Action research to enhance the education of student Sign Language Interpreters in the Healthcare domain

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Introduction

There is a well-documented disparity between the health outcomes of deaf people and those of the general population. A report by SignHealth (2014) indicates that issues with lack of access to health information and services has led to *"…a likelihood of reduced life expectancy in Deaf people."* (2014,p.3)

Much of this disparity has been attributed to issues with communication between health professionals and the BSL (British Sign Language) using deaf community. Healthwatch (2017) report that deaf people are unhappy with some of the interpreting services they receive, with issues raised around levels of qualification or competence

This Action Research study aims to determine whether using a **Cognitive Apprenticeship** learning framework to deliver a **Situated Learning** opportunity to student sign language interpreters, improves their ability to effectively interpret a simulated healthcare assignment.

Objectives

1. Determine which aspects of a healthcare interpretation pose challenges for student sign language interpreters.
2. Design an educational intervention to address these challenges.
3. Administer the intervention in the form of a *model interpretation* done by expert sign language interpreters
4. Evaluate the impact of this intervention.
5. Make recommendations to influence the educational practices of healthcare interpreter educators

Methodology

This study uses interactional analysis of a multi-modal interpreting event, as part of a nine-stage Action Research cycle, to identify areas which require intervention to effect change and enhance the level of skill and or knowledge of student interpreters working in the healthcare domain.

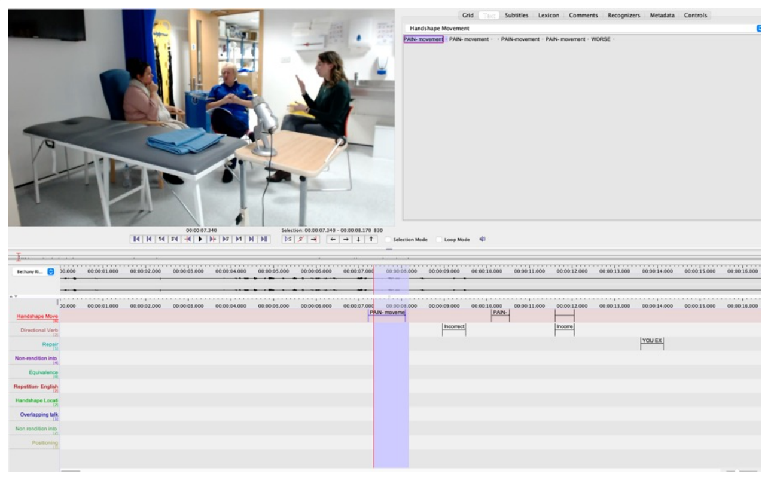
The educational intervention is designed using the social learning theory **'Situated Learning**' (Lave and Wenger, 1991) and the associated learning framework, **Cognitive Apprenticeship** (Collins et al, 1987).

Data were collected by a variety of methods, as follows:

Questionnaires (**Stages 5 and 8**) to establish:

- Pre-intervention confidence levels related to healthcare interpreting
- Student perception of the value of each educational activity
- Student views about situated learning and the importance participant authenticity and environmental authenticity
- Post-intervention confidence levels related to healthcare interpreting

Video data analysis using Elan (**Stages 2 and 9**)



Thematic analysis and coding of the issues encountered by students in Datasets 01 and 02 informed the intervention design Post-intervention footage was analysed to determine whether the intervention had had a positive effect on student performance

Video data analysis to compare *model interpretation* participant communication behaviours (**Stage 4**)

