

Perceptions of Learning Disability Students towards Computer Technology as a Learning Tool in Penampang Sabah

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Abstract: *In today's literature review, there is no denying that technology has great potential to improve teaching and learning practices so that strengthening student training, technical support for students can reshape a diverse learning environment in education. The teaching and learning process in the 21st century requires students who are active and able to deal with problems not only intelligently, but systematically, creatively, and innovatively. To realize the situation, today's education system needs to apply elements of Information and Communication Technology (ICT) in the teaching and learning process to help teachers convey ideas with interesting teaching aids to motivate interest and create attractiveness in the learning process of the education curriculum. With that method, students tend to be active due to the fun learning method, thus helping to improve understanding of the lesson content taught by the teacher. This study explores the perceptions and the needs of Learning Disabilities (LD) students with respect to motivation, enjoyment, and learning towards computer technology experiences. The study involves of thirty (30) students from various groups of learning disabilities from one of national secondary school in Penampang, Sabah.*

Keywords: technology, teaching and learning practices, Information and Communication Technology (ICT), Learning Disability (LD) students, computer technology experiences

1. Introduction

The advent of information technology (IT) and its various applications have revolutionized the landscape of education in the 21st century. Information technology, particularly computers and the internet, serves as essential tools facilitating various educational activities such as accessing course materials, engaging in discussions with instructors, participating in forums, presenting papers, and sharing information (Mishra et al., 2020). Online teaching - learning, leveraging the internet for educational purposes, has gained immense popularity in recent years, especially given the current global situation. While online learning offers advantages such as flexibility in time and location and a wider range of courses and content, it also presents certain drawbacks, including technical challenges, distractions, and a lack of personal attention (Lewis - Kipkulei et al., 2021; Adam et al., 2022).

Numerous researchers have recognized online teaching - learning as a technology - driven approach that can enhance learners' linguistic skills, including grammar, punctuation, and spelling, while also improving their proficiency in writing, speaking, listening, and reading (Khasawneh, 2021; Handrianto et al., 2021).

Integrating technology in education plays a crucial role in facilitating English language teaching and learning by digitizing educational content and making it accessible on - demand (Saffanah, 2022). Furthermore, the use of technology enables the efficient transfer of knowledge and skills to a large number of learners. As online classes become increasingly prevalent, numerous studies have explored the application of technology in the classroom

setting to support language learning and teaching (Utami et al., 2021).

Shadiev and Yang (2020) define technology as the use of technical processes, methods, or knowledge to achieve learning objectives. Existing research indicates that incorporating technology into language learning and instruction is as effective as traditional methods in enhancing learners' performance, interaction, feedback, and motivation (Hazaymeh, 2021; Shadiev & Huang, 2020). Individual students' intrinsic motivation levels influence their perceptions of success and enjoyment in the online learning experience, as reported by Shadiev & Huang (2020) and Saffanah (2022). The significance of computers in education cannot be overstated. The use of technology facilitates immediate, relevant, and engaging learning experiences as students interact, exchange ideas, conduct independent research, adapt to new situations, and take charge of their own learning. Consequently, harnessing the capabilities of computers as tools can significantly enhance the effectiveness and efficiency of educational practices.

Despite the growing popularity of online learning, there is a notable research gap concerning the perceptions of Learning Disability (LD) students regarding online learning for enhancing motivation within English for Communication classrooms in Penampang, Sabah. To address this gap, the present study aims to explore the following key inquiries: i) What are the LD students' perceptions of computer technology experiences as learning? ii) What are the specific needs of learning disabilities students in developing desirable Web - Based English Instructional materials using the ARCS model? To answer these questions, the research adopts a survey - based research method to examine students' perceptions of the learning experiences with

computer technology and its impact on their persistence and engagement. Additionally, the study will identify the learning disabilities students' requirements in designing effective Web - Based English Instructional materials based on the ARCS model.

