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KNOWLEDGE TRANSFER ABOUT EARTHQUAKE DISASTER MITIGATION TO CHILDREN THROUGH SONG GENERATION WITH TF-IDF Maria Umran*, Hafiz Mohd. Sarim** *Faculty of Information Science

and Technology, Universiti Kebangsaan Malaysia, maria.alkibt@gmail.com **Faculty of Information Science and Technology,Universiti Kebangsaan Malaysia, hms@ukm.edu.my Email Correspondence :maria.alkibt@gmail.com Received : Accepted : Published : Abstract: This research provides a method for an alternate approach of knowledge transfer and disaster mitigation, targeted specifically for children. Past observations during disaster identify that when children are separated from parents, they suffer due to the inability to comprehend disaster mitigation concepts. Knoweldge Management Systems are needed to digest a large body of knowledge from documented disaster mitigation techniques into simple words and small phrases that children can understand. Based on TF-IDF and text analysis concept, knowledge extraction is enabled to produce simple words that are understandable by children. This study shows that those simple words can be arranged into contextual lyrics utilizing an Artificial Intelligence lyrics generator. Those lyrics then can be orchestrated into songs by using music generator. The entire process produces the new generational knowledge in a form of songs, which can be easily understood by children. The method proposed by the research has accomplished knowledge transfer about earthquake disaster mitigation to children effectively through songs as a medium. By transferring knowledge about earthquake disaster mitigation to children as an early education technique, they will have a better chance in surviving during disasters. Keywords: TF-IDF, disaster mitigation, knowledge transfer, knowledge management system, children, song Introduction As a part of disasters, earthquake also contributes a huge loss and destruction. A strong earthquake on 5th June 2015 at a moment magnitude of 6.0 on the Richter scale in Sabah, Malaysia killed 18 people, among victims were six Singaporean children from the Tanjong Katong Primary School (BBC News, 2015). There is no guarantee that children will always be along with their parents when a disaster occurred. Therefore, they need to gain some knowledge about disaster mitigation. However, transferring knowledge to children is not an easy task due to their limited absorptive capacity. There are still problems on regards children's behavior and attitude on natural disasters, and effective knowledge, even though they have already learnt about natural disasters and mitigations at school for years. This happened due to ineffective teaching technique, which 1| depends much on pictures and text books as teaching method (Tuswadi & Hayashi, 2014). Consequently, a newly generated medium such as songs, can be considered to be used a teaching medium to children. Another study finding shows that low scores in children questionnaires about disasters may due to the fact that teaching materials are inconsistent with the key messages provided by the authority (Amri et al, 2017). The proposed process in this study develops a mechanism that can be modified based on the needs in conveying the key messages from stakeholders to children. On the other hand, children with lack of literacy and other education level limit their perceptions of a potentially emergency situations, and how to prepare for it. According to Izadkhah & Hosseini (2005), one of the difficulties in training children is the abundant difference between education level in the big cities and small towns or villages due to illiteracy rate. A new medium such as songs will erase the boundaries between literate and less literate children, and transfer equal knowledge about disaster mitigations in both cities and remote areas. Nonaka and Takeuchi (1995) define 'Combination' as knowledge conversion of explicit knowledge such as documents, to another explicit knowledge. A proposed process is required to digest a large body of knowledge in a form of documents by utilizing Knowledge Management Tools to produce simple words and phrases. Those words then are arranged into lyrics and orchestrated into songs. The process modifies the knowledge conversion of 'Combination' to a nouveau knowledge transfer mechanism, specifically in earthquake disaster mitigation. Besides, none of Knowledge Management Tools combine the mechanisms, since knowledge extraction, lyrics creation and song orchestration are complete ad hoc mechanisms. A proposed process has the aim to combine all mechanisms from start to finish. Through a mechanism of knowledge extraction and knowledge transform, a newly generational knowledge

