

THE ROLE OF E-LEARNING AND PERSONALHYGIENE IN COMPARISON BETWEEN RURAL AND URBAN AREAS: A SYSTEMATIC LITERATURE REVIEW

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ABSTRACT: *The e-learning and personalhygiene both play a vital role for the humansdevelopment and their protection. The digital and hygiene divide between the rural and urban areas are growing rapidly. This study conducts a systematic literature review of 101 papers about the practices of e-learning and personalhygiene in a) Rural areas b) Urban areas c) Comparison on both areas and d) Lacking facilities if any, from the studies published from 2008 to 2018. Results indicates that compared to urban areas e learning in rural areas are developing slowly nowadays but are in need of enough resources and also lacking in personalhygiene. The author observed that many researches concentrated on various research topics such as ICT (Information Communication and Technology), Network, Educational Outcomes, WASHhygiene concept, Tablet training ,Mobile Usage and Agricultural training. Majority of these papers centered on ICT and Networks, Hence this study highlights the two important factors such as e-learningplatform and personalhygiene which makes a comparison on both rural and urban areas.*

Key Words: *comparison with rural and urban ,e-learning ,systematic literature review, personalhygiene.*

1. INTRODUCTION

E-learning and personalhygiene are the essential factors for the Student's growth. First factor refers to the e-learning, Wheree-learning aids in student's attention and makes them study and understand the difficult concepts in an user friendly way. e-learning refers to the term of learning which is supported technologically by teaching and learning materials with the variety of tools such as computer aided learning, multimedia, teleconferencing, and web-based training. [1] E-learning has been spread world wideas anoutstanding educational technique. [2] Also, e-learning is defined as the training delivered on a digital gadget such as a laptop or a smart phone computer or any device which is designed to help the learning and its objectives. [3]

The second factor is the personalhygiene, where personalhygiene is a clear specification of human's personality. Personalhygiene deals with practices that helps the areas in maintaining and Promoting the health physically, emotionally, socially, and spiritually [4]. Areas pay a substantial time in schools where the areas spend a near contact with each other in transferring diseases. Majority of the health issues among the school areas are due to the lack of personalhygiene [5]. Importantly, in the areas environment, there is a vast spreading infections and contamination in the children environments in developing regions [6]. As personalhygiene is essential for good health and personality. In our Indian society, the problems in reproductive health and personalhygiene discussions are frequently avoided. Parents as well as educational institutions fail to discuss these issues with the areas, even today [7].

Therefore, this study make use of systematic review approach for the two essential factors such as e-learning andpersonalhygiene which makes a difference between the rural and urban areas. Merging these two factors , there was no effort to review thoroughly and synthesize these studies, In order to deliver a clear view regarding the practices of personalhygiene and e-learning . Hence this study applies a systematic review method to discover the differences between the rural and the urban areas.

2. RESEARCH QUESTIONS :

It systematically gathers, examines and construct all the current studies on e-learning and personalhygiene with rural and urban areas which provides the research methodological structure of this study .To attain the main goal of this study, The researcher proposed four key questions. Responding to these research questions will help the reader understand about the essential of two factors, which explains the practices of

e-learning and personalhygiene regarding the availability and lacking facilities which distinguishes between the rural and urban areas. The research queries of this paper are stated below:

RQ1 : What are the practices of e-learning and personalhygiene among ruralareas ?

RQ2 : What are the practices of e-learning and personalhygiene among urbanareas ?

RQ3: Is there any difference on rural and urbanareas regarding e-learning and personalhygiene ?

RQ4 : What are the features lacking in e-learning and personalhygiene among rural and urban areas?

3. GOAL OF THE STUDY :

The Main purpose in the study is to discover the research papers under the concepts of e-learning and personalhygiene on comparison between rural and urban areas between the duration 2008-2018 (10 years).

4. BACKGROUND

This part delivered an outline of the two factors and its historical improvements. This section provides an overview of the definitions of e-learning and practices of personalhygiene .

