Switch Progression
Assessment guide and useful resources

Much has been written over the years regarding the assessment and use of switches for learners with severe and complex difficulties. Some good... some not so good. Switches provide a direct method of controlling the computer, tablet devices, battery toys and more for those with severe cognitive, sensory and physical difficulties. They provide independent access to communication learning and leisure but using them has to be learned. We've compiled some of the most common issues you will come across on that journey.

Which switch does the student need?
Switch assessment is not an exact science despite what many 'experts' may tell you. A good assessment draws together information about the learner from parents, teachers, therapists and others who have regular contact with them. It tries to identify one or more voluntary movements which can be used by the student to activate a switch. These movements should be as reliable and consistent as possible

It will attempt to identify the best switch or switches for the student and where to mount them to make pressing the switch as easy as possible. It will take into account who is supporting the student and inform a teaching plan to ensure the learner makes good progress in their use of the switch to support their learning and communication needs. If all of this sounds very daunting, you can always engage a specialist consultant or service. Alternatively there are some very useful free assessment materials including a 'Switch Assessment Framework' from the ACE Centre which will help you through the process. You'll find them on our web site.

A huge range of switches are available to buy from specialist suppliers. The decision as to which switch you'll need will be informed by your assessment

Hitch Switch Box   **Simple Switch Box**   **Crick Switch Box**   **Blue2 (for ipad / Android)**

You'll also need a switch interface if you plan to use the switch on the computer. There are many available from specialist suppliers. Most Learners need only two switches and the 'Simple Switch Box' from Inclusive Technology would be a good choice. If you are planning to use a switch on an iPad or Android device, you'll need a Bluetooth switch. We strongly recommend the **Ablenet Blue2** which we have extensively tested and works with just about every app on the market.

Switch interfaces work by converting the press of a switch into a key press that the computer can understand. Almost all switch software requires a switch interface capable of sending a <SPACE> (one switch) and <ENTER> (two switches) All of the interface boxes shown above are able to send both <SPACE> and <ENTER> and are 100% compatible with the activities on our web site. Some schools choose to use an adapted mouse which when connected to a switch sends a left or right mouse click. We do not recommend using mouse clicks for switch presses and most of our activities will not work with them

Things to consider when working with switches

Prompting
Everyone needs prompts when they are learning a new skill however it's important that our learners don't become dependent on them. We identify our baseline for prompts as part of our assessment and work towards reducing them as soon as we can. If you are supporting a learner with switches, it's your job to work toward losing your job. Remember to always give the learner time to respond. When you' think you have waited long enough... wait another 30 seconds
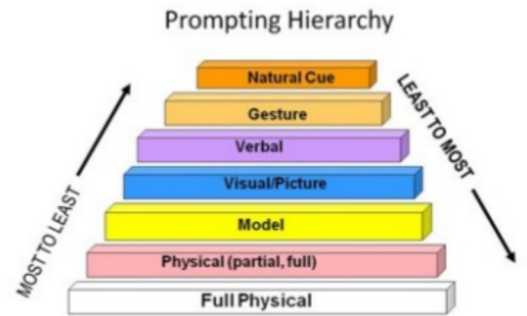
"Press the Switch"
It's surprising how many schools I visit still use some variant of the "Press the Switch" verbal prompt. Prompts which refer to the switch shift the focus of the activity onto the switch and the process of pressing it rather than focusing on the effects the learner has created through their actions. Rather than using "press the switch" or "press the button", try something related to the reward like, "more music", "more cars" or simply "more".

Of course learners need to be reminded about the switch. To help them make the connection between the switch and the reward, we should always ensure that there is a picture on the switch which relates directly to the effect that pressing it would produce. All of the programs on this web site are accompanied by a full set of images to print which have been sized to fit the most common switches.

Switch Tapping
Occasionally we come across students who tap or bang the switch repeatedly. This can vary from light tapping to heavy handed and quite violent slapping of the switch. To understand why they do this, we need to look a little more closely at them, where they are, who is around them and the activity they are taking part in.

Here are a few things that you may like to consider.

- **Does the learner understand the what the switch is?**
Some learners may not understand what the switch is. For them it may just be something you have placed on their tray and they are exploring it as they might any other object placed on their tray. If you suspect that this is the case then you may wish to consider modelling the actions of the switch, first by showing the learner what it does, then by hand-over-hand work if the learner will tolerate it. Our goal is the learner to begin to understand that by pressing the switch they are able to make things happen.

- **Does the learner understand the activity?**
Some learners may not understand what is expected of them to complete the activity. For example a learner may have been working on a 'press and let go' activity previously and this new activity requires the learner to press and hold the switch down. The student presses and lets go of the switch but nothing happens so they repeat the switch press over and over. Again we need to consider modelling the required behavior to help the student understand and make connections between their actions and the actions of the switch toy or software.

- **Is the learner seeking attention by banging the switch?**

Some learners bang switches because when they do, someone comes to talk to them. For many of our learners their interactions with you and others are the high point of their day and some will seek whatever opportunities initiate these moments. If you suspect that this is happening, try a different approach. Find activities that interest the student and use them together. Use activities that require holding a switch down to limit the switch banging and work slowly towards reducing your input to enable the learner to begin to work more independently.

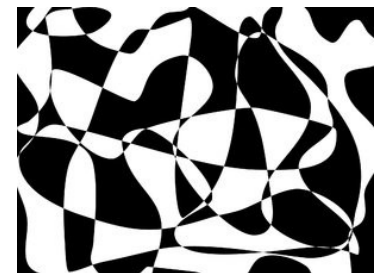**Switch Building Activities**

Many commercial switch programs feature a 'switch building' level where the learner is required to press the switch a number of times in order to 'build' either a pattern, a picture or a scene. With each press of the switch, another part of the image is 'built' until at the last press in the sequence the complete image is revealed and usually animated as a reward. Sequences often require three, five or more switch presses before the animation sequence is played. Learners moving from cause and effect activities often start switch building at three presses and move on to more as they make progress.

Progress? Is the student really making progress if they're learning to hit a switch over and over again? By that maxim, I've worked with some switch skills geniuses. You know the learners I'm talking about, the ones who sit there and bang or tap the switch continually… again and again and again like they're beating out the bass line of 100bpm house music. Surely that can't be right. Is a student who can press a switch six times in a row to build a picture more advanced than one who can only press it only three? Switch 'building' is a misnomer and for some learners it is counterproductive. Imagine 'building' the picture of a cow with multiple switch presses. <press> "Look a cow's leg" <press> "Look udders"

How many of our students working at low levels of cognition would be able to identify a picture from parts of a picture? It gets worse. Some commercial software uses patterns for the pictures to build.

<press> "look a wobbly line", <press> "and another wobbly line", <press> "and another …" You get the picture? Most of our students don't and because they don't really understand what's happening they quickly learn that if they bash the switch repeatedly, eventually the reward will play. This is counter-productive and keeps them firmly at the cause and effect 'make something happen' stage except now they are tapping a switch repeatedly to get the reward. We have taken a deliberate decision NOT to include switch building activities as part of our program of progression. The disadvantages in our opinion far outweigh any benefits especially for learners with severe and complex needs.

Ian Bean