2. Literature Review

Based on Mishra et al. (2020), recent developments have seen Information and Communication Technology (ICT) become the main catalytic tool for spreading and storing information, thereby helping students build new knowledge. Furthermore, existing studies have highlighted the wide usage of online distance learning in education, with a particular focus on its significant role in English language learning, where it benefits both educators and learners through enhanced interactions, increased collaboration, improved participation, and greater knowledge acquisition. Nevertheless, successful integration of ICT in teaching and learning requires the active cooperation of all parties involved. In the context of Special Education, Ibrahim et al. (2021) emphasize that research on technology integration in teaching and learning is still in its early stages, calling for further investigation in this area.

Utilizing technology, especially computers and the internet as educational tools, has been found to increase students' learning motivation and enjoyment. Altunay (2019) specifically highlights students' satisfaction with language skill development through online distance learning due to its flexibility in terms of time and place. However, students have also encountered technical problems and a lack of certain technological tools, which has impacted their ability to learn English language skills. In light of these findings, this literature review emphasizes the significance of exploring the perceptions of Form One LD students towards computer technology. Understanding their levels of motivation, enjoyment, and learning in utilizing technology is crucial. Additionally, investigating their specific needs in developing desirable web - based English instructional materials, guided by the ARCS motivational model (Attention, Relevance, Confidence, and Satisfaction), is vital to adequately prepare them for the challenges of the information age.

Moreover, Guillén - Gámez et al. (2020) have demonstrated that technology enhances learning for disabled students. However, transitioning from a physical to an online learning environment raises concerns, particularly with regards to accommodating impairments. Gundersen et al. (2020) highlight the impact of various factors, such as dealing with ambiguities in online learning platforms, on e - learning experiences for disabled students. Given the existing literature, it is evident that technology integration in education, particularly online distance learning, plays a crucial role. Understanding the perspectives of learners with specific needs and addressing challenges and opportunities presented by technology can lead to a more inclusive and effective learning environment (Meşe & Sevilen, 2021). Further research in this area is necessary to advance our understanding and improve educational practices for all learners (Arwin et al., 2022; Kamenetz, 2020).

3. Methodology

In this survey study, a comprehensive account of the research methodology and procedures is presented, encompassing aspects such as the research community, sample selection, and the employed instrument. The research approach adopted for this study is the descriptive quantitative design to obtain the opinions of the respondents, chosen for its relevance to the present investigation and its capacity to facilitate description, interpretation, and analysis within the realm of human sciences.

3.1 Population and Sample

The sample was made up of 30 Form One SLD (N=30) who were studying in national secondary school with Special Education Integration Programme (SEIP) in Penampang, Sabah. They were selected through purposive sampling where the researcher deeply analyses the Form One SLD to apply active learning strategies to encourage students' communicating in English for Communication class orally or in writing. Another goal is to foster students' abilities to use current technological techniques to solve tasks and problems relevant to the English language four skills (listening, speaking, reading and writing) in a grammatical framework suitable to their level. Table 1 describes demographic background analysis involving gender, age, ethnics and learning disabilities (LD) category. The students were 13 years old, including both male and female. These students were diagnosed as having LD by health care professionals, were registered as individuals with learning disabilities with the Malaysian Social Welfare Department and placed in special education classes in national secondary schools. The frequencies are obtained from the participants' profiles using Statistical Package for the Social Sciences 26 (SPSS 26th) software. The distribution of the sample according to demographic characteristics is shown in the table below;

Table 1: Demographic information of the participants (N=30)

Aspects	Demographic attributes	N	Percentage (%)
Gender	Male	16	53.33
	Female	14	46.67
		30	100
Age	13 years old		
Ethnic	Malay	3	10
	Chinese	8	26.67
	India	0	0
	Sabah Native (Please specify)	19	63.33
	Sarawak Native (Please specify)	0	0
	Others (Please specify)	0	0
Learning Disabilities	Syndrome Down	2	6.67
	ADHD	3	10
	Autism	18	60
	Cerebral Palsy	0	0
	Inertia (Slow learner)	4	13.33
	Dyslexia	3	10
	Various Disabilities	0	0

