ONLINE COMMUNITIES – THE UAE ACADEMIC SCENARIO

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Abstract

There is an enormous role, Online Communities such as Virtual Communities of Practice (VCoPs) play as learning aids for students studying in the UAE, or for that matter anywhere in the World. Such Online Communities are usually topic based and initiate discussions between topic experts and beginners or students. There is no geographical barriers to such discussions, i.e. the participants can be situated anywhere across the globe. The students become member of VCoPs such as Blogs or Discussion Forums and share there queries or problems with other members, who themselves may be students or experts who are geographically dispersed across the globe. In such VCoPs, new members check answers to similar problems or to post their questions which are then answered by more experienced VCoP members. This paper is an attempt to determine the significance of Online Communities such as VCoPs in the academic life of any average student from the United Arab Emirates. The main focus although is on the Information Technology students. Such significance can be highlighted in terms of analysing – the objectives for initial participation, resultant of participation and desire for continued participation. The methodology adopted for this paper is that of statistical analysis of Primary Data collected by Questionnaire instrument, filled by a group of students from various Institutes in the United Arab Emirates.

Keywords: Communities of Practice, Virtual Communities of Practice, Online Communities, Knowledge Management.

1 Introduction

The Higher Education provided by Institutions and Universities in the United Arab Emirates is blend of Educational systems around the world. Various Universities from countries such as United States of America, United Kingdom, India, Pakistan and Australia are having their branch campuses in various Emirates such as Dubai, Sharjah, Ras – Al – Khaimah etc. Also there is an array of local Government run or accredited Universities. Hence there is a huge diversity in the academic programs offered by the said Universities to students undergoing undergraduate or post graduate education. Many times the study material such as text books, reference books etc may not be readily available in libraries or bookstores, as the array of prescribed textbooks is huge; a large number of Universities and their course diversity being the main reason. In case of non-availability, it takes 4 to 6 weeks to procure such books. Hence there is an enormous role Online Communities such as Virtual Communities of Practice (VCoPs) play, as learning aids for students here. The students become member of such VCoPs and share there queries or problems with other members, who themselves may be students or experts who are geographically dispersed across the globe. The methodology followed in such VCoPs is to for new members to check answers to similar problems or to post their questions which are then answered by more experienced VCoP members. In most cases, the students are successful in finding solutions to their problems by participating in VCoPs.

An Online Community or an e – Community is a group of people that primarily interact via communication media such as letters, telephone, email, or USENET rather than face to face. If the mechanism is a Computer Network e.g. Internet, then it is called Online Community –a Wikipedia definition. Earliest such Communities were described by Lave and Wenger (1991) as Communities of Practice (CoPs). CoPs are a set of relations among persons, activity and world, over time and in – relation to each other. In such CoPs, a new-comer learns from old-timers by being allowed to participate in certain tasks that relate to the practice of the community. Over time, the newcomer moves from peripheral to full participation. With the advent of Internet and its growing billions of users worldwide, the concept of CoPs has been extended in the online environment to Virtual Communities of Practice (VCoPs). Millions of people share knowledge freely and continually in online forums, blogs, email – groups and other discussion mediums. VCoPs are informal networks, existing outside of any one particular organization, that support professional practitioners to develop a shared meaning and engage in knowledge building among their members by providing opportunities for relationship building

and interaction through the use of Internet based Information and Communication Technologies as well as other methods.

2 Review of Literature

2.1 Online Communities

The Wikipedia definition of Online Community (also called as Virtual Community) is that it is a social network with a common interest, idea, task, or goal that interacts in a virtual society across time, geographical and organizational boundaries and is able to develop personal relationships. Since at least 1979, when the first Usenet news sharing programs were created, online communities have co-evolved with the growth in computer networking (Ling. K. et. al. 2005). Today, 29 years later, people share news, information, jokes, music, discussion, pictures, and social support in hundreds of thousands of online communities. People benefit from the presence and activity of others in online communities—from the information and other resources they provide and the conversations they participate in.

Pioneers of online community development and research (Rheingold. H 1993) and (Hiltz. S. R 1985) used the term 'online community' to connote the intense feelings of camaraderie, empathy and support that they observed among people in the online spaces they studied. Other researchers have attempted to operationalize the term so that it is useful in the analysis, design, and evaluation of community software platforms and management practices (De Souza & Preece, 2004; Preece J and Maloney-Krichmar, 2005). These researchers focus on 'the people who come together for a particular purpose, and who are guided by policies (including norms and rules) and supported by software.' Others researchers have identified key parameters of community life and then looked for their presence online.