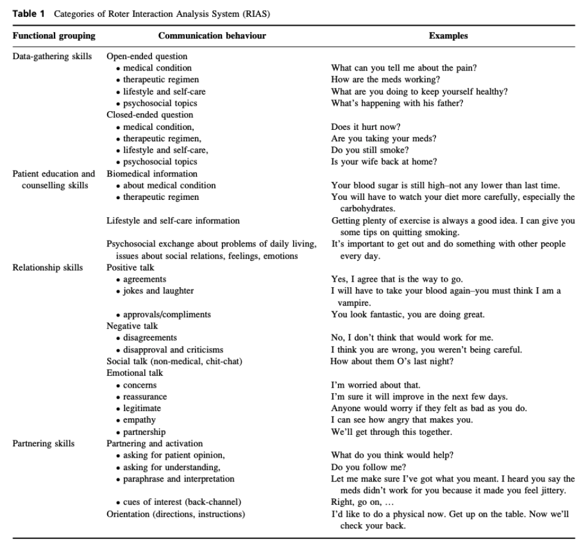
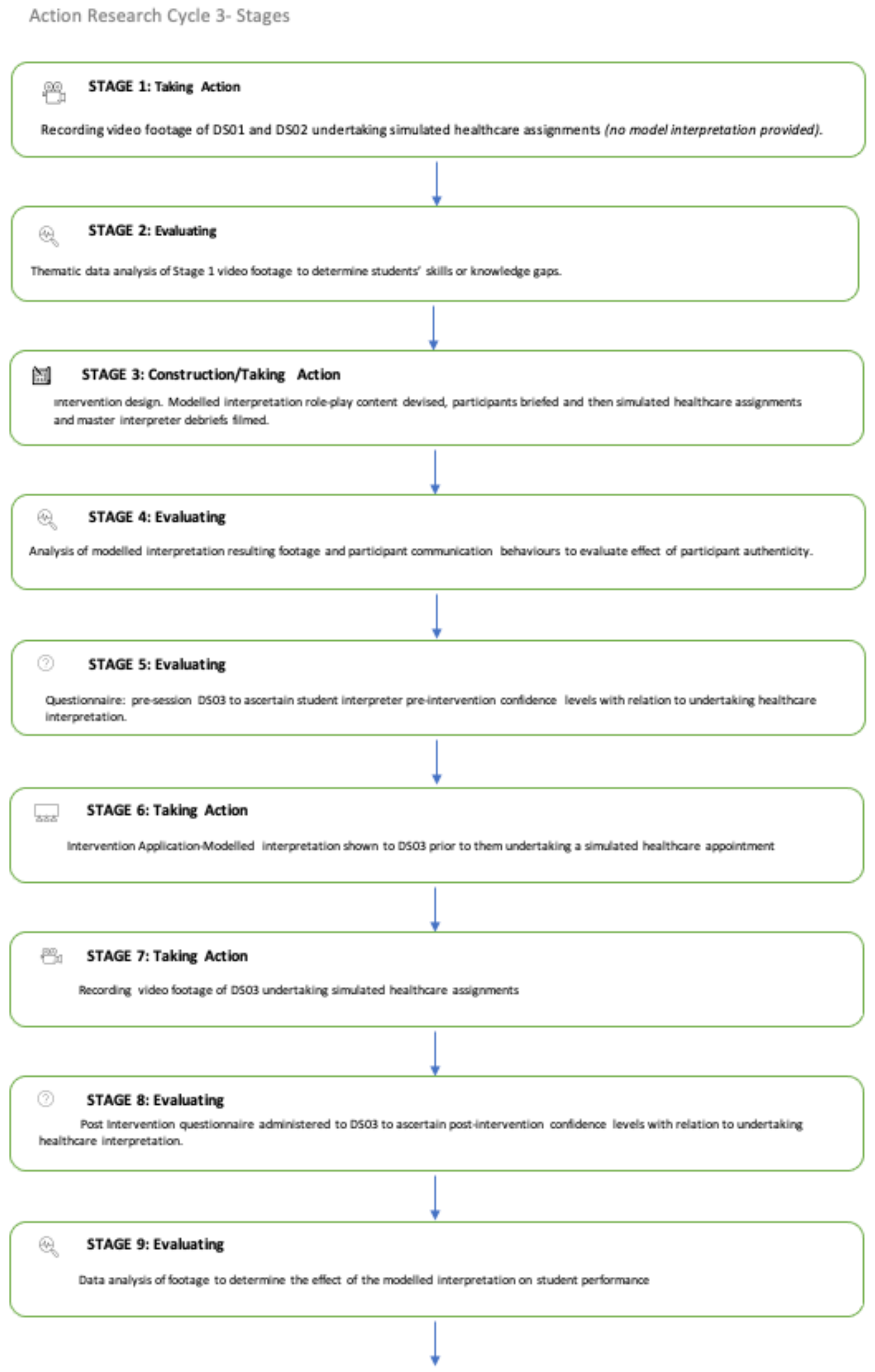


Table 1 Categories of Roter Interaction Analysis System (RIAS)

