

SPLASH OF SUCCESS: VALIDATING TOOLS FOR SPECIAL NEEDS STUDENTS IN WATER-BASED LEARNING

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Abstract

Purpose: While water activities are often part of the Integrated Special Education Program (PPKI), there is currently no published guide for special integration education teachers (GPKI) to effectively support students with learning disabilities during these activities. The Aqua Explorers module was developed to fill this gap, and this study aims to assess the validity and reliability of the instruments designed to evaluate the module's effectiveness. **Methodology:** The validity of the questionnaire and interview instruments was determined through evaluations by four experts, utilizing Cohen's Kappa coefficient to gauge validity. The reliability of the questionnaire was assessed using Cronbach's Alpha correlation coefficient, while interview instruments were refined based on expert feedback. **Findings:** The Cohen's Kappa test yielded values of 0.460 and 0.658, indicating moderate agreement, while the Cronbach's Alpha for the questionnaire was 0.86, reflecting high reliability. For the interview instruments, revisions were made following a pilot test and supervisor review, enhancing their reliability. Overall, the results indicate that the validity and reliability of the instruments are at a satisfactory level, making them suitable for use.

Keywords: Special Education Teachers, Special Needs Students, Water Activities, Validity, Reliability.

1. INTRODUCTION

The special education program is a lesson created to meet the needs of special needs students (Mohamed,2005). Special education programs are set uniquely and have their own means of implementation. The teaching and learning process is planned and conducted regularly and tested its effectiveness to ensure that it can provide special needs students (learning disabilities) to have a high independent and successful skill in life (Mohamed,2005). The Special Education Program is a unique program as it involves flexible teaching and learning processes according to the suitability of special needs (learning disabilities) students studying in it.

Previously, there were four categories of special education students which are vision problems, hearing problems, learning disabilities and the last one is gifted and talented (Razhiyah,2005). However, nowadays there are three special education programs introduced in Malaysian Public School which are the Special Education Class of Vision Impaired, Special Education Class of Hearing Impaired and Special Education Class of Learning Disabilities (Kementerian Pendidikan Malaysia,2018). The Integrated Special Education Programme (PPKI) is a special education program attended by special needs students (learning disabilities) in special classes

inside a government schools or government assistance school (Bahagian Pendidikan Khas Kementerian Pendidikan Malaysia,2014). Individual with Disability Education Act (IDEA) (Yell & Shriner, 1997) explains that special needs (learning disabilities) students are students who have problems in one or more of the basic psychological processes involving the use or understanding of the language either speech or writing. Various problems that may be faced by special needs (learning disabilities) students in relation to language proficiency are the ability to read, listen, speak and thinking skills that are incompetent compared to their age. The National Joint Committee (NJCLD) defines learning problems as a variety of disabilities that cause difficulties in speaking, listening, writing, reading, decision making or solving mathematical problems. Among the categories of pupils in the Special Education Class of Learning Disabilities are Dyslexia, Attention Deficit Hyperactivity Disorder (ADHD), Slow Learner, Autism Spectrum Disorder and Down Syndrome.