4.1 E-learning Definition

| No | Definitions of E-learning | References |
|----|---|------------|
| 1 | e-learning is referred to electronic learning which refers to computer based learning. | [8] |
| 2 | e-learning is referred to the achievement and usage of knowledge , which is disseminated and facilitated electronically. | [9] |
| 3 | e-learning is that the means that is delivered through ICT (Information and communications technologies),which is especially designed to support the training and its goals. | [10] |
| 4 | e-learning refers to the process of learning which is supported technically using a teaching array and tools of teaching such as audio , video, teleconferencing ,transmissions in satellites and the online courses are referred as the training in the form of web. | [11] |

4.2 Situations regarding Personalhygiene :

| No | Behaviour | Outcomes assessed regarding Personalhygiene | References |
|----|--------------------|--|------------|
| 1 | Tooth Brushing | Tooth brushing is one of the common Oral hygiene measures. It is a way of controlling plaque which provides cleaning sufficiently thoroughly which is executed at regular intervals. | [12] |
| 2 | Menstrual hygiene | The females such as adult girls and adult pre-menopausal women are affected every month by the problem of Menstrual hygiene. Overall ladies within the world have enforced their individual Personal plans to cope up with their menstruation. | [13] |
| 3 | WASH | The WASH approach served as a standard evaluation of vital information which related to sanitation, hygiene and health, which are focused to support the strategies for the enhancement of human's growth and quality of life. | [14] |
| 4 | Head and body lice | Pediculus humanus is one among the general public health issue which has 2 ecotypes like head lice and body lice, it differs within the alternative of atmosphere on human and in their vector competency in transferring diseases. | [15] |
| 5 | Skin Cleansing | In this circumstances, personalhygiene contains the subsequent practices like bathing, showering, bed bathing or strip laundry that is applied by the nursing employees with or while not the assistance of the patient | [16] |

4.3 Historical Development Of e-learning and personalhygiene :

In 1960s, Universities were included with the computers which includes the educational applications. It was thought that the high budget of technology would prevent its global uptake as an educational tool. [17] Since the 1970s, researchers felt easy about the instructions in computer programs and this progressed the time of computer aided instruction. Educational computing research emerged more than 30 years ago, Furthermore, the link between the learning and the technologies resulted in the term called e-learning. [18]WASH is a plan implemented since 1995,WASH refers to (Water, Sanitation and Hygiene) which makes

the environment to be comfort and healthy and helps to enhance the health of the children and maintains the educational presence and success [19]

5. EVALUATION METHOD

Systematic literature review is a way of gathering, Assessing, Combining, and Presenting the Outcomes from many research studies on the area of interest [20] A systematic literature review combines all the evidences that fits an eligibility criteria that responses to answer the research [21]

5.1 Research Methodological Structure :

This represents an overall mind view about the Process done in systematic review. The Research under e-learning and personalhygiene were found under the disciplines of Education, Computer Science, Computer Applications, Health and Management. The systematic literature review is processed according to the following Structure[60]

