

A Systematic Review: Access Equality towards Quality Education

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Abstract

Access equality is important for all students to achieve a quality education to help expand students' potential. This systematic observation research aims to identify access equality towards other countries' quality education. This research was done towards six articles from 2015 to 2019 based on the assessment process conducted. All results were concluded in tables. It was found that access equality is important for students in order for them to obtain quality education.

Keywords

Systematic Observation, Equality, Equity, Quality Education

1. Introduction

Education is the root of humankind. If a country without a systematic education system, what would happen towards the country's development? Recently, the ministry has been emphasizing on quality education alongside the fourth industrial revolution. Thus, quality education which is the key to the country's future has become a priority in Malaysia's Education Development Plan (PPPM) 2013-2025.

The ministry is transparent in providing quality education to all Malaysians. This is because the ministry is emphasizing on equality or equity among the citizens with the aim for all to receive equal education in terms of infrastructure and technology. The ministry has also provided financial aid to parents so they are able to prepare school supplies for their children. Therefore, children of all status are able to enjoy the privilege of having quality education although they are staying in rural areas.

The government has introduced education for all to give children equal opportunity to receive quality education without having to worry about geographical location, gender and socioeconomic status. Most countries, specifically the third world countries, have started to pay special attention in the education sys-

tem development. School facilities have been upgraded and internet access has been expanded. This ensures all students to have equal opportunity in education. In fact, good education is capable of providing intelligent human civilization in organizing life and making decisions that benefit the human race (Samruhaizad & Azahan, 2017).

Many developed countries have practiced technology in their education system. For instance, Finland, which is the exemplary country in terms of education, has produced successful students in various aspects. Finland is also one of the best ranked countries in the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS). The country is seen as a successful country in terms of its education system as they are focusing on comprehensive use of technology which suits the school's environment. The use of technology is optimized to expand students' self-potential regardless of gender.

This study is important for teachers to provide quality education to all students without any gap. Technology is used optimally to develop students' self-esteem regardless of gender differences.

2. Research Objective

Generally, this research aims to study any research related to access equality towards quality education. The objective is as follows:

To identify access equality among students towards quality education.

3. Research Question

There is only one research question, which is:

Is there a significant relationship between access equality among students and quality education?

4. Methodology

For this research, the researcher used the PRISMA protocol, including database from ERIC and JSTOR to identify the systematic observation towards education access equality.

4.1. PRISMA

This research used the PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analyses) protocol which focuses on articles related to the key words. Not only that, it was also used as the base to report systematic observation towards other researches, specifically intervention assessment. According to Sierra-Correa and Cantera Kintz (2015), PRISMA has three advantages, which are:

- 1) Defining clear research questions that allow for a systematic research;
- 2) Identifying the inclusive and exclusive criteria; and
- 3) Studying the wide scientific literature database in one time definition.

Thus, PRISMA has helped in the process of finding related articles to the key

words on the use of technology towards education equity.

4.2. Resource

This research depends on two databases of main journals—ERIC and JSTOR. These databases were chosen for their ease of use and suitability with the articles found.

4.3. Eligibility and Exclusion Criteria

Some eligibility and exclusion criteria were specified. First, only journal articles with empirical data were chosen. Second, in order to avoid confusion and difficulty in translating, searching WAS only focusing on articles published in English. Third, related to time line, a five-year period was chosen (between 2015 and 2019), a sufficient period to observe the related research and publication evolution. Finally, based on the objective, the researcher has been focusing on articles that can be accessed globally.

4.4. Systematic Review Process

There are four stages to the process of systematic review. The process has been conducted in Jun 2019. The first stage was identifying the key words used for the searching process which were education's quality, equity and access. Other than that, the researcher used synonym for the term equity which is fairness to widen the angle of article searching. At this stage, there were no duplicate articles. In order to identify any duplicates, the researcher used the Mendeley software.

The second stage was screening. At this stage, 594 articles were studied and 550 articles were extracted. The third stage was eligibility. At this stage, the researcher identified accessible and downloadable articles. After carefully studied by the researcher, 38 articles were excluded as they were seen inappropriate with the research objective. The fourth stage was finalizing the suitable articles. Thus, only 6 articles were deemed useful and suitable after going through all aspects (**Figure 1 & Table 1**).

4.5. Data Abstraction and Analysis

Six articles chosen by the researcher were assessed and analyzed. The main focus was the specific study based on the research question. The data was extracted by reading the research abstracts which illustrate the chosen articles. Then, the researcher read the whole articles to identify the themes that were suitable with the current research question. Qualitative analysis was done using content analysis to identify the themes related to use of technology in education (**Table 2 & Table 3**).

5. Results

Access equality towards quality education has become a global issue. There were multiple reports on this issue from 2015 to 2019. However, this article is only focusing on four criteria which are only journal articles, the language used, five-year publication period from 2015 to 2019 and accessible articles only. The results were analyzed as in **Table 4**.

