sample were transcribed, coded and analyzed qualitatively from responses in relation to the research questions raised. Qualitative analysis was done in responds to the emerging themes from the interviewing data. Content analyses of responses were also done to help in generalization. Conclusions from the literature review and other relevant studies and literature were drawn to support findings. Questionnaires were analyzed using frequencies tables and relevant description based on data obtained.

3.8 Validity and Reliability

To ensure that the questionnaires and interview schedule were valid and reliable the researcher provided the designed questionnaires and interview schedule to the supervisor. This is to enable the supervisor to review them to see if they would produce the correct responses based on the research questions raised.

Questionnaire items which were not needed or ambiguous were deleted or restructured. Another validity and reliability was participants for interview were also made to listen to the tape to be sure what were recorded were their views and those that participants did not want to be presented were deleted.

CHAPTER FOUR

Presentation of Data Analysis and Discussion

4.0 Introduction

This section deals with the presentation, and discussion of findings of this study. The findings are presented according to the background information of the participants/respondents and the five main research questions posed to guide the study.

4.1 Background Information on participants

The background information on teachers who took part in the exercise covered the school, region, gender, status, qualification and number of years taught at the deafblind centre.

Analysis of the background information of participants revealed that the twelve (12) participants were teachers at the centre for deafblind children and youth on the campus of Demonstration School for the Deaf, Mampong-Akwapim. The break down is as follows seven (7) males and five (5) females. The views expressed in the study were thus male dominated. The status of the teachers ranged from senior superintendent through assistant director. The number of years taught by participants at the center for deafblind persons ranged from one (1) year to eight (8) years. Eleven (11) out of the twelve participants were holders of degree certificates in special education – visually impaired where as the remaining teacher holds a three (3) year post secondary teachers certificate.

4.2 Research Question 1: How do teachers and caregivers use calendars?

Calendar usage with persons who are deafblind by teachers and caregivers.

In an attempt to know how the teachers and caregivers use calendar with persons with deafblindness the following question was posed: what is calendar in relation to teaching from your point of view? The answers to this question from all the interviewees were similar. Four of the participants involved in the interview shared the view that:

“Calendars are routine activity schedules designed, structured or programmed that use symbols to represent activities of the deafblind person on daily, weekly or monthly basis. The symbols are put in containers, boxes which are partitioned or folders in a sequential order (verbatim expression from participants)”.

Two of the participants commented as follows:

“Calendar is a mechanism or system structured to be the time table for the deafblind persons program (Expression by a teacher)”.

“Calendar is a time table that the teacher follows throughout the day (verbatim expression by the teacher)”.

Similarly, the teachers who responded to the questionnaires also shared the same views with the interviewees.

From the comments above it can be said that all the teachers (participants) at the Centre for deafblind persons saw calendar as a structured routine schedule in their teaching and learning process with persons who are deafblind. This could be the reason why Miles & Riggio (1999) remarked that a well routine structured schedules for persons with deafblindness makes teaching and learning easier, enjoyable and fun. However Miles & Riggio cautioned that in using calendar in the teaching and learning process with persons with deafblindness teachers must make sure that their unique

needs are met and should be in conformity with their individualized education program (I.E.P)

Types of calendars often used in the teaching and learning process with deafblind persons.

Analysis of data collected on this topic revealed that teachers at the centre for deafblind children and youth stated the following types of calendars as the ones often used in teaching persons with deafblindness at the centre. They are daily, weekly, monthly and annual calendars.

The six teachers interviewed on the type of calendars said as follows:

“We only use daily calendars (verbatim expression)”.

Four out the six respondents shared the same view with the interviewees.

The remaining two teachers said the following:

“We use daily, weekly and annual calendars (comments from teachers)”.

From the analysis on the types of calendars used in the teaching and learning process with deafblind children at the centre revealed that the following types of calendars are used. They are daily, weekly and annual calendars.

Calendars set and use

The authors explained how a calendar set can be used to teach children with deafblindness Blaha & Moss, (1997); Shevde, (2003), these authors stated that to use calendar in teaching persons with deafblindness you must first get all the symbols that represent all the activities for the day and then find the containers, compartments or folders in which the symbols will be arranged so that the person with deafblindness would know the order in which activities would occur. Secondly, both the teacher and the deafblind person should dialogue about the symbols.

Thirdly, the teacher should prompt the deafblind person to slot in the symbols. When this is done; the teacher should cue the child to pick the first symbol to move to the activity area to work. When the activity is over let the child sign “finished” and returns the calendar symbol to the finished box or folder pocket.