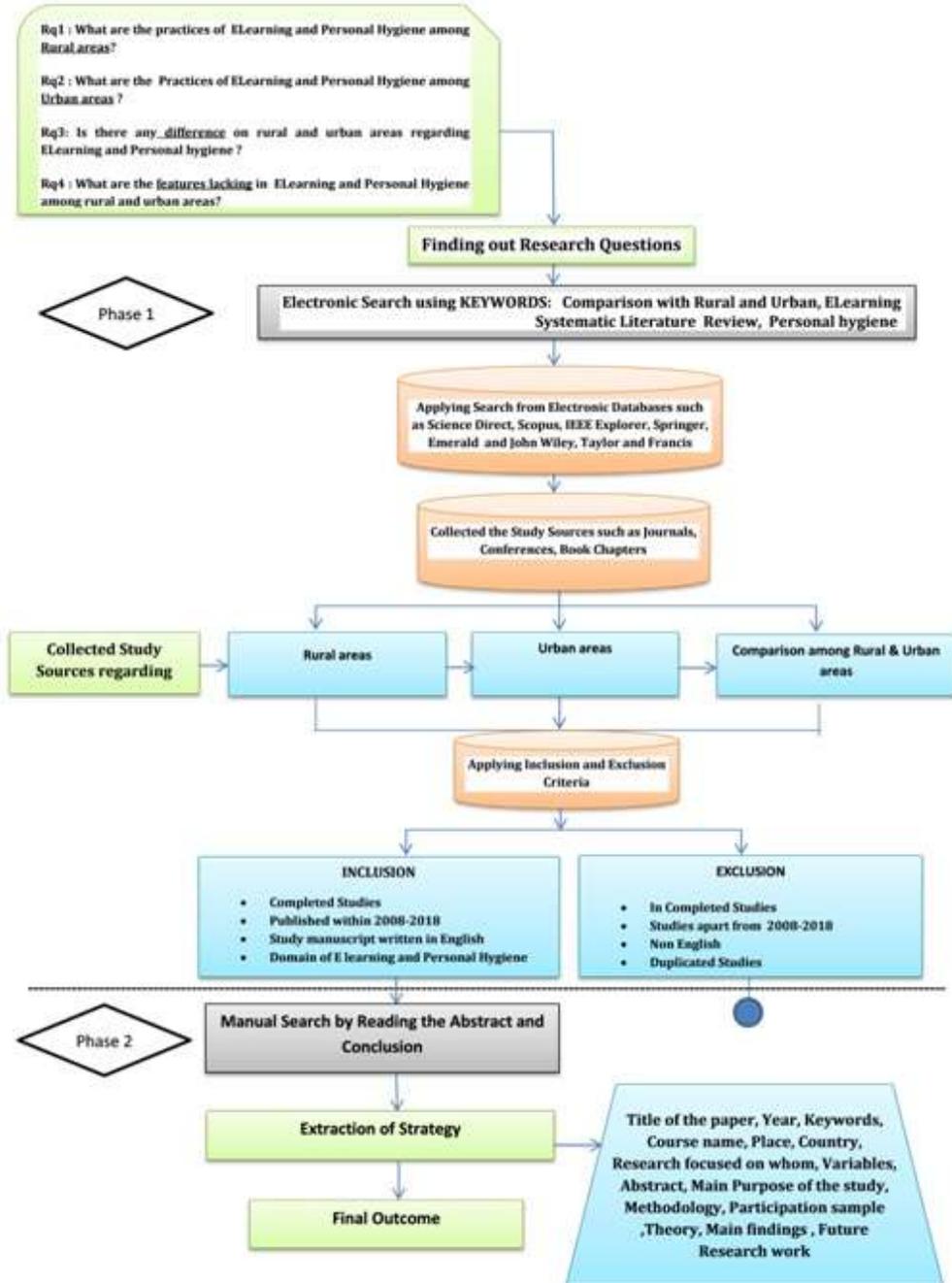


Figure 1. Research Methodological Structure

Step 1 : First the research questions were found, the keywords were framed according to the Questions

Step 2 : With the help of the Keywords, Search Process was done under the Electronic databases such as Science Direct, Scopus, IEEE Explorer, Springer, Emerald and John Wiley, Taylor and Francis.

Step 3: Study sources such as Journals, Conferences and Book Chapters were included from three categories such as e-learning and personalhygiene in ruralareas ,Urban areas and comparison between rural and urban

Step 4: After collecting the resources filtering process is done using the concept of Inclusion and Exclusion criteria

Step 5: Manual search is done by reading the Abstract and the Conclusion

Step 6 : Finally Extraction of Strategy is done to acquire the final Outcome by using Microsoft Excel by representing the following fields such as Title of the paper, Year, Keywords, Course name, Place, Country, Research focused on whom, Variables, Abstract, Main Purpose of the study, Methodology, Participation sample ,Theory, Main findings, Future Research work.

5.2. Inclusion and exclusion criteria

The reason for identifying inclusion and exclusion is to display which items were included and which were excluded from the study. This review is centered on two factors e-learning and personalhygiene practices.The author observed the articles from journals, conferences, workshops ,book chapters which includes English language. The limit for the year of publication was from 2008 to 2018.This provided a clear view about the practices of e-learning and personalhygiene used in rural ,urban areas and also the comparison between rural and urban used since 2008.