As shown in Table 1 above, 53.33% (N=16) of the participants were male, while 46.67% (N=14) were female. Most of the participants, 100% (N=30), belonged to the 13 - year - old age group. The participants in this study

represented different ethnic groups, with the majority being Sabah Natives, comprising 63.33% (N=19) of the total. Chinese participants accounted for 26.67% (N=8), and Malays made up 10% (N=3) of the sample. In terms of learning disabilities, approximately 60% (N=18) of the participants were diagnosed with Autism, while 10% had ADHD (N=3), 13.33% were classified as Inertia (Slow learners) (N=4), 10% had Dyslexia (N=3), and 6.67% had Syndrome Down (N=2). This section provides fundamental information about the variables, aiming to understand the students' perceptions of computer technology experiences in learning English. It addresses fourteen (14) items. The reliability coefficient alpha across the 14 questions was 0.946 (Table 4.5), indicating that these questions measured the same construct. Overall means (M) and standard deviations (SD) were calculated for all respondents and questions.

Moreover, this section aims to present essential information about variables related to students' perceptions of Form One SLD (students with learning disabilities) concerning motivation, enjoyment, and learning experiences with computer technology while learning English for the Communication subject. It includes fourteen (14) addressed items. The reliability coefficient alpha for these 14 questions was 0.946 (Table 2), suggesting a high level of internal consistency.

3.2. Research Instrument

To achieve the objectives of this study, a survey was given to Form One SLD enrolled in a national secondary school with Special Education Integrated Program (SEIP) at Penampang, Sabah. A Smiley Face Likert Scales instrument allowing the participants. The survey was done for analysis phase on 30 respondents and their views were considered to design the motivational WBEI materials based on their needs by applying ARCS model. The survey was divided into two sections including a cover letter. The first section composed of 14 close - ended statements to measure the participants' perceptions of the usefulness of online distance learning for enhancing their English language skills. The second section composed of 16 close - ended statements to collect information about their needs to develop the desirable Web - Based English Instructional materials using ARCS learning motivation and adapted from the ARCS 4 basic standards (each of these standards has 4 statements). Participants were required to complete the survey which was Smiley Face Likert Scales ranging from 1 = 'completely disagree' to 5 = 'completely agree'. It highlights the need to provide appropriate methods for LD students in delivering optimal response through the Smiley Face Likert Scales (Hall & Tazzyman 2016). The respondents have to choose one option from a dropdown box. The researcher explained to them the purpose of the study and assured them about the confidentiality of their results.

3.3. Validity and Reliability of the Instrument

The research instrument was presented as in Table 2 below shows Cronbach's alpha which determines the reliability for measuring items under each variable. The value of Cronbach's alpha for the students' perceptions of computer

technology experiences as learning and students' needs in developing the desirable Web - Based English Instructional materials using ARCS learning motivation are 0.946 and 0.955 respectively which exceed the minimum value of 0.70. Therefore, the entire variables provided a reliable measure of internal consistency.

Table 2: The Result for Reliability

No	Variable	Number of Items	Reliability
1.	Students' perception of computer technology experiences as learning	14	0.946
2.	Students' needs in developing the desirable Web - Based English Instructional materials using ARCS learning motivation	16	0.955

3.4. Data analysis

The respondents took nearly 30 - 45 minutes to complete and submit the responses. The researcher utilized the Statistical Package for Social Sciences (SPSS) version 26.0 to analyze the data and extract the results, as well as numerous statistical tests, including arithmetic means and standard deviations to answer question one and question two.

4. Research Findings

Data was calculated and presented based on the participants' responses to the survey. These results were given in light of the research topics that guided the current study. Firstly: the results of the first question: What are the LD students' perceptions of computer technology experiences as learning?

4.1 Analysis Findings to Identify Perceptions of Computer Technology Experiences

The analysis findings revealed a predominantly positive response from the participants, with the majority expressing agreement and strong agreement across all survey statements. Notably, the three highest positive scores were recorded for the statements: "I am very comfortable using a personal computer" (18, 60.0%); "I rely on computers in doing school assignments" (17, 56.7%); and "I believe technology helps students learn better" (16, 53.3%).