In reaction to how a calendar set can be used three of the teachers who responded to the questionnaires said these respectively:

“Calendars are set before the day’s activities begin. The deafblind person is prompted to pick the first symbol in the activity area to do the task (comment by a teacher)”

“The student brings all the activity symbols for the day, teacher dialogs with the deafblind person about all the symbols before starting the task (expression from the teacher)”

“Select all the symbols representing the activities to be performed in the day. Teacher and student dialogue about the symbols after which student is prompted to slot in the symbols into the containers or spaces provided in the calendar (comment from teachers)”

Two other respondents shared a similar response.

“The calendar is set by identifying the object symbols which the teacher and the deafblind person talk about it first. Then the deafblind person fixes the symbols into the spaces provided on the calendar before starting the activity (remarks from teachers)”

Two of the teachers interviewed gave the following responses:

“Calendar symbols are set in a left to right format and the schedule must have a finished container or pocket so that when an activity is over the symbol ends in it (verbatim expression by a teacher)”

“In using the calendar the deafblind put all the activity symbols in order, then picks the first symbol to the activity area to work .(expression from a teacher)

One teacher remarked:

“The deafblind person with teacher assistant dialog about the activity symbols first after that he picks the first symbol to the activity area to do the task (Expression by a teacher).

From the responses given by the different teachers what seems suggestible is that to set up a calendar all activity symbols must be identified for every activity. Provision for containers, segmented boxes or folders must be ready for the symbols. Together with the deafblind person talk about the activity symbols and then prompt the child to fix the symbols independently. The calendar should be consistent and must be set before the day's programme begins. As remarked by Welch and Cloninger (1995) a consistent schedule, sequenced activities, activity cues and organized environments assist a deafblind person to feel more secure and feel at ease. This implies that the settings and using of calendar schedules in the teaching and learning process of the deafblind allows the child to have a routine to follow in everyday activity.

Things to consider when you want to implement calendar

As regards things to consider when you want to implement calendar the six teachers interviewed shared similar views:

Four out of the six said this:

“The age and the extent or level of the disability must be considered (verbatim expression from teachers)”.

The remaining two teachers were of the view that:

“The cognitive, residual vision and materials must be considered when one wants to implement the calendar with persons who are deafblind (verbatim expression from teachers)”.

The teachers who responded to the questionnaire stated the following as things to consider in implementing calendar with persons who are deafblind.

Three out of the six respondents stated the following

“The age, intellectual and the degree of the disability must be considered (expression from teachers)”.

The rest two of the teachers who responded to the questionnaire stated the following as things to consider in implementing calendar with persons who are deafblind.

“The person with deafblindness individualized education program (I.E.P), level of disability in terms of vision, hearing or cognitive and materials must be considered. (remark by a teacher)”.

“The calendar should be implemented with a suitable material taken into consideration the unique disability of the deafblind person (remark by a teacher).

From what the participants said above age appeared in almost all the responses. This implies that one of the most important things to consider when you want to implement calendar with deafblind children is age of the child. The responses again revealed that hearing, cognition and touch of the child should be taken into consideration.

Material for constructing calendars

In responses to items on the above topic the following were mentioned by both participant and respondent as materials that can be used for constructing calendars: rice sack, empty shoe boxes and hard paper carton. Others are plastic basket or containers, strips of cardboard and wooden compartments or segmented can also be used.

The following are what five of the teachers interviewed said:

“ All the materials mentioned: rice sack, empty shoe boxes, hard paper carton, plastic basket or containers, strips of cardboard and wooden compartment can be used to construct a calendar (expression by teachers)”.

One interviewee said:

“Plastic baskets/containers, rice sack, wooden compartment and strips of cardboard can be used (expression from a teacher)”.

Four of the teachers who answered the questionnaire stated that:

“All the materials can be used (expression by teachers)”.

However, two teachers were of the view that:

“Rice sack strips of cardboard, wooden compartment and hard paper carton can be used depending on the child (comments by teachers)”.

The consensus amongst two groups of participants shows that the materials used in constructing calendars at Mampong centre for deafblind children and youth are rice sack, empty shoe boxes, plastic baskets/containers, wooden compartments, strips of cardboard and hard paper carton. This finding agrees with Blaha and Moss (1997); Shevde (2003) that materials such as shoe boxes, coffee or biscuit cans, plastic or wooden compartments that can be obtained in the locality can be used rather than commercial ones that may prevent a teacher from constructing a calendar

4.2 Research Question 2. What calendar components are used in the teaching and learning process with deafblind persons?

Calendar components used in the teaching and learning process with deafblind persons.

