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Artificial intelligence as Revolutionary Era in Handling Financial Burden in Education Field-A Meta-Analysis Based Study

Huda Al-Kubaisi[1], Sayed Shahbal[2]*, Rubia Batool[3], Amna Khan[4]

[1]National Center for Educational Development, College of Education, Qatar University, Qatar

[2]Department of Psychology, International Islamic University, Islamabad, Pakistan.

[3]Department of Psychology, Riphah International University, Lahore, Pakistan

[4]PhD Scholar, Department of Psychology, International Islamic University, Islamabad, Pakistan.

***Corresponding author:** Sayed Shahbal, Department of Psychology, International Islamic University, Islamabad, Pakistan, Email: syedshahabal@gmail.com

ABSTRACT

Background: The burdenization in education is one of the most common phenomena because the tough routine and extensive amount of knowledge based on the level of education usually affected the financial status in the education field. Introduction of the integrated circuit through artificial intelligence revealed a new era of innovation by providing effective and appropriate information without any cost.

Aim: To analyze the impact of artificial intelligence as a revolutionary in handling financial burdens in the educational field through the meta-analysis.

Method: A qualitative meta-analysis conducted from researches between 2019 and 2023 written in English language through the electronic search engine of google chrome, fire fox and Microsoft edge databases: Google Scholar, Emerald Insight, Research Gate, Science Direct, and PubMed. Keywords used in the research included: artificial intelligence, AI, revolutionary era, financial burden, educational field. Using the syntaxes as "and", "or", "with", "if" etc.

Results: The outcome from the forest graph indicated that approximately 85% of the period reviewed literature population extensively supports artificial intelligence in the educational field with the limitation of burden in the educational field. The funnel graph indicated the interconnectedness of the studies regarding the particular perspective of artificial intelligence's importance.

Conclusion: The revolutionizing the new era of modernization enhances the importance of artificial intelligence to the educational field because of the spontaneous availability of all the educational requirements without greater burdenization.

Keywords: *artificial intelligence, AI, Revolutionary era, financial burden, Educational field, Meta-analysis.*

INTRODUCTION

Knowledge, wisdom, and courage enhance through the appropriate education. Education is the fundamental right of every individual (Johnson et al., 2021). Education originates from the first life on earth. It provides information about the prokaryotic and eukaryotic existence that led toward the flourishment of humankind on the planet called earth (Vinichenko et al., 2020). All this information based on effective all this ancient information embedded in the written literature that is hard to find under sim one reliable resource (Shinners et al., 2021). This leads to learning and education being a difficult procedure for students. Innovation is required in a paradise that is associated with the enhancement of student interaction and the desire to gather more information (Mishra & Tyagi, 2022).

Revolution in the new era based on modern techniques and along with the integrated circuit introduced into the life of humans (Qian et al., 2021). This integrated circuit has a greater influence on integration and understanding of the need and desires of the student with respect to the different requirements based on educational parameters (Makhija & Chacko, 2021). Therefore, the shifting of the trend from retail literature to online soft literature becomes easier and preferable for students in order to eliminate extreme time consumption, cost effectivity, and availability (Khan & Khojah, 2022; Shahbal et al., 2022)

Artificial intelligence is a name for operationalizing the simulation process of the human brain into an action that provides variable responses and reactions in a millisecond (Liu et al., 2022). It also indicated that artificial intelligence is highly functional in different educational domains identifying the different disciplines has their own policies theories and practical's (Mosteanu, 2020). Therefore, the artificial intelligence provides every new information based on validity (Mhlanga, 2020).

Extensive usage of artificial intelligence made the world globalized that has a fundamental understanding of not only communication but also effective knowledge sharing between the different audiences living at the offer of places (Al-Shoqran & Shorman, 2021). AI integrated circuits usually work on providing higher proximity and working on the artificial respective of intelligence to meet at the demand of the requirement for the educational perspective (Moloi & Marwala, 2020).

Students are the individual who has less to spend on their extra notes and material that they wanted for the study (Jiang, 2021). Therefore, providing everything on the internet note only affect the understanding of different perspective but also provide the collective stick understanding of the same ideology (Rapanyane & Sethole, 2020). This lead to the higher availability of a massive amount of information and knowledge from all around the globe (Hasan, 2021).