Table 1- Including and excluding criteria

| Inclusion | Exclusion |
|-------------------------------------|---|
| Completed Studies | InCompleted Studies |
| Papers focusing on Major research | Papers apart from Major research and Duplications |
| Published within 2008 - 2018 | Studies apart from 2008-2018 |
| Study manuscript written in English | Non English |

5.3 Select strategy:

Search was done from various online databases such as Science Direct, Scopus,IEEE Explorer, Springer, Emerald and John Wiley, Taylor and Francis . To manage and to arrange the studies in a proper and an easy way , Mendeley Desktop a Reference manager software was used to easily manage all the search results and to decline the duplicated studies.

5.4 Study selection and Data Extraction

The study selection is to find the study that is linked to the research questions. Initially using the keywords we collected 116 studies from the Electronic search, After applying those studies into Mendeley software the duplications were removed and resulted with 101 studies ,Then we applied the inclusion and exclusion criteria and also by reading the abstract and conclusion of each study the studies which were exactly related were 62 studies.

The data extraction is done to make the information in a perfect way. Data extraction was done easily by using the Microsoft Excel and Mendeley. It was done by classifying each study on the basis of the Title of the paper , Year, Keywords, Course name, College/School, which Country, Research focused on whom, Variables(concentrated on which material), Abstract, Main Purpose of the study, Methodology, Participation sample ,Theory , Main findings , Future Research work. The Explanation of each item is shown below

Table 2 - Mining of Data and Choice of Study

| Extracted data | Description |
|---------------------------|--|
| Title of the paper | Heading of the paper, which designates about the paper |
| Year | Year of Publication |
| Keywords | Important terms included in the paper |
| Course name | Speciality of the paper |
| College/School | A Particular place the research was focused |
| Country | Research attended on which part of the world |
| Research focused on whom | Research focused on which people |
| Variables | Concentrated on which material |
| Abstract | Short description of the paper |
| Main Purpose of the paper | Determination of the paper |
| Methodology | It denotes the category of methodology such as Qualitative, Quantitative or Mixed. |

| | |
|----------------------|---------------------------------------|
| Participation sample | No of Individuals sampled in research |
| Theory | Theory of the paper implemented |
| Main findings | Outcomes after the Research |
| Future Research work | Upcoming ideas of research work |

5.5 Origin of Publications:

From the Sources of Publications Journals, Conferences, Book chapters and Workshops were included in the study from the reliable sources which includes the concept of e-learning and personalhygiene. The Majority studies were included from Journals with (73) Studies, Conferences with (24) Studies, Workshop with (2) Studies and Book Chapters with (2) Studies. The origin of Publications is shown in the figure 2 below :

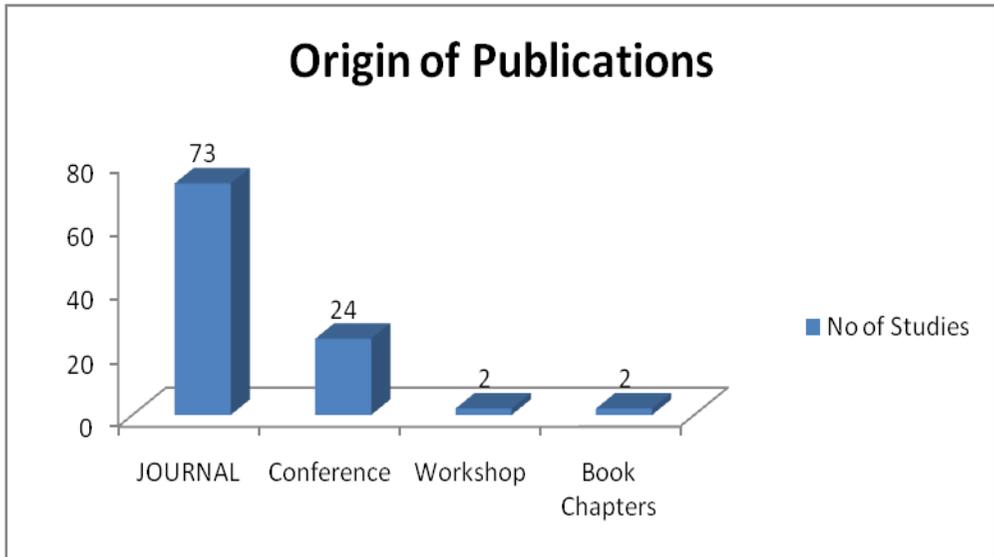


Figure 2. Structure of Origin of Publications

5.6 Temporal view of publication :

The Research Papers in this study were selected from the year between 2008 to 2018. Overall from the chart the Publications of studies is increased in the year 2015 and 2017.This shows that it may increase in the upcoming year too. The view of the studies is shown in Figure 3