As indicated in Table 3, the overall analysis shows that the students in this sample are comfortable using a personal computer (M=4.33; SD=0.959) and rely on computers for school assignments (M=4.40; SD=0.770). Additionally, they hold a positive belief in the ability of technology to enhance learning (M=4.30; SD=0.877). These findings suggest that the participants actively utilize digital technologies to generate ideas, assist with school assignments, and solve real - world problems. Moreover, they utilize computers to organize their work (M=4.20; SD=0.761), create innovative projects (M=4.33; SD=0.758), and predominantly use Microsoft Word for word processing (M=4.27; SD=0.640). These practices align with MacArthur's (2009) findings, which emphasize the supportive role of technology in planning, word processing, spell check, word prediction, and speech recognition for LD students. The participants also

reported using computers for creating PowerPoint presentations (M=4.00; SD=0.695) and searching for research references (M=4.17; SD=0.648).

In terms of reading habits, the sample indicated a preference for accessing news on the Internet (20, 66.7% with M=4.20; SD=0.551). They also engage in frequent reading and sending of email messages (M=4.10; SD=0.662). Interestingly, instead of playing computer games, they tend to enjoy online chat rooms or discussion groups (M=4.13; SD=0.776). This aligns with Vygotsky's social development theory (1978), which underscores the interactive and social nature of teaching and learning, emphasizing the role of communication in knowledge sharing and meaning -

making. The participants recognized the significance of internet access for achieving success in their studies (M=4.00; SD=0.910) and acknowledged the positive impact of technology on teachers' instructional practices (M=4.17; SD=0.648). These findings suggest that students perceive online classes as influential in their learning experiences.

In summary, the analysis findings indicate that the participants hold favorable perceptions of their computer technology experiences, relying on various technological tools to enhance their learning and communication. The positive attitudes towards technology integration bode well for the future of education in the digital era.

Table 3: Frequency of Students' Perceptions of Computer Technology Experiences As Learning (N=30)

No	Items	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Mean	Standard Deviation
1	I am very comfortable using a personal computer.	18 60.0%	6 20.0%	4 13.3%	2 6.7%	0 0.0%	4.33	0.959
2	I rely on computers in doing school assignments.	17 56.7%	8 26.7%	5 16.7%	0 0.0%	0 0.0%	4.40	0.770
3	I use computers to help keep me organized.	11 36.7%	15 50.0%	3 10.0%	1 3.3%	0 0.0%	4.20	0.761
4	I use computers to produce artistic, innovative projects.	15 50.0%	10 33.3%	5 16.7%	0 0.0%	0 0.0%	4.33	0.758
5	I like to play computer games.	11 36.7%	14 46.7%	3 10.0%	2 6.7%	0 0.0%	4.13	0.860
6	I read and send e - mail messages almost every day.	8 26.7%	17 56.7%	5 16.7%	0 0.0%	0 0.0%	4.10	0.662
7	I use word processing more than any other program.	11 36.7%	16 53.3%	3 10.0%	0 0.0%	0 0.0%	4.27	0.640
8	Internet access is essential if I am to do a good job in my class.	9 30.0%	15 50.0%	3 10.0%	3 10.0%	0 0.0%	4.00	0.910
9	I read most of my news on the Internet.	8 26.7%	20 66.7%	2 6.7%	0 0.0%	0 0.0%	4.20	0.551
10	I use the Internet for research more than the library.	9 30.0%	17 56.7%	4 13.3%	0 0.0%	0 0.0%	4.17	0.648
11	I enjoy online chat rooms or discussion groups.	11 36.7%	12 40.0%	7 23.3%	0 0.0%	0 0.0%	4.13	0.776
12	I can create a PowerPoint presentation.	7 23.3%	16 53.3%	7 23.3%	0 0.0%	0 0.0%	4.00	0.695
13	I believe technology helps teachers teach better.	9 30.0%	17 56.7%	4 13.3%	0 0.0%	0 0.0%	4.17	0.648
14	I believe technology helps students learn better.	16 53.3%	8 26.7%	5 16.7%	1 3.3%	0 0.0%	4.30	0.877
	Overall Mean Score						4.20	0.583

Based on the data presented in Table 3, the highest mean score of 4.40 was recorded for the statement "I rely on computers in doing school assignments. " On the other hand, the lowest mean score of 4.00 was observed for both the statements "Internet access is essential if I am to do a good job in my class" and "I can create a PowerPoint presentation. " This analysis indicates that, overall, the Form One LD students (N=30) perceived their computer technology experiences positively and displayed a preference for using technology in their English learning.