It is increasingly common for online communities to rely on members rather than editors to contribute and moderate content (F. Harper et. al. 2007). To motivate members to perform these tasks, some sites display social comparisons, information designed to show members how they compare with others in the system.

2.2 Communities of Practice (CoPs)

The concept of a community of practice (often abbreviated as CoP) refers to the process of social learning that occurs when people who have a common interest in some subject or problem collaborate over an extended period to share ideas, find solutions, and build innovations. It refers as well to the stable group that is formed from such regular interactions.

Etienne Wenger (2006) defined CoPs as "Communities of Practice are groups of people who share concern or a passion for something they do and learn how to do it better as they interact regularly". This definition of Wenger encompasses three essential characteristics of CoPs:-

• The Domain – The Community must be oriented around a particular interest that stimulates commitment.

• The Practice – Members of a CoP participate in collective knowledge building. They are practitioners who, whether consciously or not, share and learn valuable, workable knowledge.

• The Community – Interactions and discussions among members are key characteristics. Individuals who work in the same office are not engaged in a CoP unless they, through whatever means, discuss and interact with each other, building relationships which enable them to learn from each other.

Also as per Wenger (2006), following are motivational factors for participating in CoPs:-

• Reasons for a short term participation	•Reason's for prolonged participation
• Accept Challenges	• Personal Development
• Access to Expertise	• Professional Development
• Confidence Building	• Network
• Fun with Colleagues	• Marketability
• Meaningful Work	

The members of a CoP need not be from the same discipline; in fact the Community can be strengthened and invigorated by drawing the expertise of its various members (Maura Borrego et al. 2006). Although prior acquaintance can make it easier to collaborate in certain CoPs, it is not a sufficient condition for them to achieve their objectives (Dianne – Gabrielle Tremblay 2004).

Gheradi and Neolini (2000) draw out an important conclusion that the key feature of any CoP is the Community Knowledge accumulated through the practice in CoP is greater than the sum of individual knowledge of members of that CoP.
The abstract purpose of CoP's is knowledge crea-

tion and knowledge communication or in other words CoPs can be identified as setting for effective knowledge sharing. Despite these valuable benefits, to create a community of practice is not always as simple, fast and successful as put forth in theory because in real conditions, it can be quite a challenge, when dealing with individuals from different cultures and addressing needs and challenges specific to the contexts in which they interact (A. Carvajal et. al. 2008). Tackling this challenge can produce outcomes somewhat different from those normally expected from a Community of Practice.

2.3 Virtual Communities of Practice (VCoPs)

Internet – based networking technologies, which can provide a convenient single platform for groups or networks of groups to form within larger organizations have led to the proliferation of various forms of virtual teams, virtual groups and virtual communities.

Kimble et. al. (2000) define a virtual team as a "micro-level" form of geographically dispersed workers is brought together to accomplish a specific organizational task using Information and Communications Technologies (ICTs). Johnson (2001) suggests that whilst traditional communities are situation specific and tend to have clearly defined membership, Virtual Communities are task centered, and are formed as the need arises. VCoPs are physically distributed groups of individuals who participate in activities share knowledge and expertise, and function as an independent network over an extended period of time using various technological means to communicate with one another, with the shared goal of furthering their 'practice' of doing their work better(Maura Borrego et. al. 2006). A VCoP may use a large array of traditional media (phone, teleconference, fax etc) and more of less sophisticated technological tools such as e – mail, videoconference, newsgroup, online meeting space, common database, website or intranet to establish a common virtual collaborative space. (Line Dube et. al. 2006).

Following figure shows the graphical depiction of a VCoP:-

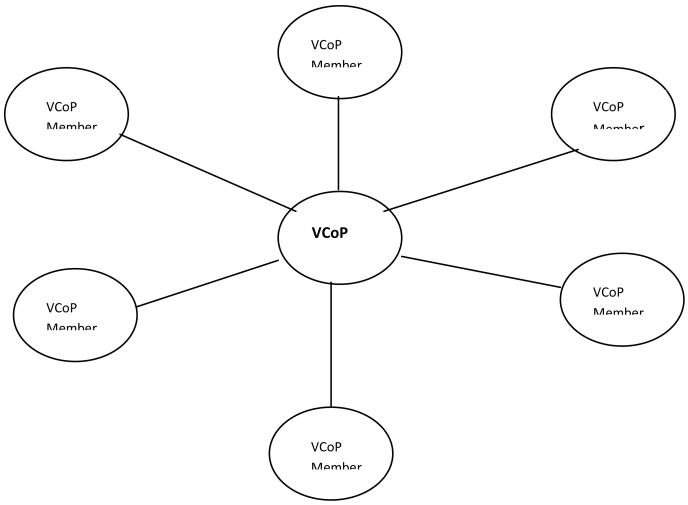


Figure 2.1: Graphical Depiction of a VCoP

Pallof and Pratt (1999) have defined the formation of Virtual Communities as a multi staged process, having following stages:-

- Definition of Community's purpose.
- Establishing norms and code of conduct.
- Establishment of member roles.