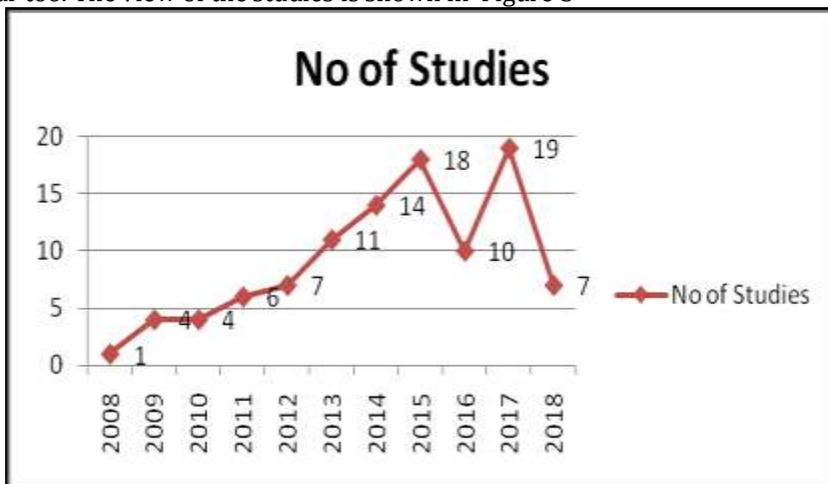


Figure 3 . Graph for no of studies

5.7 View regarding the Categories of Study

The Literature review is about comparing the studies between the rural and urban areas, While the study the papers collected were according to 4 categories, which includes rural areas, urban areas, Comparison on both and Other category.

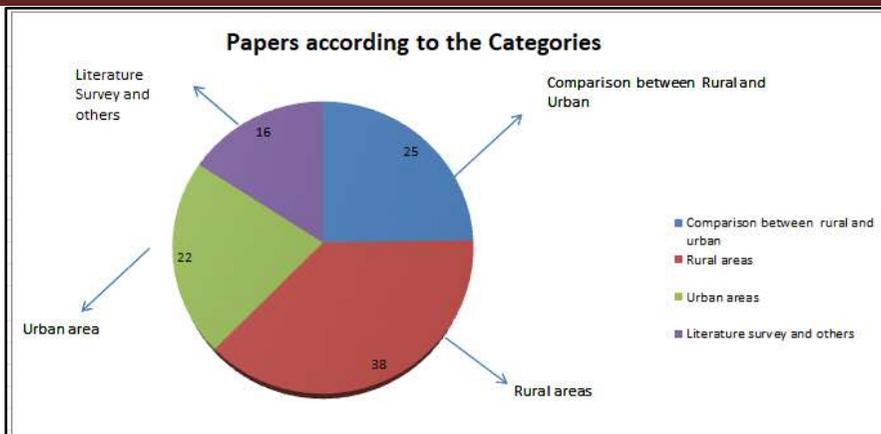


Figure 4. Searching of Papers according to Categories

6. RESEARCH QUESTIONS RESULTS :

RQ1 : What are the measures about the e-Learning and personalhygiene among ruralareas ?