1.1 Research Background

Pupils with special needs (learning disabilities) are often associated with psychological and neurological difficulties against language response either oral, written, cognitive perception or psychomotor activity. Pupils with special needs (learning disabilities) are actually unable to follow classes using the syllabus and pedagogical ways for normal children in the mainstream (Ali & Sahal,2016). This is due to the difference of systems internally and externally compared to the ordinary children. If we focus on the appearance, special needs (learning disabilities) students seems like they do not have any physical, emotional, vision, hearing or learning disabilities and as results,it is difficult to identify them and usually getting mixed up with the students in the mainstream. This has caused them to be drowned and dropped out from studying as they cannot cope with the mainstream pace of learning. However, there are ways to identify these children based on their unique features. Among the features that are easy to identify are unsatisfactory academic achievement, weak in mathematical and language subjects and also do not show interest in the classroom. Based on observation through many studies, most of these kids only can focus for a short time on teaching and learning activities, often drowsy, easily distracted, forgetful and always embarrassed to ask questions even if they do not understand (Ali & Sahal,2016). This causes them to be left behind in the lessons and always seen as incapable while they are actually experiencing difficulties in understanding the contents of the lessons. Due to these factors, special needs (learning disabilities) students are not suitable to be in the mainstream classes and when parents or teachers in the mainstream identify these features, they are recommended to refer these children to the doctor to confirm the status of their child-mentally and physically. As a special educational teacher, all these factors should have been considered in order to identify the appropriate teaching and learning delivery method for this special needs (learning disabilities) student. The Integrated Special Education Programme (PPKI) has a variety of interesting and appropriate pedagogical techniques that comply the needs of special needs (learning disabilities) students and among them is the Classroom External Learning (PLBD) which includes various activities such as school trip, field activities including horse riding and water activities (Kementerian Pelajaran Malaysia,2005). PPKIs indeed carry out relatively frequent PLBD activities and mostly include outdoor activities such as horseback riding, bowling and water activities.

1.2 Problem Statement

Various Outdoor Learning Activities (PLBD) are often carried out in schools with integration special education programs (PPKI) throughout Penang such as horse riding activities, activities involving sensory stimuli and aquatic activities [8]. Aquatic activities are often carried out by playing in the swimming pool conducted by outsiders who have a lifesaving certificate such as the Malaysian Public Service Agency or the Fire Brigade officer. These individuals have no skills in handling special needs (learning disabilities) students and have to be paid according to hours at an expensive rate (Jabatan Pendidikan Negeri Pulau Pinang, 2018). This is one of the factors that resulted in difficulty in conducting aquatic activity even though it actually had a positive impact on students with special needs (learning disabilities). Another factor is, these water activities are often carried out without the goal, objectives and guidance due to no exposure and training to teachers in carrying out these aquatic activities.

Penang's special education teacher skills in conducting water activities are also very poor based on data collection by the Penang State Education Department where survey results find out, only 4 people from 616 special education teachers in Penang have knowledge in skills basic swimming and confident to handle water activities for their special kids while 0 out of 616 special education teachers in Penang have a certificate of lifesaving in the water which is a must and most important qualification in handling water activities for school kids in Malaysia (Jabatan Pendidikan Negeri Pulau Pinang, 2018). This is a big controversial issue as 62.5% of these special integration education programs have conducted water activities with no experts, knowledgeable and confident individuals handling it (Jabatan Pendidikan Negeri Pulau Pinang, 2018).

Swimming activities are also conducted without any objectives, guidelines or specific modules for the performance improvement of special needs (learning disabilities) students through this activity (Jabatan Pendidikan Negeri Pulau Pinang, 2018). This has caused most teachers to carry out swimming activities by playing water without any objective for specific performance improvements. Swimming modules for special needs students are not widely published (Kraft et.al, 2019) while water activities for special needs (learning disabilities) students have been carried out for a long time in the Integration Special Education Programme (PPKI). This situation that led to water activities in the Outdoor Learning Activities (PLBD) was often questioned by parents and school administration as there were no significant proof that shows these water activities to be beneficial for these special kids and no guide or module used throughout the activity to prove that this activity was actually have its objective, aimed and can be operated by special educational teachers of integration well and safely.

Handling water activities actually requires high skills especially when it involves special needs students. Handling without expertise or disclosure on how to operate the activities will invite hazards to teachers as well as special needs students. A water activity which refers to modules is also very necessary to enhance the skills of special education (learning disabilities) students and it should also be conducted regularly in accordance with the module to ensure that activities have a positive impact and fruitful, not just playing water. Teaching using modules to develop curriculum will result in more quality and productive learning (Shariza, 2017). Therefore, in

order to improve the quality of teacher teaching and student learning in water activities through PLBD, this module has to be developed.