The responses to items on the above topic revealed that teachers at Mampong centre for deafblind persons use different symbols such as objects, pictures, print, Braille, photographs and line drawings as components of calendars in the teaching and learning process with deafblind persons.

Three of the interviewees gave similar responses as:

“Looking at the level of our students we use objects, pictures, photographs, prints as well as line drawings (remarked by teachers)”.

Two interviewees said:

“Pictures, photographs and line drawings are used as calendar symbols (expression from teachers)”.

The last interviewee said that:

“ My child is totally deafblind so I use Braille as a calendar component in the learning process but apart from Braille I use objects to explain things to him as well (verbatim expression) ”.

Five of the participants out of the six people who responded to the questionnaire mentioned the following components of the calendar as what is used in the teaching and learning process with deafblind persons at the centre.

Two teachers remarked as follows

“Objects, pictures, print, photographs and line drawings can be used as symbols in a calendar (expression from a teacher) ”.

“I use only Braille symbols for my students (expression of a teacher) ”.

Another teacher added this:

“I use real objects, pictures and line drawings as calendar symbol (expression by a teacher) ”.

From the discussion above almost all the participants used concrete and abstract symbol components of calendar. Concrete symbols ranges from real objects (which can be whole or partial) to pictures, photographs, miniatures or replicas. These findings agree with (Smith & Levack, 1996). For details refer to chapter two.

4.2 Research Question 3: Why use different communication forms and functions in the calendar schedules with persons who are deafblind?

Communication forms and functions in the calendar schedules.

Views gathered from the respondents on the topic under discussion were that communication forms such as sign or tactile sign language, gestures, mimes, body movement, facial expressions, and finger spelling support calendar activities.

In reaction to the sort of communication forms used three of the interviewees said the following respectively:

“I use tactile sign language, gestures and body movement (verbatim expression from a teacher)”.

“ I use sign language and finger spelling to explain things to the student I teach (expression by a teacher)”.

“I use gestures, simple sign language and sometime facial expression because my student has residual vision (verbatim from a teacher)”

The remaining two interviewee said the following respectively:

“I use gestures, mime, hand-on-hand and sign language with my student (remark by a teacher)”.

“I use sign, tactile sign language and body movement (remark by a teacher)”.

Three out of the six teachers who responded to the questionnaire stated similar response as sign language being the form of communication used with the deafblind persons. The rest three teachers did not respond to this item.

The result from the analysis revealed that there are many other communication forms that support calendar symbols to give more meaning to the deafblind person in the performance of any task or activity. It is important that teachers as well as other caregivers employ the additional communication form that is making use of speech,

sign language, gestures or finger spelling along side calendar symbols for effective teaching and learning to take place.

Ways by which a deafblind person performs communication function.

Responses to items on this topic by participants showed that whenever a deafblind person picks a symbol from a calendar the deafblind person signed what is on the activity symbol, get all materials from the store room where materials are kept and then move to the activity area to perform the task.

The following are comments from three respondents respectively:

“After picking the symbol from the calendar, the deafblind person signs and finger spells the activity in order of occurrences all the activities (verbatim expression by a teacher)”.

“When my student picks the activity symbol, he signs what he has to do then bring all materials for the activity before work start (comment by a teacher)”.

“After picking the symbol, he signs the activity then moves to the activity area to work (comment by a teacher)”.

Two respondents commented as follows:

“The student is prompted to pick the activity symbol, signs what is on it before beginning the activity (remark by a teacher)”.

I guide the student to the calendar to pick the activity symbol, assist him to sign what he has picked before doing the task (remarks by a teacher)”.

Similarly the interviewee said as follows,

“My student, after picking a symbol shows it to me then I will direct her to bring the needed materials for the activity to begin work (remark by a teacher)”.

“When the student picks the symbol, I cue her to sign what she has picked, goes for materials before starting work (comment form a teacher)”.

“I support my deafblind person to pick the symbol, helps him to sign then both of us go to the storeroom to bring materials for the activity to begin (expression by the teacher)”.

“When my student picks activity symbol from the calendar he signs the word on the activity symbol and then perform the activity (comment by a teacher)”.

“After picking the activity symbol the deafblind child signs back exactly what he/she picked, goes for materials before work starts (comments from teachers)”.

Analysis from both the interview and the questionnaires indicate that anytime a deafblind person picks a symbol from a calendar he/she signs what the symbol stand for. This shows that the deafblind person understands and gives meaning to the symbol for what it represents.

Alsop (1998) explained that as a deafblind person’s gain understanding of the world around them, they communicate using symbols or abstract forms such as signs to represent activities and level of understanding.