| E-learning inRural areas | | |
|---|--------------------|--|
| Citations | Variable focused | Description |
| (Sato et al., 2017) [22] | ICT and Network | In the rural schools of Nepal, India. There was a need of support in infrastructure of networks and its hardware , It occurred failure on networks, slow speed in internet and also the frequent power failures exists. |
| (Tarek, 2014) [23] | Tablet Training | In the rural areas of Western Bangladesh, here the rural needs and the urban needs were exactly the same. The trainings were required to satisfy the local needs and work on the standards for the empowerment. |
| (Anand, Saxena, & Saxena, 2012)[24] | Broadband internet | Due to the broadband problems such as availability ,cost and need of technical skills and stuff are faced by the rural people and residents. |
| (Andreea-Diana, 2014) [25] | ICT | More than 50 % of rural pupils are eager in using the Computers at school for many purposes. The rural pupils are improving so it's a need to improve the quality of the education. |
| (Oduor, Waweru, Lenchner, & Neustaedter, 2018) [26] | E-learning | The Outcomes show that the farmers needed enough awareness to empower them to apply ICT mediations that make them better yields. Farmers are very much eager in gaining to access information in water, soil richness and market openings. |
| (Anand et al., 2012) [27] | ICT | Some studies say that there were some negative consequences noticed in booming the e-learning in the areas of rural because of the need of Understanding, unwillingness, economic imbalance and need of facilities in northern India. |

| Personalhygiene in Rural areas | | |
|--|------------------------------------|---|
| Citations | Variable focused | Description |
| (Das, Baker, Dutta, Swain, & Sahoo, 2015) [28] | Menstrual hygiene | In the rural areas the washing practices which are Unhygienic are particularly common in lower socio-economic groups among the women and the girls. Menstrual hygiene management is affected by the factors like accesstoareas wherever theladies will address menstruum connected wash in privacy and well-being |
| (Khatoon, Sachan, Khan, & Srivastava, 2017) [29] | Daily bath and changing of Clothes | In the district of Lucknow the school children between the age of 6-12 undergone their studies, 13 % of the areas were taking bath daily and 77 % of the school children were taking bath in alternative days 79.5% of school children clothes were changed on alternate days |

| | | |
|--|--|--|
| (Sreenivasan, Gotestrand, Ombeki, & Oluoch, 2015) [30] | Hand wash | In 2008 at the region of Kenya , Nyanza Province as we indicated that the handwashing is important ,the response from the people regarding Handwashing while visiting the toilet were 96 % , (95%) did before eating , 61 % did before food preparation , 27% did handwashing after cleaning a defecated child, 26 % were done after contact with a patient and 4 % of them did their hand wash after coughing and blowing ones nose . |
| (Paul et al., 2017) [31] | Personalhygiene | In Odisha (formerly Orissa) in a rural state of eastern India most of the diseases were more in children due to the need of proper personalhygiene, it is important to focus on the programs for developing the personal hygienic practices |
| (Rah et al., 2015) [32] | WASH(water , sanitation and hygiene)practices | 83 % of the household peoples have been facilitated with improved drinking water sources. One fifth of the households have enhanced sanitation services, 77 % do not have toilet facility. |
| (Paul et al., 2017) [33] | Personalhygiene | In RuralOdisha with higher level school students, higher than 90 % of the school children are good in maintaining their personalhygiene like clear hair, tongue, hand washing and footwear.. 80 % of children take daily bath and daily brushing. |

It is found that the e-learning in rural areas are poor and in need of development not only in India also in other parts of the world. Rural people are eager to use those e-learningresources but the facilities are not fulfilled to them completely. Regarding personalhygiene the practices are lacking in rural areas such as Odisha, Lucknow as due to the lack of personalhygiene the children areas . In kenya the health staffs and clients are taking measures to maintain hygiene health.

RQ2 : What are the measures about the Practices of e-learning and personalhygiene among urbanareas ?