can be created in a form of song. By listening to the song, children as the recipients can retain the intended lessons easily, and be proactive during disasters in order to minimize injuries, prevent trauma, and reduce calamities. Aims of Study The general objective is using Knowledge Management System for transferring knowledge from experts' works in earthquake disaster management to children through songs. Meanwhile, the specific objectives of the study are; 1) to propose a process using existing framework of Knowledge Management Systems for the conversion of experts' body of knowledge into simple and easily understandable words and phrases, and also to develop new mechanism using existing mechanism for the conversion of extracted words into a lyrical structure of a song. 2) to evaluate the effectiveness of newly generated song in transferring disaster mitigation knowledge to children. Related Works Based on United States Geological Survey (2015), the latest recorded earthquake with 9.0 of the Richter scale was in 2011 in Japan, which killed at least 15,550 people, misplaced 5,344 people, wounded 5,314 people, and relocated 130,927 people. The Guardian (2011) reports that the earthquake and tsunami devastated Japan and may has displaced as many as 100,000 children, when many of them were at schools or kindergarten in the mid-afternoon. Meanwhile in Nepal, one-fourth of total deaths of 7,679 victims in a 7.9-magnitude earthquake on 25th April, 2015 were children below 10 years old (Hindustan Times 2015). Mitigation focuses on long-term procedures for eliminating or reducing risk (Allen et al. 2016). Ozkazanc & Yuksel (2015) shows that even university students do not have sufficient knowledge about disaster awareness. 84.5% students at Gazi University have not obtained fundamental disaster drills, and the 78.6% of them have not acquired a training lesson related to disasters throughout their education life. There are some approaches which have been introduced in order to reduce disaster risks, for instance; Save The Children (2015) provides a comprehensive module about disaster mitigation for children including a cultural folk song and drama titled "The Bow and Arrow" from Sri Lanka. However, training children also has some problems. Pedagogical factors also affects the teaching and learning process, in this case on ICT applications in the class rooms (Razak, Saeed, & Alakrash, 2019). One song in particular has been attributed thousands of people's lives in Simeulue island, Aceh during the earthquake and tsunami in 2004 is

> 5**the story of Smong** (meaning "tsunami" **in** the **Devayan language).**

It has been proven that victims in other parts of Aceh have larger casualty ratios, with the death toll reaching more than 200,000 people out of an original population of 4,193,000 (1:20 ratio). Meanwhile, in Simeule

> 5**island, the victims were only 7 people** out of **78,000** in **total population**

with 1:11,000 ratio (Syafwina, 2014). According to Mcclain Opiyo (2015), music or songs play a major role in storing information for current generation of what they went through and the future generation will have a chance to know about it also. Another well-known story about generational knowledge is the "Duck and Cover" animated film. It was intended to be a civil defense counter for children in case of a nuclear bomb attack during the Cold War in the 1950s and 1960s. Knowledge Management System is involved in Emergency Response Management (ERM) on knowledge based, which delivers an extremely fast response to the queries (Arain 2015). Another case study is flood Disaster Management Plans

> 3**(DISPLAN) of the State Emergency** Services **(SES) the State of Victoria,**

Australia

based on metamodeling framework. It validates

3**knowledge transfer analysis framework to** combine **access** into **semi-structured**

DISPLAN through unified repository (Inan & Beydoun, 2017). Converting a large body of knowledge is feasible by using knowledge extraction. Saitoh et al. (2015) propose a feature selection based on onomatopoeia for the knowledge construction model by focusing on feature selection of text mining. Another knowledge extraction framework that can be utilized is text classifiers, where Jie, et al. (2015) construct the knowledge extraction framework. The segmentation process of a large text on a document

6**into several** clusters **and knowledge can be identified based on text classifier,** which is **constructed with the major elements of each**

document (Chen et al, 2018). In order to transfer the knowledge to children through a song, DeepBeat as lyrics creation tools is required in the process. It based on two machine-learning technique, those are: a deep neural network model and the RankSVM (Support Vector Machine). It shows 82% the accuracy of the distinguished real next line from a randomly selected lyric (Malmi, et al. 2015). Methodology and Findings of Study Proposing a Process from KNN & TF-IDF Framework The flow from knowledge extraction, lyrics generation, and song orchestration was patched in a proposed process, which create a newly generated medium. This process implements KNN & TF-IDF (Term Frequency - Inverse Document Frequency) framework (Trstenjak, et.al 2014), which is proposed to assist the measurement and classification

4**of documents** similarity **based on the** needed **text sample.**

Trstenjak, et.al (2014) also employ

4**the K-Nearest Neighbor (KNN),** as **one of the simplest machine learning algorithms.**