The present study has a beneficial understanding of the utility of the artificial intelligence true operation of the integrated circuit that monitors and collaborates the messages gained from the different audiences at the same time and manages the network of the AI to facilitate effective answers to everyone (Abdeldayem & Aldulaimi, 2020). The heart to understand that in the past everything based on written literature (Dudukalov et al., 2021). Innovations and new knowledge does not move across the boundaries because of the variable hurdle and inappropriate audience that came between the appropriate message and the desirable target audience (Al-Kubaisi & Shahbal, 2021; Al-Kubaisi, Shahbal & Khan, 2022; Sharma et al., 2021).

Artificial intelligence revolutionized improvement in quality of education around the globe (Chen et al., 2022). This lead to the effective handling of the financial problems and burden on the student regarding the acquisition of such knowledge, participation in the higher cognitive campaign, and decreasing potential communication barriers (Loukis et al., 2020; Al-Kubaisi, Shahbal & Khan, 2022).

METHODOLOGY

Methodology for the mate-analysis based on the identification of artificial intelligence with respect to the revolutionary era in the handling of financial burden among the different educational

fields. Meta-analysis done regarding the different steps that executed to get the appropriate standardized results. The most fundamental results regarding the matter. There are 9 steps in the matter analysis detail of each step provides the effective background, present and future information about the particular study execution process

Step 1: Frame a question
Framing of the question in this particular Bata analysis based on the study paradigm "Artificial intelligence As a Revolutionary error in handling financial burden among the educational field meta-analysis study". Framing the question based on the PICOT question. Finding appropriate questions for this matter analysis and order to get the responses based on the desirability in indicating.

P = Students getting either formal and informal studies simultaneously
I = Artificial intelligence in the Revolutionary era
C = Benefit in educational financial handling.

O = Handling financial burden in the Educational field.
T = Data extracted from 2019 - 2022.

Step 2: Run a search
Data for the research collected from all the researchers conducted between 2019 and 2023 written in English language through the electronic search engine of Google chrome, fire fox and Microsoft edge databases: Google Scholar, Emerald Insight, Research Gate, Science Direct, and PubMed. Keywords used in the research included: artificial intelligence, AI, Revolutionary Era, Financial burden, Educational field. Using the syntaxes as "and", "or", "with", "if" etc.

Step 3: Criteria
Study selection based on research criteria including inclusion and exclusion. Table indicating the research criteria for the selection and rejection of the studies.

TABLE 1: The Criteria of Inclusion and Exclusion of Research Includes:

No	Criteria	Inclusion	Exclusion
1	Research that ranges from 2019 to 2023.	☐	
2	Research that is below 2019.		☐
3	Studies including the perspective of the artificial inelegance in educational integration	☐	
4	Studies indicating financial handing regarding the cost of education	☐	
5	Educational burden effecting other than financial.		☐
6	English literature.	☐	
7	Other than English literature.		☐
8	International literature	☐	
9	Other effect of revolutionary era from educational financial burden		☐
10	Data will collected from the peer-reviewed journals.	☐	
11	Quantitative research and quantitative studies	☐	

Specifically, defining criteria for this particular study indicated the essential and important material for the conduction of the study regarding the identification of educational burden in the modernized era based on different complications normalized through artificial intelligence.

Search Syntax
Syntax defined as the element, word, or symbol that factorized to identify the potential very able in the different studies based on their importance and associated requirement. In this specific study, the syntax is associated with the identification of the particular literature already present in the research paradigm. The syntax is

composed of uni-word syntax, bi-word syntax, and multiverse syntax. In this particular search, uni-word syntax combined to form bi-word and multi-word syntax for the extraction of data from the variable databases.

Uni-word syntax
Syntax 1: Artificial intelligence AI
Syntax 2: Revolutionary Era
Syntax 3: Financial burden
Syntax 4: Educational field

Bi-word syntax
Syntax 1: Artificial intelligence AI + Revolutionary Era
Syntax 2: Artificial intelligence AI + Financial burden

Syntax 3: Artificial intelligence AI + Educational field
Syntax 4: Educational field + Revolutionary Era + Financial burden + Educational field

Bi-word syntax operationalized for the election of data from variable resources indicating the potential benefits and combination of the studies based on the desired results.

Step 4: Data Statistics
Data collected from all resources based on the availability indicated a greater amount of study articles. Identification of each article mentioned in the table identifying the potential usage and usability with respect to the effective identification of a potential number of studies present in the database regarding the defined syntax.