After completed the development of this Aquaexplorers Module, an instrument to measure the effectiveness of the module has to be build. In the context of this research, a questionnaire and an interview was made by the researcher through expert review (Ikart, 2019; Poncette et.al, 2020) and content validation (Shariza,2017). A validity and reliability test had to be done to prove the efficiency of the module. In this paper, the process of validity and reliability of the instruments will be detailed and explained thoroughly to prove the originality and quality of the instruments.

2. MATERIALS AND METHODS

2.1 Research Design

The design used for this pilot study is a quasi-experimental design. It uses a sampling method aimed at using Integrated Special Education Teachers (GPKI) as samples and administering pre-test before conducting intervention to the study sample (n:120) of 10 sessions using the AquaExplorer module. A post-test that fills the same questionnaire form with the pre-test will be conducted upon completion of 10 intervention sessions.

2.2 Participants and Sampling

This pilot study generally involves 120 Integrated Special Education Teachers (GPKI) from 30 Integrated Special Education Programs (PPKI) throughout Penang. Samples are recruited by invitation from the Special Education Sector, Penang State Education Department to their respective schools with funds and facilities by Universiti Sains Malaysia. All of these samples are certified Integrated Special Education Teachers (GPKI) and are involved in conducting water activity programmes at their respected PPKIs. The sample of the study is also the person responsible for the aquatic activity program or water therapy conducted periodically at PPKI respectively and they are the right group to be the sample of this study. Administrators such as the Ministry of Education Malaysia (KPM), State Education Department (JPN), District Education Office (PPD) and the school administrators will receive an invitation letter from the researcher to conduct this study. Samples should also be among those who do not have past history or chronic water-related diseases for example suffer from severe seizures or asthma when doing water activities.

2.3 Instrument Development Process - Questionnaire

Instrument development is performed by the using document analysis method (Shariza, 2017) and expert review method (Ikart, 2019). Four experts in the field (Ikart, 2019) are appointed as reviewers of the instrument. Questions are formed by researchers based on five objectives and three phases of the study. The questions is then reviewed by these four experts to determine the suitability of the question and expert views used to improve the question so that it answers the objectives of the study.

Table 1: Section and elements in the questionnaire

Section One	Section 2	Section 3	Section 4
<p>Samples background:</p> <p>1. School 2. Gender 3. Age</p>	<p>The knowledge level of Special Education Teachers in handling 10 basic water skills in the module:</p> <ul style="list-style-type: none"> ▪ Water confidence ▪ Bobbing & Bubbling ▪ Floating (prone, supine, pencil, mushroom, jellyfish, combination) ▪ Walk, bend, run in the water ▪ Push & Glide, Regain Feet ▪ Kicking (flutter kick) – with kicking board, swimming noodle, without aid ▪ Front crawl arm action ▪ Kicking, arm action and breathing ▪ Water treading ▪ Small games 	<p>The confident level of Special Education Teachers in handling 10 basic water skills in the module:</p> <ul style="list-style-type: none"> ▪ Water confidence ▪ Bobbing & Bubbling ▪ Floating (prone, supine, pencil, mushroom, jellyfish, combination) ▪ Walk, bend, run in the water ▪ Push & Glide, Regain Feet ▪ Kicking (flutter kick) – with kicking board, swimming noodle, without aid ▪ Front crawl arm action ▪ Kicking, arm action and breathing ▪ Water treading ▪ Small games 	<p>The applicability level of Aquaexplorers Module:</p> <ul style="list-style-type: none"> ▪ Is it easy to be used by GPKI? ▪ Is it helping in conducting water activity? ▪ Is the contents suitable for GPKI? ▪ Are you going to use it every time you conduct water activities for your special education (learning disabilities) students?