The finding that students "read and send messages through e - mail" suggests that they engage in effective communication with one another, utilizing digital media to interact, collaborate, and share work, which strengthens communication and fosters a sense of community among classmates. This aligns with Ibrahim et al. 's (2021) research,

which highlighted electronic communication as a valuable method for enhancing social communication among students with disabilities. Additionally, findings from Hazaymeh (2021) indicated that approximately half of the surveyed teens believed that Internet usage improved their relationships with friends, while 32% reported that online tools facilitated the formation of new friendships.

Employing digital innovative approaches to provide authentic learning experiences, including multimedia lessons, interactive e - activities, and discussions, can significantly motivate learners and enhance their language learning experiences. This is supported by Rahmawati's (2016) study, which revealed varying perceptions among students regarding the use of e - learning for English language skills, ranging from extremely positive to some reluctance. However, it was found that e - learning offered

flexibility, innovative information, rich resources, promoted student cooperation, and encouraged active learning, aligning with the current study's findings.

In conclusion, the mean scores presented in Table 3, interpreted based on Moidunny's (2009) framework, underscore the positive perceptions of Form One students with specific learning disabilities regarding their computer technology experiences. The incorporation of digital tools and media in the learning process has proven to be beneficial, fostering effective communication, motivation, and enhanced language learning outcomes.

Table 4: Mean Score Interpretation

Mean Score	Interpretation
1.00 - 1.80	Very Low
1.81 - 2.60	Low
2.61 - 3.20	Medium
3.21 - 4.20	High
4.21 - 5.00	Very High

Source: Moidunny (2009)

The overall mean score for perceptions of computer technology experiences feedback is 4.20, with a standard deviation (SD) of 0.583. The responses for all the items are dispersed around the mean in the range of 0.5, indicating that students are performing well and demonstrating discipline in their online learning practices. As per Moidunny's (2009) framework for mean score interpretation, Table 4 provides further insights into these findings. A smaller SD value is preferable as it reflects relatively homogeneous changes between individual scores around the mean score value.

This study's results align with the research conducted by Handrianto et al. (2021), emphasizing the significance of offering ICT - based activities to cater effectively to the

learning needs of special education students. Furthermore, exposing students to activities that build upon their prior knowledge is crucial for facilitating comprehension and conceptual understanding. This observation underscores the importance of maintaining focus and employing suitable techniques to sustain students' engagement and motivation throughout the information - seeking process. Moving on to the second research question, which aims to identify the learning disabilities students' needs in developing desirable Web - Based English Instructional materials using the ARCS model (Attention, Relevance, Confidence, and Satisfaction), further exploration and analysis are required to answer this question comprehensively. Understanding their specific needs and aligning instructional materials with the ARCS model will be essential in creating effective and engaging learning experiences for these students.

4.2 Analysis Findings to Identify Students' needs in developing the desirable Web - Based English Instructional Materials using ARCS learning motivation

The section focuses on the needs analysis carried out in the study to determine the necessary support and guidance that LD students require to create desirable web - based instructional materials using the ARCS learning motivation model. This analysis encompasses an exploration of the characteristics of LD students, their previous learning experiences, and the learning environment they operate in, all of which are essential considerations before embarking on the development process. The section also emphasizes the significance of the study and identifies areas that may require improvement during the material development procedure. The analysis involves the examination of 16 items to identify potential relationships between variables, with a high level of reliability demonstrated by the coefficient alpha value of 0.955 across the 16 questions.