4.2 Research Question 4: How does calendar schedules provide for conversational topics and calendar tips.

Conversation using calendar and calendar tips.

Regarding conversation using calendars it emerged from the analysis that the structure (calendar) allows the deafblind person to have something to talk about all day long. Some of the participants who answered questionnaire on the topic under discussion commented.

“The structure of the calendar, which is the symbols in the calendar allow the deafblind person to have something to talk about anytime of the day (verbatim expression)”

“The calendar creates room for choice making by the deafblind person and also allows him to express interest in all activity (verbatim expression)”

“The calendar helps the deafblind person to know his daily activities in a sequential order (remarks by a teacher)”

“The calendar makes conversation real and easily understandable (comment by a teacher)”

Five interviewees commented respectively:

“The calendar arrangements allows the deafblind person to know what is coming on or what has finished and that makes the deafblind to converse when he/she picks a symbol (verbatim expression)”

The calendar provides for conversation for the deafblind person in that when he picks the activity symbol he signs the activity before working (remarks by teacher)”

“It enables the teacher and the deafblind person to know what we have and what we are supposed to do that particular day. (expression by a teacher)”

“The calendar allows the deafblind person to know upcoming activities and that when an activity begins it must be finished (verbatim expression by teacher)”

“The calendar gives the deafblind person the opportunity to know the activity that will take place in the day and feel at ease because the objects in the calendar offer the deafblind person the opportunity to converse (comment from a teacher)”

The analysis of data on the topic under discussion revealed that both respondents to the questionnaire and the interviewees gave similar responses suggesting that the calendar structure really provides for conversation, from the time that the deafblind person picks the symbol. This finding agrees with Miles and Riggio (1999) who stated that calendar schedules can offer occasions for a great deal of conversation about upcoming or completed activities and can also become a way for the student to request specific favoured activities. Miles and Riggio further stated that calendar as a schedule of routine activities give the deafblind person and adult (or caregiver) the opportunity to read together the sequence of upcoming activities.

This implies that the use of calendars make the teacher/caregiver available as a partner for the whole period of learning. It also encourages the deafblind person to make efforts to communicate in some way and the calendar, give the learner opportunities to have an interesting and well organized conversation.

Good conversation with persons who are deafblind

Ten participants shared the same view on the above topic that for any good conversation with a deafblind person the following must be adhered to: mutual respect, use of same communication forms and topic of shared interest, being an attentive partner, having physical contact and comfortable pacing.

Two others participants were of the view that:

“Mutual respect, having physical contact and comfortable pacing can help make good conversation with persons who are deafblind. (Verbatim expression by teachers)”.

“The use of some communication forms, being an attentive partner and having physical contact can make good conversation (comment by a teacher)”

From the analysis it has become obvious that the interviewees shared the same views with those who answered the questionnaires. These findings agree with Miles and Riggio (1999).

Better and perfect use of calendars

Regarding hints for better use of calendars all five participants who answered the questionnaires expressed their views as follows:

“The calendar must always be at a permanent place to be used. The deafblind person must be involved in the setting of the calendar (verbatim remark by teachers)”.

“The calendar set does not need a big space and must be accessible to the deafblind person using it (expression by a teacher)”

“The objects should be systematically arranged and should be done daily (remark by a teacher)”

“The symbols in the calendar must be appropriate to meet the needs of the user (comment by a teacher)”

“The calendar must be used all the time, if there is a change in the scheduling the deafblind person should be told (expression from a teacher)”

Three of the interviewees said that:

“Better and perfect use of calendars must have appropriate and durable materials for constructing to last longer and must be at a permanent place all the time (comment from a teachers)”.

“After each activity let the deafblind person sign finished and further assist the deafblind person to put the symbol of the activity performed in the “finished box” (expression by a teacher)”

“Guide the deafblind person to sign what is on the activity symbol correctly before starting the activity (remark by a teacher)”.

Another two interviewees added this:

“Before a deafblind person begins any activity let him slot in the activity symbol in the spaces provided in the calendar the order in which activities will be done (comment by a teacher)”

“All materials use to construct the calendar must be durable and the size of the symbol should meet the users need (expression by a teacher)”.

The responses from the two groups of participants indicate that in calendar usage certain hints guide its perfect use. What came out clearly from the responses gathered was that the calendar should be placed at a permanent place for the deafblind person to get it all the time. It also came out that the deafblind person must be involved in the scheduling of the calendar and this must be daily. Again, both interviewees and those who responded to questionnaire agreed that all the sections in the calendar must be clearly partitioned and filled in order or sequentially in the left to right format, the finding agrees with (Afutu, 2007). Other hints suggested by the respondents and the interviewees were use of durable materials for making the calendar and appropriate symbols base on the user’s need. This implies that to every teacher or caregiver it is important to note all these hints and employ them in the use of calendar so that effective teaching/ learning can be established all the time.