2.4 Instrument Development Process - Interview

The development of an interview instrument of the study also uses the method of document analysis (Shariza, 2017) and expert review methods (Ikart, 2019). Four experts in the field (Ikart, 2019), the Excellent Lecturer of Adapted Physical Education, Special Education Lecturer, Special Education Excellent Teacher of Penang State and Swimming Coaches of Special Needs have been appointed as an interview reviewer. This interview question is formed by researchers in the form of semi-structured interviews. Semi-structured interviews are interviews that provide open questions and give more freedom to samples to provide answers (Ali, 2012). Interview questions involved the knowledge and confidence of special education teachers in handling water activities before and after their courses and opinions on the applicability of this AquaExplorers module. The format or expectation of an interview answer is also not provided as the researcher wants to receive all possible answers from the sample to strengthen the answers received in the questionnaire and be placed in the form of the schedule for review by the expert before being used for interviews (Ali, 2012). Comments and suggestions for improvement by experts are used to improve the interview questions.

2.5 Protocol and Procedures of the study

The administration of the study began with researchers applying for research approval from Universiti Sains Malaysia and the Ministry of Education Malaysia before conducting this study. Research procedures and instruments have been presented to all related parties including the

Head of Special Education Unit, Penang State Education Department and Special Education Teachers in PPKI involved. Data will be collected before and after the intervention on 120 special education teachers during the pilot test. The study procedure was described and explained to all the samples before they undergo the intervention.

Pre-test for data collection sessions will be conducted before the intervention on using the AquaExplorers module: Water Activity Guide for Special Education Teachers and post-test data collection sessions will be conducted after the completion of the intervention using AquaExplorers module: Water Activity Guide for special education teachers. The questionnaire will be provided in the form of Google form and can be reached by the samples through the QR code scanning that will be provided at the course registration desk. Courses for the use of AquaExplorers modules: Water Activity Guide for Special Education Teachers will be conducted at the Swimming Pool of Universiti Sains Malaysia for three days.

The researcher will make an explanation on the detail of the study to the samples (n: 120) before starting the intervention session. Protocols in carrying out interventions involving movement skills require verbal instructions, demonstrations and demonstrations accompanied by treatment attempts (Staples & Reid, 2010). The demonstration from the researcher will be repeated if the sample of the study cannot understand and follow the activity in the intervention. Demonstrations and instructions will be given repeatedly according to the understanding of the sample to ensure that all samples understand with the instructions given as the majority of samples have no basis in swimming skills (Roid & Miller, 1997).

AquaExplorers module: Water Activity Guide for Special Education Teachers has been modified so that it is appropriate to be applied to various categories of special needs (learning disabilities) students in the comprehensive educational program as a whole and the samples of the study can carry out activities with the best performance and capabilities that exist in themselves. Special Education Teachers involved with this study is not a sports teacher or teacher who has a solid foundation in managing water activities but their essential duties require them to carry out this activity without any exposure. The administration and protocol of this study have been established to facilitate the samples through intervention and collection of data as well as the benefit of the study.

The objectives and research questions is formed through data collected from the Penang State Education Department and the results of the past studies. In collaboration with the Special Education Unit, Penang State Education Department, pilot test was successfully carried out. Schools are selected from five districts in Penang, 7 schools from southwestern district, 5 schools from South Seberang Perai district, 7 schools from Middle Seberang Perai district, 4 schools from North Seberang Perai dictrict and 7 schools of the northeastern district. All of these schools are selected through their consent to participate in this course and provide full cooperation and commitment throughout the course. Schools are also selected from all districts throughout the state so that each district has a representative attending this course and the district education office has a main coach from state-level courses to conduct courses at the district level. This is to address the problem of lack of provisions and facilities to engage all domestic schools to attend this course but its benefits can be communicated to all.