| E-learning inUrban areas : | | |
|---|----------------------|---|
| Citations | Variable focused | Description |
| (Sampath Kumar, Basavaraja, & Gagendra, 2014) [34] | e-learning resources | Majority of the schools, in particular in urban areas the private schools are provided computers. The development of the economy is very rapid in the urban areas. |
| (Mouza & Barrett-Greenly, 2015). [35] | Electronic learning | The urban Students in the kingdom of US, use the mobile applications to refer the online content on various topics also teachers used the online content, to locate the online content they used iPads which includes text and images. |
| (Kutzner, Hauke, Marciniak, & Owoc, 2015) [36] | e-learning | Employees in cities under the sectors also need to upgrade their knowledge. At present the cities used the e-learning system to solve the issues that contributes to the growth of the Urban knowledge. |
| (Gachago, Morkel, Hitge, van Zyl, & Ivala, 2017) [37] | e-learning | Regarding e-learning in the regions of South Africa , the Lecturers who were designated as the Champions use specific tools for supporting their teaching or student learning practices. They are curious and eager to learn in any space. They pursue to adapt their practices to their learners. |
| (Authors, 2017) [38] | e-learning | In the kingdom of saudiarabia the largest universities have contributed the e-learningcentre which offered online courses in both the languages such as English and Arabic. which collaborated with the Dean ship of Academic Affairs, Also the King Abdul Aziz University (KAU) offers academic support for the students which offers 16,000 eBooks. |

| Personalhygiene in Urbanareas : | | |
|--|--|---|
| Citations | Variable focused | Determinants |
| (Jeyakumar & Ghugre, 2017) [39] | Hand Wash | 90% of the adolescent girls washed their hands with only water before. After visiting the toilet 90 % of them made hand wash with soap and water. |
| (Mhaske, Khismatrao, Kevin, Pandve, & Kundap, 2013) [40] | Hygieneof hair,skin,clothes,nails | In urban areas the practices of personalhygiene display that 437 (97.1%) students have combed and trimmed their hair. The Skin was hygienic with 396 (88.0%) students and the dresses were neat with 330 (73.3%) students. The untrimmed nails with 201 (44.7%) students were the major problem observed under hygiene status. The Poor hygiene was observed with the older boys. |
| (Jeyakumar & Ghugre, 2017) [41] | Maintenance of drinking water and Disposal of water. | 84 % of the households covered the water,10% of the households did not cover the drinking water partially or fully. In this study 20 % of the people never use the footwear in the neighbourhood, about 10 % of the households were located near the open drains as the water logging increases the risk of vector borne infections. |

RQ3: Is there any difference on rural and urban Areas regarding e-learning and personalhygiene ?

| Difference under E Learning | | |
|---------------------------------------|--------------------|---|
| References | Behaviour | Differences |
| (Liao, Chang, Wang, & Sun, 2016) [42] | Digital inequality | The urbanstudents scores were bigger than the agricultural students on DSE by 1.337 points. The technological resources & straightforward access to the computers with net are the vital desires to satisfy the digital divide on the schools and also the government to give rise to the number of computers in households. |
| (Pham & Massey, 2018) [43] | Internet | The home was the foremost common place for the respondents within the areas of rural and concrete relating to the web access. The access rate for the agricultural areas calculable that 85% thehouseholds created access in home web by 2015. The percentage of the respondents within the urban areas is considerably not up to the agricultural areas |
| (Goh & Kale, 2016) [44] | ICT | The rural schools within US and across the globe have faced the limited computer services to sufficient student’s software and limited great speed internet connections when compared to the locations of urban. |
| (Authors, 2015) [45] | ICT | In this study the rural students of about 20.66 % and urban students of about 69.70 % made use of the computers for the purpose of academic for several ways, The major issue is that many of the rural and urban students experienced were the electricity failure and the need of computer skills while handling the systems. |

| Differences under Personalhygiene | | |
|--|--|--|
| References | Behaviour | Differences |
| (Sunday & July, 2015) [46] | personalhygiene in reproductive health | In the regions of Jaipur,India. The rural girls are more aware and mindful about the reproductive health when compared to the urban counterparts. |
| (Dehghanzadeh, Asghari-Jafarabadi, Salimian, Asl Hashemi, & Khayatzaadeh, 2015) [47] | Pediculosis capitis on school children | The study in the country of Iran shows that the Prevalence of head lice was not important with urban (5.1 %) and rural as (6.1 %). The frequency between the students with low educated mothers was larger than the high educated mothers. Previous studies demonstrated that the prevalence in gender the |

| | | |
|--|---|--|
| (Borges-Pedro, Müller, Nunes, & Gomes, 2018) [48] | Water and sanitation | girls have more risk than the boys. For the Water provision ,The Schools in rural areas don't have their own wells as they depended for the private wells . Own bathrooms for the students were available in the state schools which were unshared with the teachers. In County schools 11 % of the toilets were shared by both the students and the staffs. 16 % of the toilets were located inside the classrooms. |
| (Chaudhari, Mansuri, Singh, & Talsania, 2015) [49] | Personalhygiene in hair ,nails and dental | Majority of the urban children in schools of about 597 (87.03%) were practicing hair combing, where the rural areas had 559 (80.78%)401 (57.95%) in rural areas show that the children nails were clean and trimmed ,and 427 (62.24%) in urban areas. |