4.2 Research Question 5: What benefits do persons with deafblindness derive from the use of calendar schedules?

Benefits derive from the use of calendars

Analysis of the responses on the above topic indicates that there are numerous benefits derived from the use of calendars such as enhanced communication skills, awareness of time concepts/ time piece/ vocabulary and provision of emotional support. Others are choice making, development of cognitive skills. All six participants interviewed gave the same responses like enhanced communication skills, awareness of time concept/ time pieces/ time vocabulary, choice making, emotional support, turn taking, development of cognitive skills and social skills. Similarly four of those who answered questionnaires shared the same responses as those interviewed. However two teachers did not respond to this item.

From the above responses, it became clear that teachers and other caregivers are to ensure that persons with deafblindness using calendar schedules in all settings acquire these benefits. For instance persons with deafblindness need to be taught how to make choices to express their opinions on things. This finding agrees with Brown and Lehr (1993); Newton, Horner and Lund (1991) and Heward (1996). This implies that persons with deafblindness gain all these benefits whenever they use calendar schedules and in which ever environment they find them selves.

Good things about calendar schedules

Regarding this topic variety of views were gathered from all participants. Some of them are as follows as said by three interviewees:

“It makes the deafblind person to be alert of the various activities that are to be done at a time and also let the deafblind person to learn on their own because certain times the deafblind person will visit his/her calendar to do certain things which even the teacher has not been instructed, by so doing the deafblind person is developing self tuition. (verbatim expression by a teacher)”.

“It promotes good communication skills between the teacher and the deafblind person. It enhances the deafblind persons independence during activity since the teacher offers little or no assistance to the deafblind child (comment by a teacher)”.

“One thing I have observed is that it has helped my student in particular to read some particular word like mathematics, English language, language skills and vocational skills. She knows all these words because previously we were not dealing with those vocabularies but because of the use of the calendar, she now knows these vocabularies. It has also help us to be able to follow the time table we don't do things haphazardly we always want to go according to what we have in our calendar (verbatim expression from a teacher)”.

Two interviewees added that:

“Two things I have observed are that in the absence of the real teacher when a different teacher picks the student he knows exactly what they are supposed to do that day. It also helps the deafblind person to know the activity that we have each day, week or monthly (verbatim expression from a teacher)”.

“I have observed that when using the calendar it makes the deafblind person to be aware of time conscious and then gives them a lot of communication skills because they take the items in the calendar and communicate about the schedule (remark by a teachers)”.

The six teachers who answered the questionnaire remarked as follows:

“It helps in transition from one activity to another. It makes the person with deafblindness time conscious as well as choice making (comments from a teachers)”.

“The calendar allows the deafblind person to have a structure to follow sequentially. Calendars help deafblind persons to recall a past activity anytime they pick a symbol from the structure (expression by a teacher)”.

“It involves the deafblind person in it setting and enhances smooth teaching and learning (verbatim expression by a teachers)”.

“It makes the deafblind person easy prediction of his activities for the day to day task (expression of a teacher)”

“The calendar helps in transition from one level use of calendar to another(comment by a teacher)”

“The calendar provides a good structure for conversation and awareness of time passage for persons with deafblindness (expression by a teacher)”

Analysis from the transcript revealed that there are many good things about calendar schedules as a teaching and learning strategy with person who are deafblind. Some of the good things about the use of calendars as mentioned by teachers were promotion of good communication skills, anticipation of activities, expansion of vocabulary and awareness of passage of time. The rest are transition from one activity to another, structure to follow and to recall past activity anytime a symbol is picked, it enhances smooth teaching and learning, and these agree with the idea developed by Mclethie (2005) from the word calendar as a reminder for people who work with persons who are deafblind. That is:

„C“ stands for conversation, communication, choice making and concept formation.

„A“ stands for anticipation, activity and ability. This means that the calendar allows the deafblind person to know upcoming event, he/she is involved in the activity and has ability to follow activity orderly.

„L“ stands for learning. This means that learning goes on all the time.

„E“ stands for explore, expansion, exercise and enhancement. The deafblind person explores the symbols and other materials in the calendar and there is expansion of concepts and enhancement of learning.

„N“ stands for natural. The calendar process looks natural and is „real life“ learning.

„D“ stands for daily, and design. Indeed the calendar is design daily with the student to be consistent in scheduling all the time.