The study was initiated with the application for the study of conducting a study from the Ministry of Education. Upon obtaining permission from the Ministry, the researchers will present the samples names and schools to the Senior Assistant Director General, Special Education Sector, Penang State Education Department in order to engage them in this study. Upon completion of the presentation, the invitation letter will be issued to invite them to attend this course. This course is named Training of Trainers AquaExplorers Module Implementation Course: Water Activity Guide for Special Education Teachers.

On the first day of the course, the participants will enroll and answer the questionnaire by scanning the QR code which is a link to a pre-course questionnaire on the Google Form website. All samples will answer questions at the questionnaire first before listening to course briefings, course flow and view the content of 10 interaction sessions in the module. Samples will be involved with a demonstration and use of modules for three days from 8.00 am to 5.00 pm. On the third day, the sample will bring a special education (learning disabilities) students to follow the practical session of this course. This student will attend the course with their parent consent. The samples will choose an interaction session that is perceived according to the level and ability of his student before applying it. After completing the interaction session, the course samples will respond to the post-course questionnaire by scanning the QR code which is a link to the post-course questionnaire form on the Google Form website. This collected data will be taken and analyzed as quantitative data. Out of the 120 course samples, 10 samples will be selected by the researcher to undergo interviews to obtain qualitative data and reinforce quantitative data and research findings (Ali, 2012; Jie, 2020).

3. DATA ANALYSIS

3.1 Validity & Reliability of Study Instruments

Two instruments in this study which are questionnaire and interviews was validate by using the content validity ratio techniques involving four experts who have been selected to evaluate the instrument (Ab Aziz et.al, 2018). Protocol constructs for questionnaires and interviews are also done using document analysis techniques (Shariza, 2017) and expert survey methods (Ikart, 2019; Poncette et.al, 2020)

Reliability means consistency of samples studied (Zahir et.al, 2019). In other words, an instrument or experimental instrument is said to have high reliability if similar results are obtained from different individuals in experiments (Zahir et.al, 2019). In the context of this study, the reliability of the research instrument protocol is accepted through the views of all pilot test samples of 120 special education teachers who use this instrument and the questionnaire shows that 100% of the sample agrees with the protocol of this research instrument, while the interview question structure has been improved with a little change with the revision of the supervisor as someone who has expertise to recheck the interviews question (Syafri & Yaumas, 2018)

The validity and reliability of the research instruments is very important in determining the quality of the findings. Validation of instruments is carried out using the service of four

appointed expert. The information of the four experts are as follows:

Table 2: Background of the specialist chosen for content validity

Expert Background	Expert 1	Expert 2	Expert 3	Expert 4
Field	Adapted Physical Education	Special Education (Learning Disability)	Special Education (Learning Disability)	Teaching Swimming/Aquatic activities for Special Needs students
Position	Excellent Lecturer in Physical Education	Special Education Lecturer	Excellent Teacher in Special Education (Learning Disability) for Penang State	Special Needs Swimming Instructor
Place of Service	IPG Kampus Tuanku Bainun	Universiti Pendidikan Sultan Idris	Sekolah Kebangsaan Seri Sentosa	<i>Malaysia Swimming Teacher Association (MSTA)</i>
Qualification	Bachelor Degree-Physical Education Master Degree-Education Administration	Bachelor Degree-English Language Master Degree-Special Education Doctorate Degree-Special Education	Bachelor Degree-Special Education (Learning Disability)	Bachelor Degree-Medicine Certificate-Swimming Teacher Award in Swimming Teaching for Special Needs from MSTA
Career Experience	30 years in education field (Physical Education & Special Education)	24 years in education field (English Language & Special Education)	19 years in education field Special Education (Learning Disability)	6 years as the Army Medical Doctor and 4 years as Special Needs Swimming Instructor

3.2 Questionnaire Validation Process

The questionnaire testing was conducted by appointing four experts in the field (Ikart, 2019) to obtain the validity of the instrument content and the coefficient index among the experts is referred to determine the instrument validity level (Ali & Saud 2013; Alwi & Shaari, 2017; Khalid et al., 2020; Hanif et al., 2020). Four experts in the field (Ikart, 2019), the excellent lecturer of Physical Education, Special Education Lecturer, Special Education Excellence Teacher of Penang State and the Swimming Instructor for Special Needs are appointed as an assessor for the validity of this questionnaire. After getting a specialist assessment feedback for the validity of the instrument content, the researcher used the Cohen Kappa Correlation Analysis technique for the validity value of this instrument (Othman & Kassim, 2018).