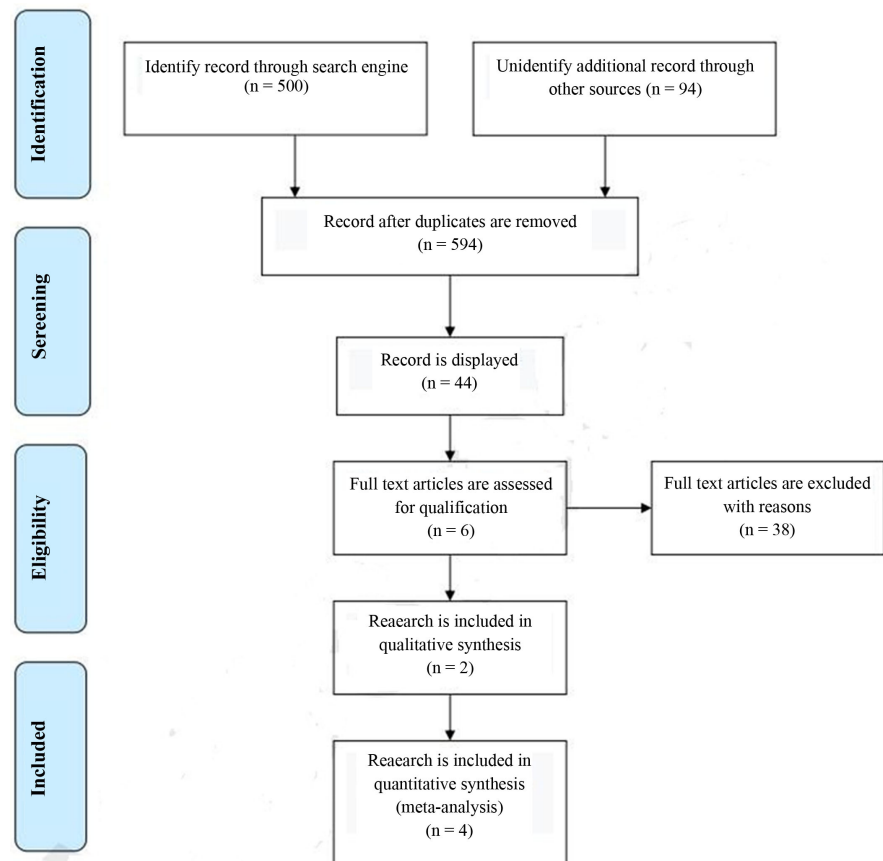


Figure 1. PRISMA flow chart. Adaptation from Hayrol Azril, Steven Eric, & Samsul Farid (2018).

Table 1. Article quality assessment.

No.	Element	Description
1	Objective	Have a clear objective.
2	Research Context	Clarify research plan, implementation and development.
3	Sample	Determine suitable amount of sample.
4	Methodology	Explain the types of methodology including research outline, data collection, and data analysis.
5	Data	Data including tables, interviews/research focus, observation feedback.
6	Valid results	Validate research analysis through expert research, feedback and other mechanism.

Table 2. Eligibility and exclusion.

Criteria	Eligibility	Exclusion
Type Literature	Journal	Journal (systematic observation), serial books, books, chapters in books, proceeding, conference
Language	English	Non-English
Period	Between 2015 and 2019	Less than 2015
Index	Social Science	Non-Social Science
Country	Globally	-

Table 3. Article quality assessment based on Grades A, B, C dan D.

Researcher	Year	Quartile/Journal	Criteria						Grade
			Objective	Research context	Sample	Methodology	Data	Valid result	
Jacob et al.	2016	Q3	/	/	/	/	/	/	A
Nellie & Nolan	2017	Q2	/	/	/	/	/	/	A
Marshall	2017	Q1	/	/		/	/	/	B
Phuong et al.	2017	-	/	/	/	/	/	/	A
Oghenekohwo	2017	-	/	/		/	/	/	B
Leitão	2015	Q1	/	/	/	/	/	/	A

Table 4. Results of systematic review.

Researcher	Year	Respondent	Journal Title/ Quartile	Type of Institution	Type of Research	Result
Jacob et al.	2016	801 480 Students (Virtual Course) (Florida)	<i>RSF: The Russel Sage Journal Of The Social Science</i> (Q3)	Florida Virtual School	Action Research	There was an increment of student enrolment from 2006 to 2013 for virtual courses in Florida. The use of technology in school created equality among students who were poor and those who were not. Bridging Course Camp has impacted Malawi female students positively.
Nellie & Nolan	2017	36 Female Students (Secondary School) 12 Female Students (College)	<i>Science Education International</i> (Q2)	Secondary School and College	Action Research	The camp has successfully improved respondents' motivation and encouraged female students to further studies in Science Education. Improved knowledge and skills.
Marshall	2017		EPAA (Q1)	Chartered School	Descriptive	Four identified issues: 1) Effects towards variety in a district. 2) Transport. 3) School application. 4) Access towards experienced teachers.
Phuong et al.	2017	54 Students (Treatment Group) 59 Students (Control Group)	The Journal Of Effective Teaching (-)	College	Quasi- Experimental	Equity-oriented pedagogy helped to reduce equity and access gap.
Oghenekohwo	2017		<i>International Journal of Education & Literacy Studies</i> (-)	Schools in Nigeria	Descriptive	Education development in Nigeria is deficit due to: 1) Inequality 2) Corruption 3) Leadership 4) Weak Institutions
Leitão	2015	11 732 Students	EPAA (Q1)	-	Correlation	Social Index of Educational Effectiveness (SIEE) helped equity in schools in Brazil.