TABLE 2

No	Database	Syntax	Year	No of Research
1	Google Scholar	Syntax 1	2018	1250
		Syntax 2	2019	
		Syntax 3	2020	
		Syntax 4	2021	
		Syntax 5	2022	
2	Research Gate	Syntax 1	2018	1130
		Syntax 2	2019	
		Syntax 3	2020	
		Syntax 4	2021	
		Syntax 5	2022	
3	Emerald Insight	Syntax 1	2018	1025
		Syntax 2	2019	
		Syntax 3	2020	
		Syntax 4	2021	
		Syntax 5	2022	
4	Science Direct	Syntax 1	2018	1150
		Syntax 2	2019	
		Syntax 3	2020	
		Syntax 4	2021	
		Syntax 5	2022	
5	PubMed	Syntax 1	2018	1250
		Syntax 2	2019	
		Syntax 3	2020	
		Syntax 4	2021	
		Syntax 5	2022	

After scrutinizing and collecting all the data that is necessary for every search from the database and engine to the application of methodological and explanation regarding the waist application and importance. Data gathered based on the databases, which include the Google Scholar

1250, Research Gate 1130, Emerald Insight 1025, Science Direct 1150 and PubMed 1250.

Prior to the selection of study inclusion and explosion criteria that have already been defined was operationalized to understand the potential number of the studies out of which the exact number of studies that are closely related to the present title of the study indicated " artificial intelligence in the revolutionary era handling financial burden educational field, a metal analysis study". The most fundamental exact number of studies remains based on the selection of the studies regarding the PRISMA diagram indicating the process of selection.

Step 5: Study selection

After applying the inclusion and exclusion criteria the total number of article 5,058, remained 4,010 when identified the additional record through different other resources, after this the total number of articles remained to 1795 which was screened for duplication after the screening process a number of articles remain at 185, 3rd step indicating the operationalization of eligibility criteria. The total number of articles that proceed through this stage is 30, at the end stage the duplication of the screen article was assessed on the exclusion of 2 studies for the reason of duplication, 2 studies were wrong published, 7 studies worked with the wrong research design and 4 with wrong outcomes.
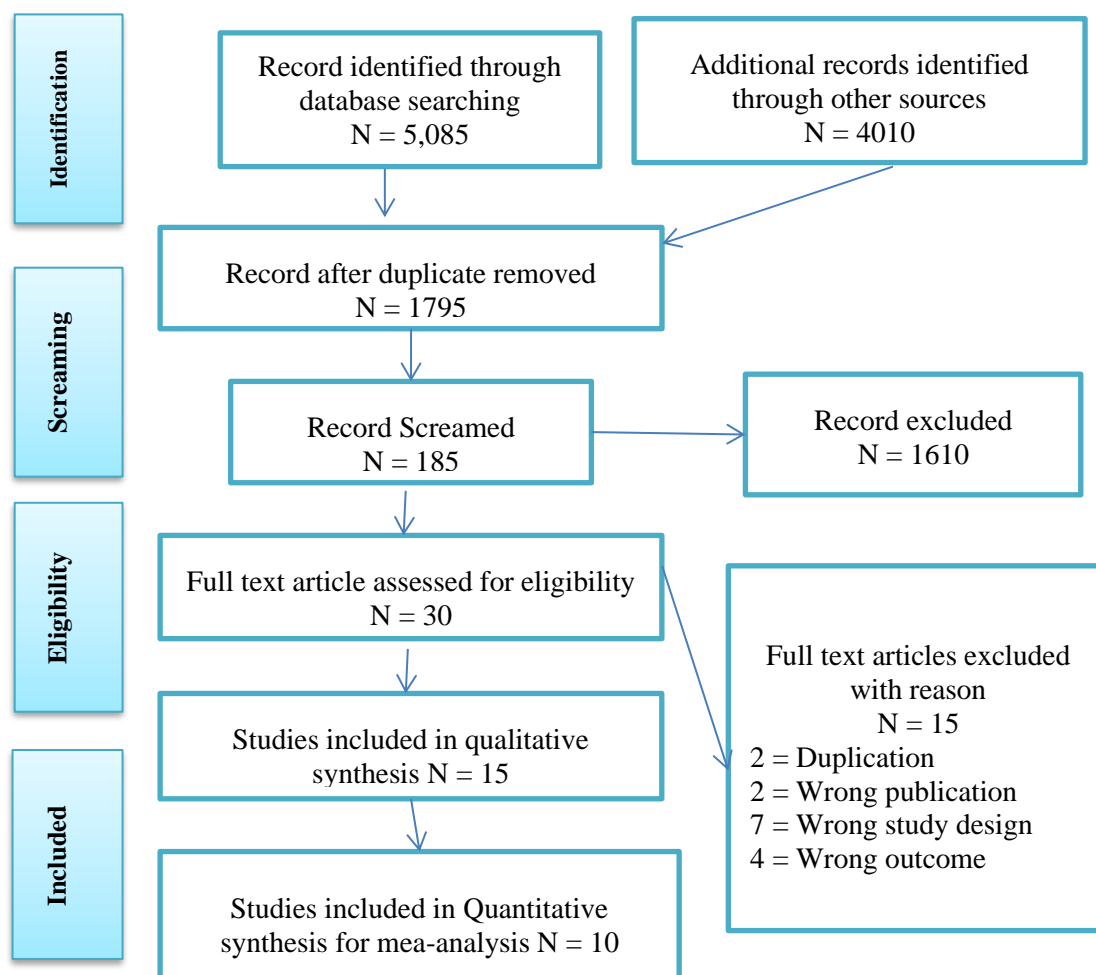