Meanwhile, the process for this study is implemented in “RapidMiner” as a Knowledge Management Tool, “DeepBeat” as lyrics generator, “WolframTones” as songs orchestrator, and “Sibelius” as music note writer. The presentation of the proposed process can be displayed as Figure 1: Figure 1. A Proposed Process to Create a Newly Generated Medium Identifying Significant Words In order to digest a large body of knowledge, a knowledge extraction will be deployed by using a Knowledge Management Tool through these steps, those are; 1) selecting relevant documents, 2) Tokenizing documents, 3) Transforming cases, 4)

Filtering stop words, 5) Generating n-Grams in terms, 6) Filtering tokens by length. Knowledge extraction basically uses term frequency and TF-IDF. There are three documents about earthquake disaster mitigation, which will be extracted, those are; 1) “Great Shake Out Earthquake Drills”, published by Earthquake Country Alliance, 2) “What to Do in an Earthquake”, released by Victoria State Emergency Service Australia, 3) “Earthquake”, published by Department of Homeland Security, United States of America. After extracting those documents, the highest frequent until the least frequent phrases appeared on the result, where it was limited to total occurrence 8. Therefore, there are 23 significant words as the result of knowledge extraction technique. The highest occurrence word is “earthquake” with total occurrence is 41, meanwhile the least occurrence word is “emergency” with total occurrence is 8. It can be assumed that those words or phrases are the most relevant words in regards to earthquake disaster mitigation. These contextual phrases were utilized as inputs to arrange lyrics in the next step of this research experiment. Significant words are displayed on Figure 2: Earthquake Shaking Table Neck Cover Shelter Glass Debris Hold Drop Ground Head Situations Stop Emergency Crawl Protect Buildings Doorway Falling Stay Move Nearby Figure 2. Significant Words Rearranging Significant Words into Lyrics After performing the knowledge extraction process, the significant words will be put into a lyric generator. In this study, DeepBeat will be deployed as a lyric generator. This generator helps users to create a whole new song verse by combining rhymes from existing songs or by selecting some options so that users can choose which rhyme fits the best, since the song must be contextual. Arranging phrases or words into lyrics was not that easy, since the flows and common sense of the lyrics must be taken into an account. As it is concerned that the final result will be delivered to children, the phrases must be simple but still contextual. In this research, the lyrics arrangement can be seen below: “When you feel ground shaking, drop, cover, hold on Drop to your hands and knees, protect your head and neck Crawl and hold on to sturdy tables stay until earthquake stops Do not move into doorway cause building falling down Do not run outside cause debris and glass can hurt In emergency situation find shelter nearby and be aware” Orchestrating Lyrics into a Song After using DeepBeat to generate the lyrics, then an orchestration software such as WolframTones is used to generate a musical composition. These music notes can be played with a piano as a music instrument or with any other instruments. In order to combine lyrics and composition into a readable form, so that anyone can preserve and use the composition to play instruments and sing the song, a software named Sibelius has been utilized to reach the aims. This platform generates, plays and print sheet music for practicing notes. The music notes and lyrics are displayed on Figure 3: Figure 3. A Song with Lyrics Evaluating the Effectiveness of the Newly Generated Medium In order to evaluate the effectiveness of the newly generated medium and whether it is understandable by children, two types of close-ended questionnaires were distributed to 3rd year primary school students aged 9-10 at Bunga Matahari International School in Banda Aceh. The school was chosen by using random sampling method, and the total population is 27 students. 3rd year students were selected to answer the questionnaires since this study was conducted English and their English ability is sufficient to answer the questions. Before disseminating the questionnaires, they have been tested on 5 students aged 7 until 11. The questionnaires consist of two types questions, those are; BEFORE questionnaire and AFTER questionnaire. They have the same 10 exact questions, in order to know the improvement of students’ knowledge in earthquake disaster mitigation. Initially, the students answered the BEFORE questionnaires prior to listening to the song. After that, the students heard the song for three times then answered ten questions on the AFTER questionnaire based on their perspective towards the song. All answers then were examined based on quantitative analysis to discover the result. Out of 27 respondents, there are 16 respondents who got score escalation. It means that there is a positive knowledge improvement for 59,25% to this group study. There is also an improvement of score for 4 students in the group study, it