RQ4 : What are the features lacking in e-learning and personalhygiene among rural and urbanareas?

| Features lacking underE-learning | | |
|---|----------------|---|
| References | Rural or Urban | Features Lacking |
| (Anand et al., 2012) [50] | Rural | The issues related in delivering the e-learning in rural areas, the providers approve that there is a need of Infrastructure and speed connectivity, illiteracy in IT , shortages in financial capacity of rural peoples and need of staff support in rural areas and need of awareness. |
| (Zenda, 2017) [51] | Rural | Teachers known time and therefore the lack of resources as a burden since restricted time decreases the amount of demos they are doing as its tough for them to finish the information resulting in the poor results. |
| (Acharya & Lee, 2018) [52] | Rural | To modernize the system of education in Nepal, India the ICT is performed uncertain and not logical due to the need of a clear plan, which displays that the government didn't provide any priority to the development in the ICT education . |
| (Tarhini, Hone, & Liu, 2013) [53] | Rural | In the country of Lebanon, there are some challenges that affects the e-learning systems in the universities and the institutions of higher education which supports the standard varieties of teaching in education because of the requirement of economic resources or well trained staffs, which affects the acceptance of the technologies among the countries. |
| (Mostafa, Hassan, Jahan, Chandan, & Ali, 2014) [54] | Rural | The vital factor of the system needs coaching of the teachers during this space, once it's done the rural youngsters are going to be additional benefited from the large web resources, which can enhance the educations quality within the regions of rural. |
| (Ionita, Visan, Niculescu, & Popa, 2015) [55] | Urban | The Process of business must be examined so as to outline the adequate knowledge & also the flow of management that supports the ICT. |

| Features lacking under Personalhygiene : | | | |
|--|----------------|---------------|--|
| References | Rural or Urban | Country | Features lacking |
| (Sreenivasan et al., 2015) [56] | Rural | Kenya | In the western part of Kenya , in most of the clinics there is a lack of access for safe water and hand wash facilities. To overcome this issue there was a programme initiated to put in water stations for drinking and handwashing functions in 109 health facilities, training the health staffs for the treatment in water and the hygiene also to encourage the clients to stick to these practices. |
| (Rah et al., 2015) [57] | Rural | India | In India the weak youngsters and therefore the mothers must benefited from extra nutrition sensitive interventions particularly leading up to and through initial one thousand days. The basic WASH practices are needed for the children and the mothers and also the behaviour to endure , grow and succeed. |
| (Paul et al., 2017) [58] | Rural | Odisha, India | Most of the morbidities were higher in children due to the need of personalhygiene, to develop the personalhygiene it is important to focus on the programs. Precaution should be taken to progress children regarding personalhygiene with low socioeconomic and parental education level by teachers and health workers through concerted health education level. |
| (Jeyakumar & Ghugre, 2017) [59] | Urban | Pune, India | In the Urban slums there is an improper planning for the waste disposal and water drainage in urban slums, in which it results in water logging which increases the risk of vector borne infections. Nearly 10 %\$ of the houses were near the open drains. The drains near the houses were covered fully (73%) or partially (17%) |

7. Conclusion :

From the overall study, The researcher compared the two factors e-learning and personalhygiene among rural and urban areas which are the essentials for every individual. From the overall study when compared to the urbanareas therural area are more affected and the facilities are lacking in various parts of the globe. Also in few parts of rural areas the practices are currently developing by focusing on the training and programs .Also the government should increase and enhance the facilities where the areas are more affected. So that the gap can be filled between the rural and urban areas and can have equal facilities in both e-learning and personalhygiene.

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