Functional grouping	Communication behaviour	Examples
Data-gathering skills	Open-ended question	
	• medical condition	What can you tell me about the pain?
	• therapeutic regimen	How are the meds working?
	• lifestyle and self-care	What are you doing to keep yourself healthy?
	• psychosocial topics	What's happening with his father?
	Closed-ended question	
	• medical condition,	Does it hurt now?
	• therapeutic regimen,	Are you taking your meds?
	• lifestyle and self-care,	Do you still smoke?
	• psychosocial topics	Is your wife back at home?
Patient education and counselling skills	Biomedical information	
	• about medical condition	Your blood sugar is still high–not any lower than last time.
	• therapeutic regimen	You will have to watch your diet more carefully, especially the carbohydrates.
	Lifestyle and self-care information	Getting plenty of exercise is always a good idea. I can give you some tips on quitting smoking.
	Psychosocial exchange about problems of daily living, issues about social relations, feelings, emotions	It's important to get out and do something with other people every day.
Relationship skills	Positive talk	
	• agreements	Yes, I agree that is the way to go.
	• jokes and laughter	I will have to take your blood again–you must think I am a vampire.
	• approvals/compliments	You look fantastic, you are doing great.
	Negative talk	
	• disagreements	No, I don't think that would work for me.
	• disapproval and criticisms	I think you are wrong, you weren't being careful.
	Social talk (non-medical, chit-chat)	How about them O's last night?
	Emotional talk	
	• concerns	I'm worried about that.
	• reassurance	I'm sure it will improve in the next few days.
	• legitimate	Anyone would worry if they felt as bad as you do.
	• empathy	I can see how angry that makes you.
	• partnership	We'll get through this together.
Partnering skills	Partnering and activation	
	• asking for patient opinion,	What do you think would help?
	• asking for understanding,	Do you follow me?
	• paraphrase and interpretation	Let me make sure I've got what you meant. I heard you say the meds didn't work for you because it made you feel jittery.
	• cues of interest (back-channel)	Right, go on, …
	Orientation (directions, instructions)	I'd like to do a physical now. Get up on the table. Now we'll check your back.

Analysis of the communication behaviors of the authentic Nurse and the Non-authentic Physiotherapist (actor) in the *model interpretations* using the Roter Interaction Analysis System to determine the impact of authentic healthcare talk.



Action Research Cycle 3- Stages

STAGE 1: Taking Action
Recording video footage of DS01 and DS02 undertaking simulated healthcare assignments *(no model interpretation provided).*

STAGE 2: Evaluating
Thematic data analysis of Stage 1 video footage to determine students' skills or knowledge gaps.

STAGE 3: Construction/Taking Action
Intervention design. Modelled interpretation role-play content devised, participants briefed and then simulated healthcare assignments and master interpreter debriefs filmed.

STAGE 4: Evaluating
Analysis of modelled interpretation resulting footage and participant communication behaviours to evaluate effect of participant authenticity.

STAGE 5: Evaluating
Questionnaire: pre-session DS03 to ascertain student interpreter pre-intervention confidence levels with relation to undertaking healthcare interpretation.

STAGE 6: Taking Action
Intervention Application-Modelled interpretation shown to DS03 prior to them undertaking a simulated healthcare appointment

STAGE 7: Taking Action
Recording video footage of DS03 undertaking simulated healthcare assignments

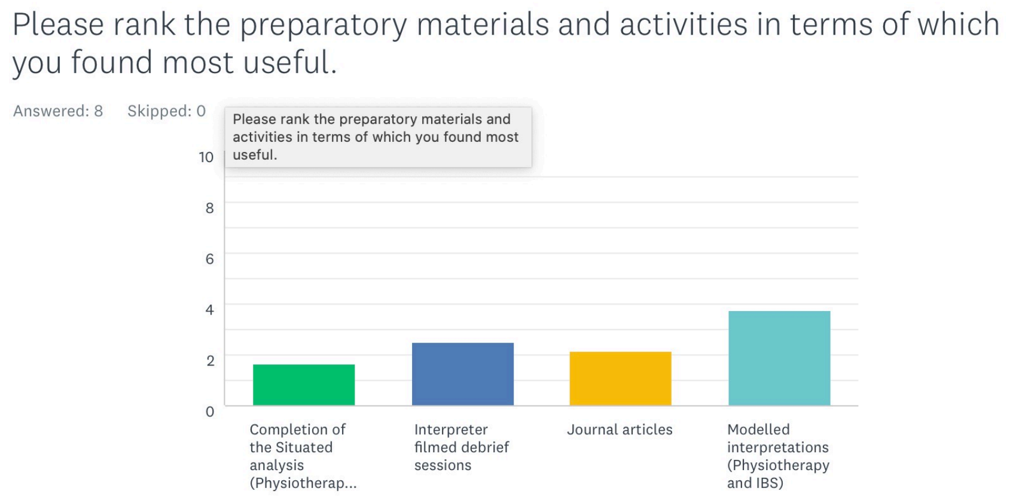
STAGE 8: Evaluating
Post Intervention questionnaire administered to DS03 to ascertain post-intervention confidence levels with relation to undertaking healthcare interpretation.