Table 5: Students' needs in developing the desirable Web - Based English Instructional Materials using ARCS learning motivation

No	Items	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Mean	Standard Deviation
A1	I like teacher uses different tones or asks questions.	17 56.7%	7 23.3%	4 13.3%	2 6.7%	0 0.0%	4.30	0.952
A2	I like if teacher uses different teaching media.	18 60.0%	9 30.0%	3 10.0%	0 0.0%	0 0.0%	4.50	0.682
A3	I like if the teacher provides different learning environments.	16 53.3%	8 26.7%	5 16.7%	1 3.3%	0 0.0%	4.30	0.877
A4	I feel familiar with English for Communication.	17 56.7%	12 40.0%	1 3.3%	0 0.0%	0 0.0%	4.53	0.571
R5	The learning goals and contents are very clear.	11 36.7%	14 46.7%	3 10.0%	2 6.7%	0 0.0%	4.13	0.86
R6	English for Communication is related to my living experience.	8 26.7%	17 56.7%	5 16.7%	0 0.0%	0 0.0%	4.10	0.662
R7	English for Communication is related to my future workplace.	11 36.7%	16 53.3%	3 10.0%	0 0.0%	0 0.0%	4.27	0.64
R8	English for Communication is related to my academic performance.	9 30.0%	15 50.0%	3 10.0%	3 10.0%	0 0.0%	4.00	0.91
C9	I have confidence to succeed in English for Communication.	8 26.7%	20 66.7%	2 6.7%	0 0.0%	0 0.0%	4.20	0.551
C10	If I work hard, I can perform well in English for Communication.	9 30.0%	17 56.7%	4 13.3%	0 0.0%	0 0.0%	4.17	0.648
C11	I can get reward if I perform well in English for Communication.	11 36.7%	12 40.0%	7 23.3%	0 0.0%	0 0.0%	4.13	0.776
C12	The English for Communication can increase my	7	16	7	0	0	4.00	0.695

	knowledge in communication.	23.3%	53.3%	23.3%	0.0%	0.0%		
S13	It is important for teachers to treat every student equally.	17 56.7%	9 30.0%	4 13.3%	0 0.0%	0 0.0%	4.43	0.728
S14	It is important for teachers to use the same criteria to assess every student.	11 36.7%	16 53.3%	3 10.0%	0 0.0%	0 0.0%	4.30	0.651
S15	I feel satisfactory if I get praise from classmates or teachers when I perform well.	17 56.7%	8 26.7%	5 16.7%	0 0.0%	0 0.0%	4.40	0.770
S16	It is important to get positive feedback from teachers.	16 53.3%	8 26.7%	5 16.7%	1 3.3%	0 0.0%	4.27	0.868
	Overall Mean Score						4.25	0.580

Note: Items A1 - A4: **Attention**; Items R5 - R8: **Relevance**; Items C9 - C12: **Confidence**; Items S13 - S16: **Satisfaction**

Table 5 provides a frequency distribution of each item in the variable of students' needs in developing desirable Web - Based English Instructional (WBEI) materials using the ARCS learning motivation model. The majority of respondents (more than half) selected "strongly agree" for most items. The item with the highest mean score (M=4.53) is "I feel familiar with English for Communication," while the items "English for Communication is related to my academic performance" and "The English for Communication can increase my knowledge in communication" received the lowest mean score (M=4.00) each. Overall, the mean score for the variable of students' needs in developing desirable WBEI materials using the ARCS learning motivation model is 4.25, which is interpreted as "very high" based on Moidunny's classification. This indicates that the respondents strongly agree or have a high need for developing the desirable WBEI materials using the ARCS learning motivation model.

These findings are consistent with Khairunnisa & Handrianto (2022) argument that online learning heavily relies on students' active engagement, meaningful communication, and interaction with digital resources to develop a deeper understanding of the content. The study examined students' needs in developing WBEI materials using the ARCS motivational model, highlighting the highest and lowest levels of students' needs in each ARCS motivational component. The descriptive statistics in Table 4.4 reveal the level of students' needs in this context, demonstrating the influence of learning motivation on the variance of the results. The Attention component (items C15 - C18) showed that 60% of students preferred the use of different teaching media, indicating a desire for diverse instructional methods. The Relevance component (items C19 - C22) demonstrated that 36.7% of students emphasized the importance of clear learning goals and content relevant to their future workplace. Additionally, Erarslan and Topkaya (2017) found that EFL students had partially positive attitudes toward online courses due to their awareness of course content and objectives, leading to knowledge development from e - learning platforms.