shows 50% escalation in understanding the knowledge. The result of survey on Microsoft Excel is depicted on the Figure 4: Earthquake Disaster Mitigation Survey 12 10 8 6 4 2 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 Before 10 9 10 9 6 8 9 9 10 7 7 5 9 7 8 7 8 6 8 5 5 9 7 10 8 8 8 After 10 9 10 9 10 9 9 9 10 9 7 9 9 7 10 10 10 8 9 9 6 10 9 10 10 10 10 Number of Respondents Figure 4. Chart of Disaster Mitigation Survey In order to show the result in a deeper insight of data analysis in measuring significance of the result, SPSS has been deployed as follows; a. Data 1) Data from BEFORE questionnaires 2) Data from AFTER questionnaires b. Demand Analysis 1) Normality test by utilizing Shapiro-Wilk Test 2) Normality test by utilizing Kolmogorov-Smirnov Test Table 1. Normality Test

2**Kolmogorov-Smirnova Shapiro-Wilk Statistic df Sig. Statistic df Sig.** Before **0.** 168 27 **0.** 049 **0.** 921 27 **0.** 043 After **0.** 296 27 **0.** 000 **0.** 746 27 **0.** 000 **a. Lilliefors Significance Correction**

b. df (degree of freedom) c. Sig. is Significance c. Normality Hypothesis H0: μ1 = μ2 or data is distributed normally or normal population distribution. H1: μ1 ? μ2 or data is not distributed normally or population distribution is not normal. d. Theory of Decision If Sig. > ? (alpha), it means that H0 is accepted. If Sig. < ? (alpha), it means that H0 is rejected or there is not enough evidence to accept H0. e. Result For Normality Test The normality test is an obligatory test before any other tests in inferential statistical analysis. In this study, ? (alpha) value or probability is 5%. Based on received information from data, the number of respondents is 27 samples, which is relatively only few in numbers. Therefore, it is recommended to apply Shapiro-Wilk Test compared to Kolmogorov-Smirnov Test for the two data. On the result of normality test for 27 respondents by exercising Shapiro-Wilk Test, BEFORE questionnaires show count Statistic 0.921 with Significance value (Sig.) 0.043. Since Significance value is smaller than alpha or the mentioned probability 0.05 (Sig. = 0.043 < ? = 0.05), according to the decision theory for H0 is rejected. So as to, the final result for normality test on BEFORE questionnaire shows that data is not distributed normally. Based on the normality test on respondents for AFTER questionnaires by utilizing Shapiro-Wilk Test, gathered information displays that count Statistic is 0.746 with Significance value (Sig.) is 0.000. As Significance value is smaller than alpha or probability 0.05 (Sig. = 0.000 < ? = 0.05), consequently the decision theory for H0 is rejected. Hence, the final outcome for normality test on AFTER questionnaires demonstrates that data is not distributed normally. f. Difference Test By Utilizing Mann Whitney U Test Mann Whitney U Test is implemented since both data are not distributed normally, and the samples are related to each other. It is presented by the BEFORE questionnaires have exact questions as AFTER questionnaires. The result of Mann Whitney U Test on BEFORE questionnaires and AFTER questionnaires can be perceived on Table 2: Table 2. Statistics Testa Result - Time

7**Asymp. Sig. (2-tailed) 0.000 a. Wilcoxon Signed Ranks Test b. Based on negative ranks**

c. Asymp. Sig. is Asymptotic Significance For Mann Whitney U test, the ? (alpha) value or probability is also 5%, and this