„A“ stands for attention, accessible and assessment. This implies that the calendar is attention directed, there is on going assessment by the caregiver to check if the

student is giving meaning or understanding the schedule and finally teaching/learning materials are easily accessible.

„R“ stands for routine, review and repetition. This suggests that the routine and repetition of activities enhances the student learning. Similarly the schedule is reviewed now and then as the student finishes a task and move on to the next activity.



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter summarizes the main findings of the study, conclusion drawn and recommendations made. The major concern of the study was the use of calendar schedules in teaching persons with deafblindness.

5.1 Summary of findings

This study sought to find out:

- How teachers and caregivers use calendars with persons who are deafblind?
- What calendar components were in the teaching and learning process with deafblind persons?
- Why the use of different communication forms and function in the calendar schedules with persons who are deafblind?
- How calendar schedules provide for conversational topics and calendar tips?
- What were the benefits that persons with deafblindness derive from the use of calendar schedule?

The study involved the demonstration school for the deaf (Centre for Deafblind Children and Youth). In all twelve (12) teachers of persons with deafblindness were involved. The instrument used to gather data was semi-structured interview which was organized on one-one basis. In addition, open ended questionnaires were also given out. The purposeful sampling technique was used in selecting the teachers. The researcher personally picked the teachers and the dates for the interview fixed.

Questionnaires were also distributed. The following are the summary of the findings based on the themes which emerged from the study.

Calendar usage

The findings revealed that calendar usage with persons who are deafblind is a structured routine schedule which contains symbols that stands for every activity that a person with deafblindness does every moment. It was also established that persons with deafblindness are taken through different types of calendars as him/her develops, progresses and the child is involved in the scheduling. Again, it became clear from the study that to implement calendars the person's age, extent of disability that is the vision, hearing, touch and cognition must be considered so that appropriate calendars can be designed to meet the needs of the individual person who to use it.

Calendar components

Findings on this theme revealed that both concrete and abstract symbols are used in the calendar structure like real objects, pictures, photographs or replicas, where as print/word and Braille form the abstract symbols. Both concrete and abstract symbols form calendar components.

Communication forms and functions

With regard to communication forms and functions the study revealed that apart from the symbols used in the calendar structure which is also communication forms, others like visual or tactile signing, gestures, finger spelling or body movement are used to support calendar activities. Further the study revealed that a person with deafblindness performs communication function from the time he/she picks the symbol till the time

that the activity is finished. This is an indication that he/she understood and gave meaning to the symbol in relation to the activity.

Conversation using calendar schedules

The findings from this study revealed that calendar structure provides for conversation from the time that the person with deafblindness picks the symbols till time the activity ends. It further revealed that the calendar structure helps the person to have a well organize conversation and that makes both the person with deafblindness and the caregiver observe good conversational practices, such as having mutual respect for one another using the same communication forms or being an attentive partner.

Calendar tips

Findings from both groups of participants on calendar tip were that calendar be set at a permanent place all the time. The study also revealed that the person with deafblindness must be involved in the setting up of the calendar and the sections in the calendar clearly partitioned and filled sequentially.

Benefits from the use of calendars

Findings under this theme revealed that there are many benefits that persons with deafblindness derive from using calendars schedules in their day to day activities. All two groups of participants agreed with the following benefits:

Enhanced communication skills, development of social skills, choice making and awareness of time concepts. Others such as development of cognitive skills, provision of emotional support and turn taking were also identified.

From the study again it revealed that there are good things about calendar schedules such as promotion of good communication skills, anticipation of upcoming activities, and awareness of passage of time. Others are transition from one activity to another, structure to follow and enhancement of smooth teaching and learning.

5.2 Conclusion

From the results of the findings, it is obvious that in using calendar schedules in teaching persons with deafblindness all teachers/caregivers must involve the children in the teaching and learning process. Again persons with deafblindness should be taken through well structured routine activities to be consistent in whatever they do. It was also identified that both concrete and abstract symbols must be used in constructing the calendar as the person with deafblindness moves from one time frame to another. In addition persons with deafblindness derived benefits such as enhanced communication, awareness of time concept and development of social skills from using calendars.

5.3 Recommendations

Based on the findings the following are suggested for consideration:

- Calendar design and the symbols being used must meet the needs of the particular individual going to use it.
- Teachers and other caregivers should use calendar schedules in all routines activities with persons who are deafblind.
- Persons who are deafblind should be involved in the scheduling of the calendar.

- Persons with deafblindness should be provided opportunities to make decisions and choices in the material use in the learning process.
- Both the use of static and dynamic forms of communication must be used in the teaching and learning process with persons who are deafblind.
- The calendar should always be set at a permanent place.
- Teachers and other care givers should have periodic in-service training on the use of calendars to enhance teaching and learning.