The demographics of this study consist of students from around the world based on accessible articles. From the findings of the selected articles, it can be seen that equality of access to quality education is important in attracting students for education. **Table 4** shows a list of research findings and findings based

on the theme of equality of access to quality education. Jacob's study (2016) shows that there was an increase from 2006 to 2013 students enrolling in virtual courses in Florida when schools applied technology use in schools. This creates equality for poor and non-poor students in receiving education. In fact, the application of Bridging Course Camp has a positive impact on Malawi girls (Nellie & Nolan, 2017). Bridging Course Camp enhances Malawi's female students' motivation and enhances their knowledge and skills in Science. This reflects gender equality in education.

According to a study conducted by Marshall (2017) there are four issues that need to be taken into account in establishing accessibility for identified students, namely, the impact on district diversity, transportation issues, school applications and access to experienced teachers. These factors influence the equality of access among students to receive quality education. In addition, equity-oriented pedagogy can also help reduce the equity gap and access among students (Andrew, 2017). This is important because quality education can shape student quality regardless of gender and family economic factors. However, if a country fails to provide equal opportunities to students, it will affect the country's administration especially in education. For example, educational development in Nigeria is a deficit due to inequality, corruption, leadership and weak institutions (Jonathan, 2017). Ulisses (2015) argues that the Social Index of Educational Effectiveness (SIEE) contributes to equity in Brazilian schools. This is because the role of government is important in creating learning opportunities without creating gaps in each other.

6. Discussion and Suggestions

6.1. Access Equity

Every child deserves quality education access to achieve his/her potential. Gardner (1983) states that each child has his/her own talent. Thus, the education system must suit children's development so that their self-potential can be nurtured through school education. School facilities in urban areas need to be similarly available with those in rural areas in order for all students to enjoy the facilities fit for a developed country. All parties must play their roles to achieve this aim. In fact, education in Malaysia should realize the importance of teacher's roles in the successness of all students (Samruhaizad & Azahan, 2017).

6.2. Widening Access

Quality education access is not only limited to developed schools. This access needs to be widened so that students are not left behind in receiving quality education. This could help shape students to be widely knowledgeable on current issues. Every school needs various latest access so that students have limitless information access. Students can explore the various applications available on the Internet in an effort to better understand a particular subject (Norhiza, Zamri, & Wan Muna Ruzanna, 2016).

The World Bank (2011) and the United Nations Development Program (2005)

has put Malaysia's success to achieve a whole primary education on many factors. One of them is the government's investment in education to ensure education access to all students and political spirit to put the basic framework and education institutes at their place as well as commitments from all parties to ensure that quality education can be achieved.

6.3. Enhancing Quality Education

Quality education is able to produce quality students. These students are the important assets of a country's development. The 21st century learning (PAK-21) is not something new. Developed countries have been practicing 21st century learning. However, this is still new in Malaysia. Its implementation is seen as a pure effort by the ministry to improve students' self-potential in various fields. Education is focusing more on fun learning as it attracts students' interest in class. PAK-21 concept is not focusing on technology only, but also student-centered learning. Not only that, teachers are the ones who are able to create a collaborative and cooperative learning environment. PAK-21 contains pdpc activities that encourage students to think critically and creatively as well as encourage them to explore and research with teachers and groups (Ainun Rahmah, Zamri, & Wan Munna Ruzana 2017). A teacher's job is to become a facilitator who is always encouraging students to think to solve problems and make decisions.

6.4. Assessment

Previously, the minister was introduced school-based assessments (pbs) in which students were evaluated fairly and fairly as individuals in the community based on their abilities, abilities, talents, skills and potentials without being compared to others (Aniza & Zamri, 2015). Nowadays, many developed countries like Finland use classroom assessment (pbd) to assess students. Pbd is a more complete, meaningful, authentic, and accurate assessment of student mastery. This assessment is more relaxed and focused on students' skills (SH. Siti Hauzimah, 2019). This is more casual and is focusing on students' skill development. Pbd is an assessment that could observe students' development in terms of revising, making decisions and solving problems based on their current knowledge and environment. Students are trained to think creatively and critically in making decisions. At the same time, this assessment allows students to practice Higher Order Thinking Skill (HOTS).

7. Conclusion

In conclusion, quality education is a need in every country to produce students who are equipped with needed skills. The results from the selected articles indicate a significant relationship between access to quality education. Access equality is important so that students of different genders can enjoy education as how it should be. Some countries are considered biased towards gender difference due to cultural factor. This has to be overcome for its irrelevance in the current situation. All parties have to play their roles to ensure access equality towards

education is able to be enjoyed by everyone.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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