The Confidence component (items C23 - C26) showed that 36.7% of students favored receiving rewards for performing well in English for Communication. Lastly, the Satisfaction component (items C27 - C30) revealed that 56.7% of students found satisfaction in receiving praise from classmates or teachers for their performance. The study also highlighted the significance of student satisfaction as an indicator of success in online courses, aligning with Ibrahim's (2021) findings that LD students are more likely to connect with peers via electronic mail when seeking

information. Similarly, Cakrawati (2017) found that the majority of students considered online learning platforms in English teaching and learning as effective and satisfactory tools.

Overall, the students' agreement on the needs in developing desirable WBEI materials using the ARCS learning motivation model is evident from their responses, reflecting a high level of agreement with the ARCS components utilized in the material development process. The participants expressed a strong need for developing WBEI materials using ARCS learning motivation, particularly in aspects of Attention, Relevance, Confidence, and Satisfaction, resulting in excellent feedback. These findings align with Altunay (2019) belief that an online learning environment, coupled with appropriate technology for language learning, highly motivates and encourages EFL students to effectively learn English language skills. Furthermore, they found that students form a positive attitude towards online learning environments and digital teaching due to the benefits they offer in solving learning problems in a meaningful and engaging manner, facilitating continuous interaction and connection to understand the course.

Based on the analysis of Research Question 2, the students provided higher ratings of "Agree" and "Strongly Agree" than "Not Sure" and "Disagree" regarding their needs in developing WBEI materials using ARCS learning motivation. Table 5 presents the students' agreement findings on these needs. The calculation is based on the findings of the agreement of "Agree" and "Strongly Agree" to each proposed item in terms of the proposal and the calculation of percentage as follows:

Percentage of respondents (N=30) that "Agreed and Strongly Agreed" for each aspect measured:

= Total number of respondents "Agree" and "Strongly Agree" x 100

Item (N) 30

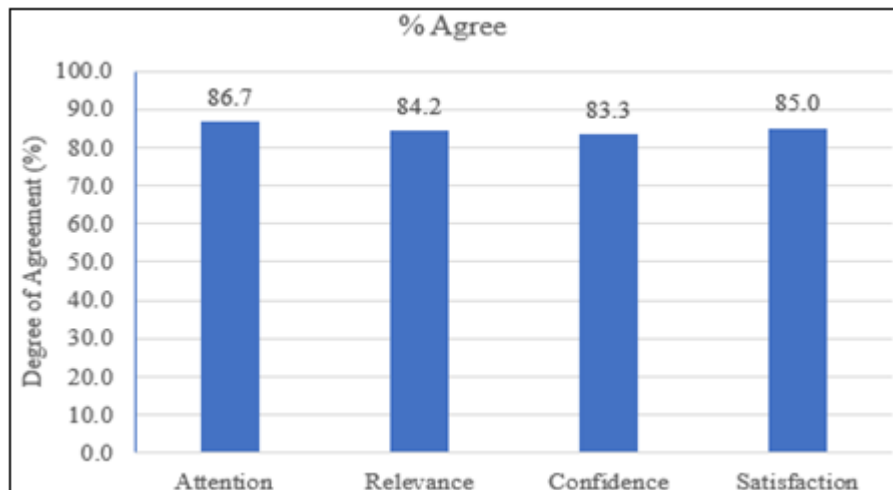
According to Creswell (2008), Paul & Cochran (2013) and Zainudin (2012), the most likely method to observe the existing situation empirically in the descriptive method of data collection is to present the findings and summarise the respondents' agreement answers with percentages.