FIGURE 1.1 Select Primary study

Step 6: Quality of study

After obtaining the 10 studies from the literature, that originally matches the content of the present study. Therefore, there is a need for an appropriate assessment of the quality of the study with respect to standardization based on reliability and validity assessment. Assessment of the quality based on the identification of relevance, coherence, approximation, clarity, and synchronized qualities to the present study for which the literature extracted to analyze the meta-analysis.

TABLE 3: Assessment of the literature quality matrix

Sr #	Author	Are the selection of studies described and appropriate	Is the literature covered all relevant studies	Does method section describe?	Were findings clearly described?	Quality rating
1	Okunlaya et al	YES	Yes	Yes	Yes	Good
2	Alam	Yes	Yes	Yes	Yes	Good
3	Mhlanga	Yes	Yes	Yes	Yes	Good
4	Agarwal et al	Yes	No	Yes	Yes	Good
5	Shaikh et al	Yes	Yes	Yes	Yes	Good
6	Goralski & Tan	Yes	Yes	Yes	Yes	Good
7	Sharifi et al	Yes	Yes	Yes	Yes	fair
8	Kengam	NO	Yes	Yes	Yes	Good
9	Alam et al	Yes	Yes	Yes	Yes	Good
10	Owoc et al	Yes	Yes	Yes	No	Fair

Each of the ten studies selected for meta-analysis was highly appropriate and congruent to the present study. Therefore, the literature was effectively depicting the past evidence for the present study of artificial intelligence identification in the revolutionary era to handle the financial burden in the educational field.

Step 7: Forest and funnel plot

Line graph indicating the potential relative similarities of the studies to the present study with respect to the research design and results. In this graph studies 5 and 10 are approximately similar to the present study indicating the potential qualitative adherence. Study 1 and 8 similar with a percentage of 75% indicating the greater extent of similarity, which provides the validity reliable, extend to the psychometrics index.
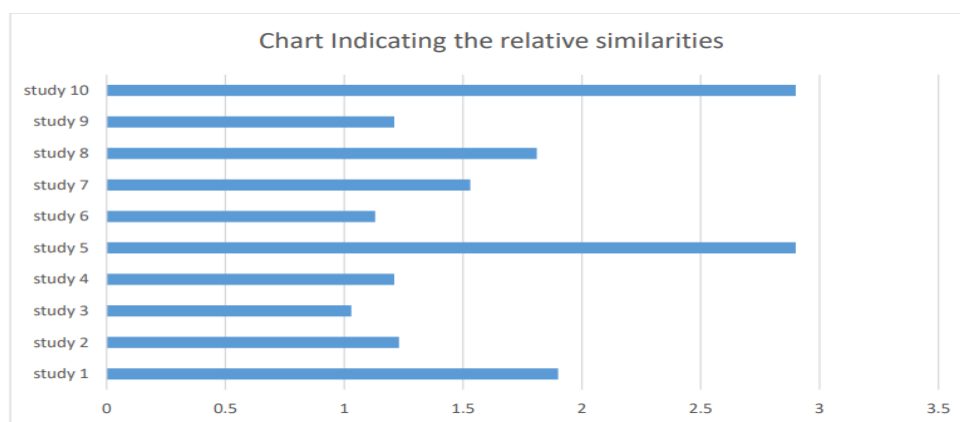