STAGE 9: Evaluating
Data analysis of footage to determine the effect of the modelled interpretation on student performance

Results

Questionnaires Stage 5 and 8

Students valued the opportunity to work with members of the Community of Practice inherent within the healthcare domain. "*Having the opportunity to work with a non-signing professional give us the experience of real-world practice and where we as interpreters fall within an interaction in a tangible way. This also gives us a sense of accountability as we need to be acutely aware of mis-communications, omissions and power dynamics which are what working interpreters contend with on a daily basis."*
They also rated the *model interpretations* as the most useful preparation for the simulated healthcare assignment.



Student interpreters' confidence in undertaking healthcare interpretations rose **40%** from a mean score of 4.9 pre-intervention, to a mean score of 6.9 post-intervention

Instructor modelling was found to positively impact upon the students' ability to negotiate appropriate positioning for physical examinations.

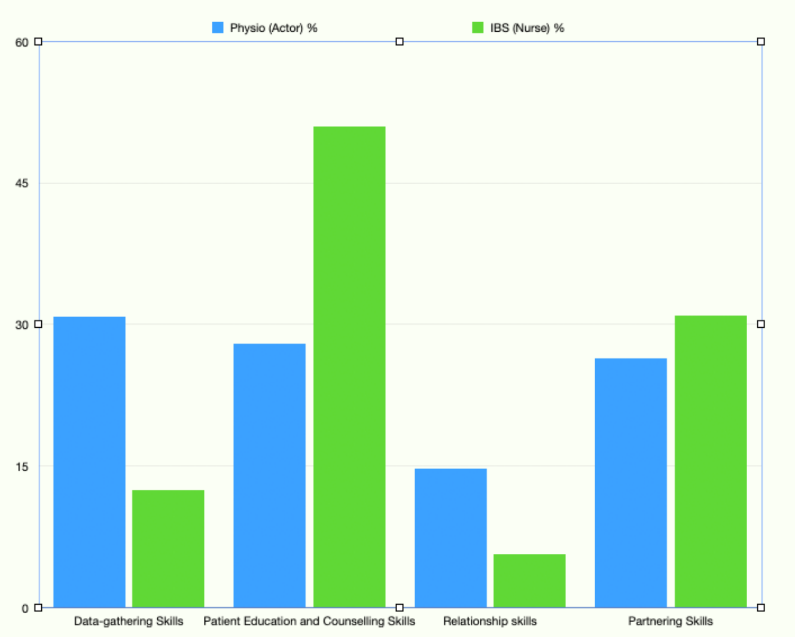
Pre-intervention student positioning example.

Intervention positioning example

Post-intervention, students were less likely to have trouble managing occasions when there were instances of overlapping talk between participants. In the pre-intervention cohort, this would often result in information being missed out of the interpretation (zero rendition).

Post-intervention, there was a decrease in the amount of Handshape errors made by students and students were more likely to effect a repair, which indicates an increased ability to self-monitor and manage instances where they experience difficulty.

There were significant differences in the communication behaviours exhibited by the authentic and non-authentic healthcare 'professionals' in the model interpretations



The authentic healthcare professional asked many more open-ended questions than the actor playing the physiotherapist. They also spent less time data gathering and more time on patient counselling and education.

Situating learning in an authentic physical environment with associated cultural artefacts allowed students to experience the ways that medical paraphernalia can impact their ability to communicate with a BSL user. For example, one who has restricted mobility due to cannulation or a blood pressure cuff.

Conclusions

The research demonstrates the benefits of situated learning and instructor modelling when educating student sign language interpreters to work in the healthcare domain. Allowing students access to expert practice in this area, prior to undertaking healthcare interpretations themselves, enables them to see the ways that the experienced interpreters interact with both the physical environment and the deaf and hearing participants. This has a positive impact on their confidence, their ability to negotiate positioning, manage overlapping talk and accurately interpret, making repairs or seeking clarification where necessary.
It is hoped that this training will benefit members of the deaf community who are either patients or healthcare practitioners, by providing them with access to skilled healthcare interpreters.

References

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