

The Data Mining on Social Safety Data for Engineering Education

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Abstract: Social safety is the most important social problem in the world. Since the spatial changes, the social safety system has a lot of problems and is needed to change a lot. In the last days, the change of social safety system has happened all over the world. The social safety systems can be getting almost all countries in the world. There is an increasing need from countries, society, higher education universities, and people groups to change current Technology, Science, and Engineering education. Due to engineering education as a need and as a rule, these efforts need many bottlenecks such as the under delegation of men and minority groups in the engineering place, a low knowing of the engineering education among rookies, poor performance of learners in related aspects of engineer and science, and the gap between the need for an engineering place and graduating learners. This paper is trying to show the discussion on how teachers and learners of engineering education can build methods and tools to attract, inform, and use engineering words and queries in university learners. The proposed work of engineering education consists of educational interfaces and other techniques for engineering education and learning.

1 INTRODUCTION

Social safety is the most important social problem in the world. Since the spatial changes, the social safety system has a lot of problems and is needed to change a lot. In the last days, the change of social safety system has happened all over the world. The social safety systems can be getting almost all countries in the world. The volume of social safety is high, with about average ratio near 40% in the United States, and about average ratio near 70% in European. The feature of these changes is an objective of paradox. So as to detect different suggestions, it is important to know how person make their individual decisions. Individual income systems change an important way for both individuals and societies as most countries get with the social and economic impacts of helping person. Yet, as the traditional words: “classifying education systems and different individual income ways is hard.”

There is an increasing need from countries, society, higher education universities, and people groups to change current Technology, Science, and Engineering education. Due to engineering

education as a need and as a rule, these efforts need many bottlenecks such as the under delegation of men and minority groups in the engineering place, a low knowing of the engineering education among rookies, poor performance of learners in related aspects of engineer and science, and the gap between the need for an engineering place and graduating learners. Though performance in Technology, Science, and Engineering education as a whole is evaluated, there is no needed of engineering education at the high institute. The number of high institute students take part in engineering related lessons is reduced to those learners who have arranged summer days, holiday program, or free time programs. In a recent review developed by the Engineering Department, teachers processed engineering to be less needed for men, Hispanics, African-Americans, and Native Americans comparing with other learners such as economics, language, and politics. The review report show that teachers think that majoring in engineering in university is more difficult than majoring in some other learners such as economics, language, and politics. This view is changed from teachers to learners. Since the need of traditional engineering education in universities, many learners in China

have shown no interest in engineering careers and are no need of the chances provided by the engineering education. The most important thing in this field will be needed learners to change ways for taking part in the basic ways of formal searching and the application of key engineering words, as well as changing searching of ethnicity, gender, and others.

Data mining technology are increasingly used in education and teaching, and in particular, in public safety fields. Person working in different companies are increasingly want to know that “what do social safety data means” and think that the results of data oriented analysis and results to improve public service safety, payment effectiveness, and others. This paper is trying to show the discussion on how teachers and learners of engineering education can build methods and tools to attract, inform, and use engineering words and queries in university learners. The proposed work of engineering education consists of educational interfaces and other techniques for engineering education and learning.

2 THE RELATED WORK

One of the basic problems to presentation is which engineering words are needed to teach university learners who lack the basic skills needed to take part in many of the lessons of a university level engineering lessons? Some papers have issued these questions (A. Begel and E. Kopler, 2005; B.S. Bloom, 1964; P.C. Blumenfeld, 2006). Merrill et al. think key engineering words as concepts representing optimization, constraints, and prediction analysis. Besides basic knowledge of key engineering words, the usage of basic skills such as the ability to mining and analyzing systems and their mode, show some experiments and evaluate training set that can accurately provide the fulfillment of product requirements are needed (G. Campbell, R. Denes, and C. Morrison, 2000). Furthermore, Custer et al. defined a set of 14 core engineering concepts (design, modeling, constraints, innovation, systems, optimization, experimentation, prototyping, tradeoffs, analysis, problem solving, functionality, visualization, and efficiency) that are coherent with the aforementioned propositions. The cognitive domain in the Bloom Taxonomy includes six levels of learning activities (H. Christensen et al., 2009). Each level is related to a number of words that describe core frameworks in the learning process. Information maintaining and change of learning is

needed for teaching and learning. Thus, a cover of the concepts is expected in any engineering lessons.