FIGURE 1: Bard chart studies relevance

Point of the estimate of study 10 and 5 has a greater impact on the present study of "artificial intelligence as revolutionary era in handling financial burden in the educational field are better analysis". Moreover, the diamond shape indicated the proportionality of the point of the estimate to the studies. Where each study indicated, a similar result related to the line graph to a clear extent.
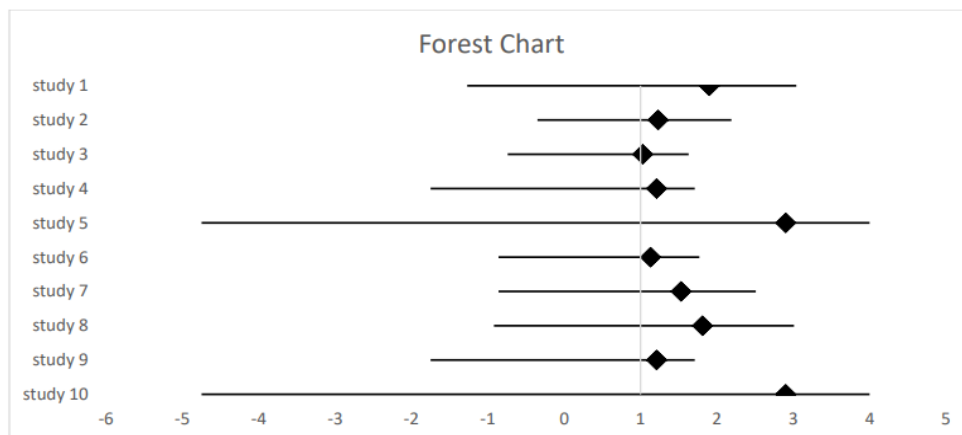

FIGURE 2: Forest chart studies relevance

The funnel chart indicated the proportionality of the contribution of the studies with respect to the area perimeter along with the identification of development, profitability, and usage of the artificial intelligence for handling financial burden among the educational figure. The greater the amount of cross-sectional area greater the impact on the profitability and utilization of the artificial intelligence regarding the burden reduction evidence from past research.
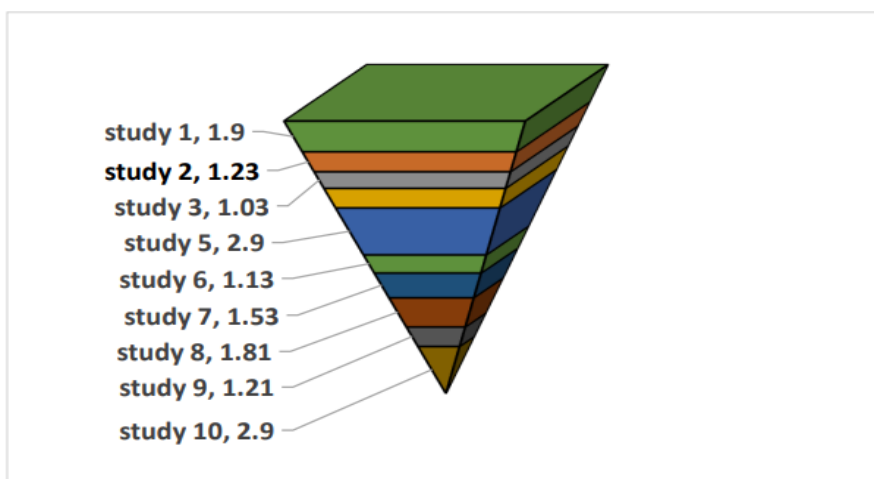

FIGURE 3: Funnel Chart studies relevance

Step 8: Analytical findings

The finding from the selected study indicated that artificial intelligence has a greater impact the human life in the revolutionary era (Mhlanga, 2020). This is because it is a composite of identifying the potential benefits based on reducing the harm to intro visual life especially related to stress and negative carbonate thoughts

(Rachmadtullah et al., 2020). In the created, that approximately 85% of the studies are compliant with the evidence that artificial intelligence modernized the new era with the revolutionary perspective to eliminate the financial burden in the educational field (Crawford, 2021).

It also founded upon the identification of different dimensions associated with the artificial intelligence and the lining of the understanding of cognitive development and knowledge enhancement of the student identification of potential benefits (Recalde et al., 2020). The potential benefit of artificial intelligence indicated that working for higher promotional services of artificial intelligence provides an equal chance and equity to the field of knowledge disappoint of any discrimination (Chen et al., 2020).

Step 9: Summary Report

Reports from the identified literature indicated that artificial intelligence has a greater influence on the educational field. Not only operational lies the process of simulation along with the observational learning. Moreover, introduced the different another beneficial perspective to the educational forum for the sake of the availability of new knowledge along with the eastern provision to the students as well as the educational domain. Limiting burden on student along with the educational institution firm embedded greater importance to the provision of accurate precise and highly generalizable knowledge for a bright future.