Table 5: Students' needs in developing the desirable web - based English instructional materials using ARCS learning motivation

Students' Agreement	Percentage (%)
Agree	42.5
Strongly Agree	42.3
Not sure	13.3
Disagree	1.9

After both analysis findings, the students were in favour of using computer technology in learning though there are

problems in the special needs students face hurdles and have their own challenges in online learning include self - motivation issues. Researchers had conducted a literature review and found that barriers in online learning are self - motivation because motivation is the centre of human action (Sayaf et al., 2022; Sousa et al., 2022; Abd Alaziz, 2021; Zain, 2020). The agreement of the respondents is based on the four aspects of ARCS motivation in developing desirable WBEI materials are presented in Figure 1;



5. Discussion

The current study aimed to investigate the perceptions and needs regarding the development of motivational web - based English instructional materials for Form One LD students in the city of Penampang, Sabah. The findings of this research demonstrated that online learning in the educational context has had a positive impact on digital students' communication and collaboration skills, as it allows them to engage and interact within a digital environment.

Moreover, the students expressed positive perceptions towards the utilization of technology to facilitate effective learning of English language skills. They found that technology offered various learning styles, promoting their active involvement and attention in the learning process. The students also demonstrated a sense of responsibility for their own lifelong learning, recognizing the value of digital resources in enhancing their language proficiency.

Furthermore, the study revealed that the participants exhibited a comprehensive understanding of technology systems, operations, and concepts. They were adept at selecting appropriate applications and effectively utilizing digital platforms to transfer knowledge into the learning process, adhering to legal and ethical principles. Overall, these findings indicate that web - based instructional materials provide both educators and learners with a versatile and interactive learning environment.

By highlighting the positive impact of online learning on communication, collaboration, and language skill development, this study underscores the potential benefits of

incorporating technology into the educational setting. The students' positive perceptions and awareness of technology's role in enhancing their learning experiences provide valuable insights for educators seeking to create engaging and effective instructional materials.

In conclusion, the research contributes to a better understanding of students' perceptions and needs in the context of developing motivational web - based English instructional materials for Form One LD students. The findings emphasize the significance of technology integration in education and its potential to foster flexible and interactive learning environments, ultimately benefitting both students and educators in achieving their learning goals.

6. Conclusion

From the results of the study conducted, the researcher can conclude that the perceptions of Form One LD students regarding motivation, enjoyment, and learning towards computer technology experiences are highly positive. The findings indicate that Form One LD students have readily adapted to the new method of learning and hold a positive attitude towards online education. A significant majority of the students (18 out of 30) reported feeling very comfortable using a personal computer ($M=4.33$; $SD=0.959$) and expressed reliance on computers for their school assignments ($M=4.40$; $SD=0.770$). Moreover, they strongly believe that technology contributes to enhancing students' learning ($M=4.30$; $SD=0.877$).

With the emergence of the COVID - 19 pandemic, the new normal of computer - based training has become necessary

for the education system, particularly in the context of Special Education. The readiness and commitment of both students and educators play a vital role in ensuring the successful implementation of teaching and learning activities in this new era of digital education. It is essential for teachers to receive proper training to effectively integrate technology into academic contexts, ensuring that devices enhance the learning process and do not detract from it. The findings of this research demonstrate the LD students' positive perceptions and their understanding of technology's role in fostering engaging and interactive learning experiences. Such insights are valuable for educators as they seek to create motivational web - based English instructional materials that cater to the needs of students with specific learning disabilities. As the study focuses on Form One LD students in a specific national secondary school with the Special Education Integrated Programme (SEIP) at Penampang, Sabah, future studies are encouraged to include diverse populations of students in special education to enhance the generalizability of the findings. Different sampling methods and study instruments can be employed to further explore and validate the results.

In conclusion, this study contributes to the growing body of knowledge on technology integration in education, particularly for students with specific learning disabilities. The overwhelmingly positive perceptions expressed by the students highlight the potential of technology to create an inclusive and empowering learning environment. Moving forward, it is crucial for educators and policymakers to continue exploring and implementing innovative approaches to ensure that all students, including those with special needs, have access to quality education that harnesses the benefits of technology.

Acknowledgement

The authors would like to thank the Faculty of Education, National University of Malaysia for providing the supports for this study.

Limitations and Future Directions

This study was limited to the sample and instrument used to investigate the topic of the research. Future research should be directed to discuss different samples and different instruments.

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper

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