3.3 Interview Validation Process

Testing of the Interview Instrument Review was conducted by appointing four experts in the field (Ikart, 2019) to obtain the validity of the contents of the instrument and the coefficient index among the experts is referred to determine the instrument validity level (Ali & Saud

2013; Alwi & Shaari, 2017; Khalid et al., 2020; Hanif et al., 2020). Four experts in the field (Ikart, 2019), the excellent lecturer of Physical Education, Special Education Lecturer, Special Education Excellence Teacher of Penang State and the Swimming Instructor for Special Needs are appointed as an assessor for the validity of this interview questions. After getting a specialist assessment feedback for the validity of the instrument content, the researcher used the Cohen Kappa Correlation Analysis technique for the validity value of this instrument (Othman & Kassim, 2018).

3.4 Questionnaire Reliability Process

The reliability test of this questionnaire was carried out by testing the use of questionnaire on 120 special education teachers in integration and seeing the value of Alpha Cronbach's correlation coefficient as an instrument reliability indicator (Saper et.al, 2016; Idris & Shaari, 2017; Zahir et.al, 2019). The value of the Alpha Cronbach correlation coefficient for the questionnaire test is determine to prove the reliability of this instrument (Sharma, 2016).

3.5 Interview Reliability Process

The interview used in this study was a semi-structured interview. Semi-structured semi-interviews are interviews that provide open questions and give more freedom to samples in providing answers (Ali, 2012). The format or expectation of an interview answer is also not provided as the researcher wants to receive all possible answers from the sample to strengthen the answers received in the questionnaire and be placed in the form of the schedule for review by the expert before being used for interviews (Ali, 2012).

Before conducting interviews, the construction of protocols and test interviews is important to ensure that the interview is directed and can answer the problem of the study (Syafri & Yaumas, 2018). Therefore, the researcher has built an interview protocol first. The researcher has requested expert assistance to ensure that this interview protocol can be used well and meet the requirements of the study.

After the researcher completed the interview protocol, the researcher asked for the service of four experts which are the Excellent Lecturer of Physical Education, Special Education Lecturer, Penang Special Education Excellent Teacher and Special Student Swimmer Coach to review and provide comments and views for improvements to the protocol and interview questions.

After researcher receive valuations and reviews from these experts, researchers make improvements to interview protocols that have been built on the comments given (Syafri & Yaumas, 2018).

To ensure that these interviews protocols can be used well and effectively in data collection for real studies, researchers have conducted a pilot test first to some samples by interviewing them using the protocol that has been built. Based on the pilot test, the researcher can identify whether the questions built in the protocol are understandable, well answered and produce honest answers or otherwise (Syafri & Yaumas, 2018).

4. RESULTS

4.1 Validity Test Result

The results of the questionnaire validity assessment by four experts show that Expert 1 and Expert 3 agrees with all 12 questions in the questionnaire. However, Expert 2 disagree with one question and Expert 4 disagree with eight questions in the questionnaire. Expert 2 commented on Question 5 and suggest to change the answer options in order to obtain more accurate findings and expert 4 commented for questions 1,2,5,6,9,10,11 and 12 where experts say the sentence structure needs to be changed so it will be clearer and easy to understand. Comments taken for improvement and analysis are also conducted. For this instrument, Cohen Kappa's analysis is conducted to assess the correlation between Expert 2 and Expert 4 as Cohen Kappa's data analysis can be used to assess the correlation between two experts who are seen to have discrepancies or disagreements (Othman & Kassim, 2018). The results of Cohen Kappa's analysis between the two experts shown the value of Cohen Kappa is 0.460 and according to Landis and Koch (1977) this value is considered moderate while according to Cicchetti et al (1985) as well as Fleiss and Cohen (1973), this value is considered good. Therefore, researchers decide to maintain questions in this questionnaire based on the validity value of the Cohen Kappa and will use it in the study.