DISCUSSION

Revolutionizing and modernizing the new era based on new development linked to the artificial mechanics that has simulation property with respect to the higher-order functioning of the concept of the human mind (Crawford, 2021). Artificial intelligence in the new era no to only aid the electronic devices through the integrated circuit but also works upon the functionality through appropriate mechanism and intervention plans (Aldosari, 2020).

Understanding the demand for a new era depended upon the highly advanced community societies and enhancing their demand for

different functioning through the artificial intelligence assistant (Sharma et al., 2021). Moreover, the requirement of the new era based on individual knowledge enhancement through the capacity and capability development venture the new technology through the effective and advanced mechanism of intervention and mechanical support (Rapanyane & Sethole, 2020).

The goal purpose of artificial intelligence is to make the life of humans simple, easier, and perfect based on the different chores indicating the potential abilities of the enduring characteristics that are associated with the cloud devices and integrated circuit management (Jiang, 2021). Artificial intelligence limited the burden in the life of a human for the sake of batter life (Mosteanu, 2020).

Each of the dimension of artificial intelligence has its own importance a long with the necessity to human life (Makhija & Chacko, 2021). There for understanding the usage and application of each dimension regarding the AI focus on the different parameters. In the knowledge paradigm (Qian et al., 2021), the most important prospective are associated with the assistant and management function regarding the recognition through the performance of the different tasks. In educational field where the knowledge perform key role to succeed (Vinichenko et al., 2020). Artificial intelligence lay down the extremely and most tremendous success for the human life (Owoc et al., 2021). This is because it is associated with the provision of educational benefits for the sake of skill and knowledge development (Alam, 2022).

Fundamental assets of artificial intelligence focus on the upgrading different mechanisms of human life especially related to the educational field (Kengam, 2020). Where it was hard for the student to buy and expand small pocket money into larger and expensive materials (Sharifi et al., 2021). Moreover, it also limited and manage the time of the student to expand in the practical field

imposing real life and theoretical knowledge present in the literature (Goralski & Tan, 2020).

Financial burden in the educational field

The financial burden is one of the most important perspective that requires effective consideration of the student as well as the guardian for the pursuit of appropriate degree and knowledge (Shaikh et al., 2022). Artificial intelligence as described earlier reduces the negative consequences of financial complications among the student and lesson the border by providing authentic reliable and valid resource material for learning and acquiring more knowledge (Agarwal et al., 2022).

Financial boy done usually depended upon the acquiring period reviewed material for the sake of precision and accuracy in the practical domain after learning from the academia (Mhlanga, 2021). Therefore, battle to bring the books from far of places has ended (Alam, 2021).

New Era Education

New innovations are coming out because of the shifting of trend to acquiring and getting more knowledge toward the precision accuracy and validity has lead the functional unavailability of new knowledge in the market because of the print availability (Okunlaya et al., 2022). AI introduce new prospective related to the availability of new knowledge and just one click away (Chen et al., 2022). For this benefit, educational field is Ludden with innovations and leading toward the sky for future amazing innovation (Mhlanga et al., 2022).

Limitations are associated with identification of the artificial intelligence that should not misunderstood with the cognitive processes of thinking reasoning and problem solving (Recalde et al., 2020). Whereas, the artificial intelligence has the ability to problem solve only those defined parameters that are present in the integrated circuit (Osetskyi et al., 2020). Moreover, the new information and innovation not embedded in the artificial intelligence because of the dependent to the human mind (Rachmadtullah et al., 2020). Ai is better for humans because it keeps in mind small details

about the different perspectives and parameters of life that humans cannot recall and register in the mind (Cantú-Ortiz et al., 2020). Moreover, recommendations are associated with the functional congruence of artificial intelligence with human intelligence for the sake of the development of a new peaceful era of life for everyone (Mhlanga, 2022).

CONCLUSION

Artificial intelligence in the new revolutionized era note only affects the knowledge and competencies among educational figures (Crawford, 2021). However, it also strength in the connection of the student to the educational field by limiting the financial Barden. It one of the basic innovation that has led to the modernized era with greater knowledge of authentic and reliable resources (Elahi et al., 2022).

Identification of different facilities provided by the artificial intelligence to the human life among all these educational enhancements through reducing the burden and providing the authentic liable and innovative new knowledge is one of the most important factors for the aesthetically understanding the essential and important parameter of artificial intelligence to human education and life.

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