8**value is the probability of rejecting the null hypothesis when the null**

hypothesis is true. The

alpha level should be determined before conducting the hypothesis. g. Hypothesis H0: there is no difference for BEFORE and AFTER questionnaires. H1: there is a difference for BEFORE and AFTER questionnaires. h. Basic of Decision If count Statistic > probability, then H0 is accepted. If count Statistic < probability, then H0 is rejected. In decision making for the Mann Whitney U Test, it is visible that Asymp. Sig. is 0.000. Meanwhile the value of Asymp. Sig. is smaller than probability (0.000 > 0.05), it can be concluded that H0 is rejected or there is a difference for BEFORE and AFTER questionnaires. Asymp. Sig. 0.000 also shows a highly significant improvement of score escalation on AFTER questionnaires and it reflects highly significant effectiveness of the song in transferring the knowledge about earthquake disaster mitigation to children. Therefore, this can be appreciated as an important contribution in disaster mitigation, especially in earthquake disaster mitigation. Discussion This study contributes a proactive measure for children in mitigating disasters especially earthquake. The proposed process can be implemented and also modified by potential stakeholders and users. Potential stakeholders include government, ministries, United Nations, Non-Governmental Organizations, mass media, schools, teachers, parents, and so on. This study also gives a constructive and applied contribution in the field of research of Knowledge Management and Knowledge Management Systems. Many times, users deploy Knowledge Management Systems to extract a knowledge but they never utilized it to reform a knowledge. This possibly provides a new role for Knowledge Management tools to repackage the extracted knowledge to targeted audiences. Another ultimate impact of this study is reducing the number of earthquake victims through the spread of generational knowledge that contained in songs. Furthermore, in the attempt to provide solution to improve Knowledge Management, this study provides a new avenue for the use of this technology. The technique has been utilized in this study, can be used also for another disaster mitigation, natural or human-caused disasters, for instance; fire, industrial accidents, act of terrorism, shootings and incidents of mass violence. On the other hand, information about earthquake disaster mitigation is easier to acquire compared to information about smaller disasters or infamous disasters. These kind of disasters are not fully documented and less accessible for people, for instance, the outbreak of infectious diseases, community upheaval and so on. Another example of disaster, which happened in the state of Johor was industrial gas leak (The Straits Times, 2019). Many schools were closed at that time since the students were affected and hospitalized due to poisonous gas from factories. This kind of event or disaster needs to be considered and documented for disaster mitigations. According to this study, alternative solutions in the future for knowledge extraction are as follows; a) Variety of main sources of information for knowledge extraction. In the future, website contents, data from database or social media can be one of the main sources as a large body of knowledge that contain tangible knowledge about disaster mitigation. Another solution is b) Availability of Information. Nevertheless, there are disasters or accidents, which are not so common happened but still need to be measured. For instance, liquefaction is a disaster that follows earthquake, it does not have a well-documented information in regards to its mitigation. On the other hand, industrial accidents also give negative impacts for children, but unfortunately the information or source are not easy to find since it is not so common. Therefore, the work in this study need to adapt to fully documented or less documented disasters in the future. Conclusion Overall, this study has successfully achieved the research purposes in designing a proposed process that has function to extract a large body of knowledge into simple and understandable words or phrases. This process also develops a mechanism for extracted words into a lyrical structure of a song, and then orchestrate the lyrics into a newly generated medium. According to evaluation on children as end users, the song as a newly generated medium has significant effectiveness in