3 SOCIAL SAFTY MINING

In China, a number of social safety functions and social data are given by the government to help person to be efficient and to provide related work. Fig. 1 shows a basic relationship between teachers and learners in the engineering education process. A learner begins a related function, which is evaluated by the teacher. Lessons are arranged on the interactive of learner entitlement and profiles. The learner is required to represent and transfer that may interact the learner entitlement and profiles. Once a learner representation is begun, it will be evaluated by the teacher. As a result, learners are further evaluated and changed if necessary. In other words, teachers to the learner can happen for reasons such as wrong representations. The teacher will try to recover the need, and the learner will be required to turn back such needs through replacement between the teacher and the learner.

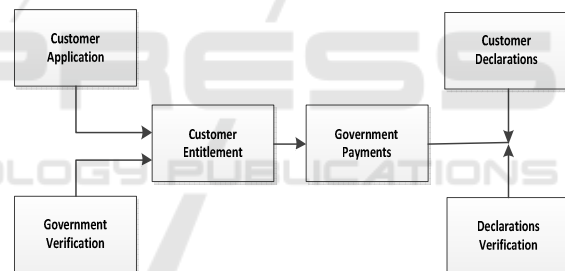


Figure 1: A cause-effect relationship in the social welfare business.

Similar to other field, data mining technologies in social safety are put by needs and related data. It has three parts: the data part, the learner part, and the data mining goal part. The data layer includes the main aims and expectations for the usage of social safety functions. For example, the main function, including learner function improvement, learner function correctness enhancement, learner function integrity enhancement, learner function management and prevention, learner function cause identification, learner function transparency improvement, learner function performance enhancement, learner function delivery enhancement, learner function profiling, learner function need satisfaction, learner function assurance, learner function detection, learner function process optimization, and learner function indicator enhancement.

In order to support the above major data mining functions, the teacher must import in efficient information framework. As a result, data are getting and refreshed at each process and space in the data mining functions. The data part concludes the main data sets. It has the learning and teaching data, the learning and teaching service data, the learning and teaching policy data, the learning and teaching payment data, the learning and teaching performance data, the learning and teaching process data, the learning and teaching infrastructure usage data, etc. Since each effort has been used to solve functions, it has been show that the teacher is in the different direction. Problems in getting and changing the main data function are needed. The accumulation of data mining functions gives an important and efficient way to show indicators, channels, and methods for these problems. The data mining part shows the major functions in mining social safety data to improve data mining functions.

Besides the needed and useful teaching and learning ways for engineering education, the teaching ways can be improved if aided with useful and pervasive methods and equipment. Useful educational methods and equipment for university learners will extend their teaching and learning field and abilities. The help provided by these methods and equipment cannot be thought a replacement for the help which can be given by a teacher. On the other hand, learning ways for engineering education must be thought as supportive methods and equipment with the method to improve learning by considering learners' profile, giving access to needed issues, relating persons, and extending lessons with useful and interesting fields for learners. Teaching and learning ways for engineering education integrates with the useful frameworks can solve the needs of university engineering education. Therefore, we divide a classification of teaching and learning ways currently available for university engineering using the following features: 1) teaching and learning ways hardware and software platforms, 2) teaching and learning ways integrated products, and 3) teaching and learning ways programmable. Usually, these features are changed to give more helpful classifications for the proposed work. Teaching and learning ways hardware and software platforms receive the domain of university engineering with a large number of functions that differ in afforded learning activities, afforded learning price, afforded learning expertise levels, and afforded learning technology requirements. Teaching and learning ways are arranged in three subject layers: teaching

and learning electronics ways, teaching and learning programming ways, and teaching and learning mechanics ways. Moreover, abilities offered by each layer are also ranked according to their required level of teaching and learning ways with whole functions and framework.

The result that assigning of a ratio shows that the proposed method does not provide effectiveness related to the teaching and learning mechanics ways. In the proposed method, a classification based framework introduces a learner with words knowledge of engineering, while other indicates a learner has process knowledge of effective and efficient engineering parts. In the analysis, the proposed method needs learners have basic knowledge in the process of methods, while the learners are focus on an engineering language. In engineering, the proposed method helps users can follow step-by-step ways to create an engineering equipment, while learners can perform open-ended engineering equipment. Teaching and learning ways can offer activities for more than one engineering level. For instance an engineering product that uses basic knowledge in the process of methods using an engineering language will be given an equipment level of the proposed method, which is shown in Fig. 2. However, the similar engineering equipment may cause engineering level via a basic knowledge language such as C++, thereby also causing an engineering language classification. The proposed method uses are a common selection for university engineering education and include evaluation, produce, and evaluation tools, engineering language environments, and online engineering language information needs.