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APPENDICES

APPENDICE A:

**SEMI STRUCTURED INTERVIEW FOR TEACHERS AT THE CENTRE
FOR DEAFBLIND CHILDREN AND YOUTH**

BACKGROUND OF RESPONDENTS

School.....

Religion.....

Sex

Status

Qualification.....

Number of years taught at the DB centre

CALENDAR USAGE WITH PERSONS WHO ARE DEAFBLIND

1. What are calendars in relation to teaching from point of view?
2. Which type of calendar(s) do you often use in the teaching and learning process with deafblind persons?
 - a. Anticipatory calendar
 - b. Daily calendar
 - c. Weekly calendar
 - d. Monthly calendar
 - e. Annual calendar

(Tick as many as you used)

3. How is calendar set and used?
4. Suggest 2 things to consider when you want to implement calendar for deafblind person.

5. Which materials can be used to construct calendars?

- a. Plastic baskets/containers
- b. Rice sack
- c. Empty shoe boxes
- d. Wooden compartments
- e. Strips of cardboard
- f. Hard paper carton

(Tick as many as can be used)

CALENDAR COMPONENTS IN THE LEARNING PROCESS

1. Which of the following symbols do you often use when using calendars:

- a. Objects
- b. Pictures
- c. Print
- d. Braille
- e. Photographs
- f. Line drawings

(Tick as many as can be used)

2. List any other symbol which is not included in the above.

CALENDAR AND COMMUNICATION FORMS/FUNCTIONS

a. Which communication forms do you use in addition to the following list when using calendars:

- a. Objects
- b. Pictures
- c. Print

- d. Braille
- e. Photographs

1. Mention 2 ways by which you have observed a child with deafblindness you are working with perform communication function after picking symbols from the calendar.

CONVERSATION USING CALENDAR AND CALENDAR TIPS

1. How does the calendar provide for conversation with deafblind persons?
2. What makes good conversation with persons who are deafblind when using calendar.
 - a. Mutual respect
 - b. Use of same communication forms
 - c. Topic of shared interest
 - d. Being an attentive partner
 - e. Having physical contact
 - f. Comfortable pacing

(Tick as many as can be used)

BENEFITS FROM THE USE OF CALENDARS

1. Which of the following do you think are the benefits that persons with deafblindness derive from using calendars?
 - a. Enhanced communication skills
 - b. Awareness of time concept/time pieces/time vocabulary
 - c. Provision of emotional support
 - d. Choice making in the use of materials
 - e. Developmental of social skills

f. Development of cognitive skills

g. Turn taking

(Tick as many as can be used)

2. Suggest 2 good things you have observed about calendar schedule as a teaching strategy.



APPENDICE B:

**OPEN ENDED QUESTIONNAIRE FOR TEACHERS AT THE CENTRE FOR
DEAFBLIND CHILDREN AND YOUTH**

BACKGROUND OF RESPONDENTS

School.....

Religion

Sex

Status.....

Qualification.....

Number of years taught at the DB centre.....

CALENDAR USAGE WITH PERSONS WHO ARE DEAFBLIND

6. What are calendars in relation to teaching from point of view?
 7. Which type of calendar(s) do you often use in the teaching and learning process with deafblind persons?
 - f. Anticipatory calendar
 - g. Daily calendar
 - h. Weekly calendar
 - i. Monthly calendar
 - j. Annual calendar
- (Tick as many as you used)
8. How is calendar set and used?
 9. Suggest 2 things to consider when you want to implement calendar for deafblind person.
 10. Which materials can be used to construct calendars?

- g. Plastic baskets/containers
- h. Rice sack
- i. Empty shoe boxes
- j. Wooden compartments
- k. Strips of cardboard
- l. Hard paper carton

(Tick as many as can be used)

CALENDAR COMPONENTS IN THE LEARNING PROCESS

3. Which of the following symbols do you often use when using calendars:

- g. Objects
- h. Pictures
- i. Print
- j. Braille
- k. Photographs
- l. Line drawings

(Tick as many as can be used)

4. List any other symbol which is not included in the above.

CALENDAR AND COMMUNICATION FORMS/FUNCTIONS

b. Which communication forms do you use in addition to the following list when using calendars:

- a. Objects
- b. Pictures
- c. Print
- d. Braille

- e. Photographs
2. Mention 2 ways by which you have observed a child with deafblindness you are working with perform communication function after picking symbols from the calendar.

CONVERSATION USING CALENDAR AND CALENDAR TIPS

3. How does the calendar provide for conversation with deafblind persons?
4. What makes good conversation with persons who are deafblind when using calendar.