The assessment results for the interview questions validity by four experts show that Expert 2 and Expert 3 agree with all 11 questions in the interview. However, Expert 1 disagree with two questions and Expert 4 disagree with four questions in the interview. Therefore, Cohen Kappa's analysis is conducted to assess the correlation between experts 1 and expert 4 as Cohen Kappa's data analysis can be used to assess the correlation between two experts seen to have discrepancies or disapproval (Othman & Kassim, 2018). The results of Cohen Kappa's analysis between the two experts showed the value of 0.658 which is according to Landis and Koch (1977), this value indicates a significant agreement while according to Cicchetti et al (1985), this value is considered as an excellent consent and in the opinion of Fleiss and Cohen (1973), this value is considered very good. Therefore, researchers decided to maintain questions in this interview based on the value of Cohen Kappa and will use it in the study.

4.2 Reliability Test Result

The reliability test of this questionnaire instrument was carried out by testing the use of questionnaire on 120 special education teachers and seeing the value of Alpha Cronbach's correlation coefficient as an instrument reliability indicator (Saper et.al, 2016; Idris & Shaari, 2017; Zahir et.al, 2019). The value of the Alpha Cronbach correlation coefficient for the questionnaire test is 0.86 and this value is a good value to prove the reliability of an instrument (Sharma, 2016).

The reliability test of this interview instrument is conducted by a pilot test to 10 samples by interviewing them using the protocol that has been a built. Based on the pilot test, the researcher can identify whether the questions built in the protocol are understandable, well answered and produce honest response or otherwise (Syafri & Yaumas, 2018). Through the pilot test, sample number 3, 6 and 7 commented that there are some questions that are quite hard for the samples

to understand. There are terms that had been use which is unsuitable and needed changes so that it is easier for them to understand and answer the questions efficiently. Further action done by the researcher is to discuss the interview questions with someone more expert which is the researcher supervisor and improves the sentence structure in the questions so that it become easier to answer (Syafril & Yaumas, 2018). The researcher has changed the questions and complete the reliability test with the supervisor's approval.

5. CONCLUSION

To conduct a water activities involving special needs students requires high skills and ability to manage situations in the pools. Conducting water activities without expertise or disclosure on how to operate the activities will resulted to a risky event and also can cause danger to the teachers as well as special needs students. A water activity which guided by modules are essential to enhance the skills of special educations (learning disabilities) students and it should also be conducted regularly in accordance with the module to ensure that activities have a positive impact to the students. Teaching using modules to develop curriculum will result in more quality and productive learning (Shariza, 2017). Thus, Aquaexplorer Modules was invented and to measure the effectiveness of this module, a questionnaire and semi-structured interview instrument were also invented and the value of validity and reliability of this instrument are very important to show the quality of the instrument built. The value of Cohen Kappa for validity test and also Cronbach Alpha coorelation for reliability test is a very good figure and had proven the quality of these instruments for uses. Future research can consider improving the measurement techniques, controlling more variables or undergo the assessment by blinding techniques.

Perspectives

This study was done because of the necessities in having a quality and impactful water activity sessions for special need (learning disabilities) students in Malaysia. These students does not have a proper guideline or objectives during scheduled water activities in outdoor learning programme yet the teachers still bring them to the swimming pool to play water. It is the main objective of this researcher to provide a fruitful water activities for the special needs (learning disabilities) students so that they can improve their potential to the optimum level in water related skills.

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