order to transfer the knowledge about earthquake especially earthquake disaster mitigation to children. By implementing the process and using the song as a newly generated medium, it is believed that children remember the intended lesson much more easily. The song also helps them to survive during earthquake, not only to prevent physical injuries, but also to save their lives and reduce bigger losses in their surroundings. As the conclusion, objectives of this study have been achieved positively. Research achievements and study results have been discussed completely. | 10 Advantage of the study and weakness of the study also have been presented. The improvement on the process and knowledge extraction have been proposed, in order to give possibilities to new researches in Knowledge Management field in the future. Acknowledgement This research was sponsored by the GGP-2017-076 research grant from the Centre for Research Instrumentation and Management (CRIM), Universiti Kebangsaan Malaysia. Rerefences Allen, G., Derr, R., & Derr, R. (2016). Mitigation and Preparedness. Threat Assessment and Risk Analysis, 117–132. https://doi.org/10.1016/B978-0-12- 802224-5.00011-7 Amri, A., Bird, D. K., Ronan, K., Haynes, K., & Towers, B. (2017). Disaster risk reduction education in Indonesia: challenges and recommendations for scaling up. Hazards Earth Syst. Sci, 17, 595–612. https://doi.org/10.5194/nhess-17-595-2017 Arain, F. (2015). Knowledge-based Approach for Sustainable Disaster Management: Empowering Emergency Response Management Team. Procedia Engineering, 118, 232–239. https://doi.org /10.1016/j.proeng.2015.08.422 BBC News. 2015. Malaysia Quake: Singapore and Sabah Mourns Victims. Url link: http://www.bbc.com/news/world-asia-33039206" [28 Aug 2015]. Chen, J., Zhang, C., & Niu, Z. (2018). A Two-Step Resume Information Extraction Algorithm. Mathematical Problems in Engineering, 2018. https://doi.org/10.1155/2018/5761287 Hindustan Times. 2015. One-fourth of Total Deaths in Quake was of Children below 10. Url link: http://www.hindustantimes.com/world-news/one-fourth- of-total-deaths-in-quake-was-of-children-below-10-nepal/article1- 1348697.aspx [28 Aug 2015] Inan, D. I., & Beydoun, G. (2017). Disaster Knowledge Management Analysis Framework Utilizing Agent-Based Models: Design Science Research Approach. Procedia Computer Science, 124, 116–124. https://doi.org/10.1016 /J.PROCS.2017.12.137 Izadkhah, Y. O., & Hosseini, M. (2005). Towards resilient communities in developing countries through education of children for disaster preparedness. Int. J. Emergency Management (Vol. 2). Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.471.5418&rep=rep 1&type=pdf Jie, Chen., Zhendong, Niu., Hongping, Fu. (2015). A Novel Knowledge Extraction Framework for Resumes Based on Text Classifier. Switzerland: Springer International Publishing: 540-543. Malmi, E., Takala, P., Toivonen, H., Raiko, T., & Gionis, A. (2015). DopeLearning: A Computational Approach to Rap Lyrics Generation. | 11 https://doi.org/10.1145/2939672.2939679 Mcclain Opiyo, L. (2015). Music as Education, Voice, Memory, and Healing: Community Views on the Roles of Music in Conflict Transformation in Northern Uganda. African Conflict and Peacebuilding Review, 5(1), 41–65. https://doi.org/10.2979 /africonfpeacrevi.5.1.41 Nonaka I., Takeuchi H. (1995). The Knowledge-Creating Company. Oxford University Press: 57-71 Ozkazanc, S., & Yuksel, U. D. (2015). Evaluation of Disaster Awareness and Sensitivity Level of Higher Education Students. Procedia - Social and Behavioral Sciences, 197(February), 745–753. https://doi.org/10.1016/j.sbspro.2015.07.168 Razak, N. A., Saeed, H., & Alakrash, H. (2019). Pedagogical Issues of Using ICT Applications in Iraq. Asia-Pacific Journal of Information Technology and Multimedia, 7(2–2), 79–87. Saitoh, Fumiaki., Aoki, Hikaru & Ishizu, Shohei. (2015). Knowledge Extraction from Web Reviews Using Feature Selection Based on Onomatopoeia. Switzerland: Springer International Publishing: 650- 655. Save The Children. 2015. Child-led Disaster Risk Reduction: A Practical Guide. url link: https://www.preventionweb.net/files/3820_CHLDRR.pdf [24 Dec 2018]. Syafwina. (2014). Recognizing Indigenous Knowledge for Disaster Management:

1 **Smong, Early Warning System from Simeulue Island, Aceh. Procedia**

Environmental Sciences, 20, 573–582. https://doi.org/10.1016 /j.proenv.2014.03.070

The Guardian. 2015. Japan earthquake: 100,000 Children Displaced, Says Charity. Url link: https://www.theguardian.com/world/2011/mar/15/japan-earthquake- children-displaced-charity [28 Aug 2015] The Straits Times. 2019. 15 Students in Pasir Gudang Suffer Breathing Difficulties Possibly due to Toxic Gas: Malaysian Health Minister. Url link: https://www.straitstimes.com/asia/se-asia/15-students-in-pasir-gudang- suffer-breathing-difficulties-possibly-due-to-toxic-gas [20 July 2019] Trstenjak, B., Mikac, S., & Donko, D. (2014). KNN with TF-IDF based framework for text categorization. Procedia Engineering, 69, 1356–1364. https://doi.org/10.1016/j.proeng.2014.03.129 Tuswadi, & Hayashi, T. (2014). Disaster Prevention Education in Merapi Volcano Area Primary Schools: Focusing on Students' Perception and Teachers' Performance. Procedia Environmental Sciences, 20, 668–677. https://doi.org/10.1016 /j.proenv.2014.03.080 United States Geological Survey. 2015. Earthquake Statistics. Url link: https://earthquake.usgs.gov/earthquakes/browse/stats.php [28 Aug 2015] | 12 Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF Maria Umran & Hafiz Mohd. Sarim : Knowledge Transfer about Earthquake Disaster Mitigation to Children through Song Generation with TF-IDF |2 |3 |4 |5 |6 |7 |8 |9