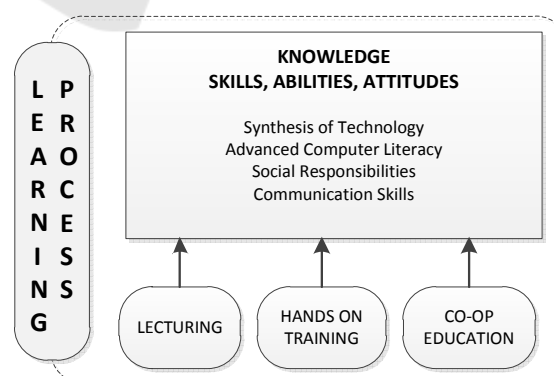


Figure 2: The basic framework.

4 DISCUSSIONS

A survey of data mining based engineering education frameworks have been discussed in this section, providing learning results for individuals with some learning profiles and creating a large number of learning and teaching methods and engineering education fields. Most of the proposed method outlined is well appropriate to answer teaching and learning needs, while other engineering education frameworks need a number of times before outputting engineering education. As both teaching and learning methods are important for university engineering education, the proposed method think that some engineering education frameworks are more appropriate to teach and learn words by teaching and learning methods. Similar to the proposed method, while other engineering education methods help the usage of the subjective methods of profile and project based curriculums. Engineering education frameworks based technologies encompass a rich number of engineering related topics. On the other hand, the most needed engineering education frameworks covered by teaching and learning methods are related to web, multimedia and internet engineering. The development of additional engineering education frameworks that encompass a high number of teaching and learning fields are needed to provide learners learning profiles. But many needs are available and challenges still exist in the area of engineering education that need how to make these engineering education learning access to a larger number of learners.

Data mining technology are increasingly used in education and teaching, and in particular, in public safety fields. Person working in different companies are increasingly want to know that “what do social safety data means” and think that the results of data oriented analysis and results to improve public service safety, payment effectiveness, and others. Social safety is the most important social problem in the world. Since the spatial changes, the social safety system has a lot of problems and is needed to change a lot. In the last days, the change of social safety system has happened all over the world. The social safety systems can be getting almost all countries in the world. There is an increasing need from countries, society, higher education universities, and people groups to change current Technology, Science, and Engineering education. Due to engineering education as a need and as a rule, these efforts need many bottlenecks such as the

under delegation of men and minority groups in the engineering place, a low knowing of the engineering education among rookies, poor performance of learners in related aspects of engineer and science, and the gap between the need for an engineering place and graduating learners. On the other hand, learning ways for engineering education must be thought as supportive methods and equipment with the method to improve learning by considering learners’ profile, giving access to needed issues, relating persons, and extending lessons with useful and interesting fields for learners. Teaching and learning ways for engineering education integrates with the useful frameworks can solve the needs of university engineering education.

5 CONCLUSIONS

Social safety is the most important social problem in the world. Since the spatial changes, the social safety system has a lot of problems and is needed to change a lot. The social safety systems can be getting almost all countries in the world. In the last days, the change of social safety system has happened all over the world. Due to engineering education as a need and as a rule, these efforts need many bottlenecks such as the under delegation of men and minority groups in the engineering place, a low knowing of the engineering education among rookies, poor performance of learners in related aspects of engineer and science, and the gap between the need for an engineering place and graduating learners. There is an increasing need from countries, society, higher education universities, and people groups to change current Technology, Science, and Engineering education.

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(050314C03).

REFERENCES

- A. Begel and E. Kopley, “StarLogo TNG: An Introduction to Game Development,” J. E-Learning, 2005.
- B.S. Bloom, M.D. Englehart, E.J. Furst, W.H. Hill, and D.R. Kratch, Taxonomy of Educational Objectives, Handbook 1: Cognitive Domain. Mckay, 1964.
- P.C. Blumenfeld, T. Kempler, and J.S. Krajcik, “Motivation and Cognitive Engagement in Learning Environments,” Cambridge Handbook of the Learning Sciences, R.K. Sawyer, ed., pp. 475-488, Cambridge Univ., 2006.
- Business-Higher Education Forum, “The American Competitiveness Initiative: Addressing the STEM Teacher Shortage and Improving Student Academic Readiness,” BHEF 2006 Issue Brief, 2006.
- G. Campbell, R. Denes, and C. Morrison, Access Denied: Race, Ethnicity and the Scientific Enterprise. Oxford Univ., 2000.
- “Cellbots: Using Cellphones as Robotic Control Platforms,” <http://www.cellbots.com>, 2011.
- H. Christensen et al., “A Roadmap for US Robotics: From Internet to Robotics,” Computing Community Consortium, 2009.
- Cisco Systems, “Packetville,” <http://www.cisco.com/web/learning/netacad/packetville>, 2011.