- g. Mutual respect
- h. Use of same communication forms
- i. Topic of shared interest
- j. Being an attentive partner
- k. Having physical contact
- l. Comfortable pacing

(Tick as many as can be used)

BENEFITS FROM THE USE OF CALENDARS

3. Which of the following do you think are the benefits that persons with deafblindness derive from using calendars?
- h. Enhanced communication skills
 - i. Awareness of time concept/time pieces/time vocabulary
 - j. Provision of emotional support
 - k. Choice making in the use of materials
 - l. Developmental of social skills
 - m. Development of cognitive skills

n. Turn taking

(Tick as many as can be used)

4. Suggest 2 good things you have observed about calendar schedule as a teaching strategy.



**APPENDIX C:
CALENDAR EVALUATION SHEET**

Calendar Evaluation

Developed by Robbie Blaha and Dale Rudin, Texas School for the Blind and Visually Impaired, Austin TX

Student: _____ Instructor: _____

Date of Observation: _____ Time: _____

USE

Does the student use the calendar at school? Yes _____ No _____
With whom? _____

Does the student use the calendar at the dorm or at home? Yes _____ No _____
With whom? _____

FORMAT

Describe and draw a picture of the calendar.

	YES	NO	N/A	?
Is the calendar understandable to the student?				
Is the size appropriate?				
Is it clear? (not too busy or too messy)				
Is it in the student's visual field?				
Is it accessible?				
Are the time intervals clearly differentiated?				
Are the calendar symbols or pictures easy to differentiate?				
Is the calendar kept in the same place so the student can find it?				
Is the calendar appropriate for the student?				
Are the materials appropriate to the student's motor level?				
Are the materials appropriate to the functional level of the student?				
Are the materials age-appropriate?				
Is the calendar individualized for the student?				
Is the calendar evolving to be more traditional and portable for a variety of settings?				

	YES	NO	N/A	?
Is the calendar format organized?				
Are the calendar symbols labeled for adults and students?				
Are the materials accessible to the teacher?				
Is there a predictable order to the routine to enhance student understanding?				
Is the calendar consistent with the daily schedule?				
INTEREST				
Does the student demonstrate interest in the calendar?				
Does the student ever seek out the calendar?				
Does the student show positive affective behavior at the calendar?				
Can the student manipulate the calendar materials?				
Are there motivating activities planned for the student?				
Are the symbols interesting to the student?				
Are there a variety of materials used to enhance interest?				
Does the student demonstrate any control over the calendar?				
Does the teacher demonstrate interest in the calendar?				
Does the teacher plan for plus one novelty?				
Does the teacher make the calendar a rewarding experience?				
Is the calendar done every day?				
Does the teacher demonstrate a positive affect while doing the calendar?				
Is the calendar relevant to the day?				
Is the calendar allotted enough time in the schedule?				
Does the teacher use the calendar to make changes/cancellations concrete?				
COMMUNICATION				
Is a social conversational setting present?				
Does the student appear physically comfortable and stable?				
Is there eye or tactual contact between the student and the teacher?				
Does the teacher focus on the student without outside interruption?				
Is there an initial social greeting?				
Are signs/gestures/signals presented accurately?				
Is the adult communication meaningful to the student?				

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	YES	NO	N/A	?
Is a dialogue taking place?				
Is the student given time to respond?				
Does the adult give non-verbal cues to the student?				
Is the communication content conversational and not command oriented?				
Is the student response varied (not routine, not imitation, not only labeling)?				
Is the teacher picking up on student cues?				
Does the student communicate spontaneously?				
Does the teacher utilize calendar representation and dialogue with students in transit?				
Is communication expanded after activity takes place?				
Are activities discussed beyond labeling?				



APPENDIX D:

CALENDARS SCHEDULES USE AT THE CENTRE FOR DEAF BLIND CHILDREN AND YOUTH.

* Padded foam folder calendar .Symbols put in order with student's participation



APPENDIX D:

CALENDARS SCHEDULES USE AT THE CENTRE FOR DEAF BLIND CHILDREN AND YOUTH.

* Padded foam folder calendar .Symbols put in order with student's participation



* Segmented wooden compartment calendar. Object symbols put in order with student's participation



* Cardboard with pockets calendars. Picture paired with print symbols put in order with student's participation.



Rice sack with pockets attached calendar. Object symbols arranged in order with student's participation



Cardboard with pocket calendar. Braille symbols arranged in order with student



Strips of cardboard calendar. Symbols arranged sequentially in sentence form with student's participation.