Johnson (2001) suggests that current web-based and text-based environments are conducive in allowing VCoPs to form and operate as "learning entities". Hildrith et. al. (2000) assert that some aspects of CoPs such as common purpose and shared interest could translate from the co-located world to the virtual world fairly easily.

Christof Lattemann and Stefan Stieglitz (2005) researched that the key factors that lead to the success or failure of Virtual Communities are having clearly defined community goals and community objectives, allowing routine time for community participation, providing an appropriate level of Management support insisting on the distribution of quality information and utilizing technologies that facilitate communications among VCoP members. The success of a Virtual Communities of Practice is also the resultant of a series of Management Practices that respond specifically to the challenges and opportunities faced by the community because of its structuring characteristics (Bourhis Et. al. 2005).

In simple terms, once a VCoP is set up, the people from various facets of life become its members. Some of the members join the VCoP to seek answers to their problems or questions, whereas others who are ex-

perts of their fields and senior members of the VCoPs contribute to the VCoPs by answering the questions of the members who have posted them on the VCoP forums or blogs. The VCoPs motivate such contributors by offering them participation and Contribution rewards such - Points for each correct reply, Stars for attaining a certain points tally, Silver or Golden membership on attaining a certain number of stars or Discounted or free training programs on attainment of Silver or Golden membership.

2.4 Knowledge Management

Knowledge is information that has been organized and analyzed to make it understandable and applicable to problem solving or decision making. Organisational knowledge is processed information, embedded in routines and business processes that enable intelligent action. Knowledge Management seeks to make the best use of knowledge that is available in an organization in order to create new knowledge. Knowledge Management thrives in capturing, organizing and storing the knowledge and experience of individual workers and groups within an organization and converting this individual knowledge into a form of knowledge that can be used by others in the organization. At this level, knowledge can be closely tied to Competitive advantage, innovation and agility in an organization.

As per research done by (Hafeez K and Alghatas F, 2007), Communities of Practice (CoPs) are regarded as one of the top ten topics of Knowledge Management (KM). Co- founders of this concept, (Lave and Wenger 1991), go to extent of considering CoPs "an intrinsic condition for the existence of knowledge" (Kimble et. al. 2000). The CoP has been particularly recognised as main tool for converting "implicit" knowledge into "explicit" form of knowledge (Davenport and Prusak 1998).

3 Objective and Methods

3.1 Objective

Extensive research has been conducted worldwide in the fields of Knowledge Management, Online Communities such as Virtual Communities of Practice and Communities of Practice. Most of the stated research concentrated on Knowledge conversion models, Communities of Practice – success or failure analysis, proposing strategies to build and maintain Vistrual Communities of Practice. The research has been mainly concentrated in case examples or workshops conducted in various Industries or professional associations of Lawyers etc. Less emphasis has been given to Academic Situations or Case studies. Universities and Institutions are very good examples of communities and can be used as potential sources of information for analysing the performance and penetration of Online Communities. But as stated earlier, less research effort has been made in this domain. Hence there exists a sort of research gap in this domain. Whatever little work has been conducted in the Academic Scenario has been concentrated to the Western World and the Universities and students existing there.

The main objective of this paper is to explore the gap mentioned above. It aims to verify the role and the impact of online communities such as virtual communities of practice on the education of students who are studying under various academic programs offered by Universities functioning in the United Arab Emirates. It is one of the rare attempts to explore the concept of Online Communities and their impact on 'student learning and skill development' in the United Arab Emirates. The following research papers form a sort of motivational background for this paper. Each of the following research examples have been conducted in an academic setting ranging from a United Kingdom based High School to esteemed United States of America based Institute such as Massachusetts Institute of Technology (MIT).

One particular Research on Online Communities was carried out in 2005 by McDowell and group in the MIT Centre for Reflective Community Practice. The findings stated are - the integration of the type of knowledge that arises from research that is 'formal' and taught in academic institutions, with the type of knowledge that resides in the work and minds of practitioners, is critical for improving society because it brings two complementary views of the world; and this is critical for the formation and success of online communities (McDowell et. el. 2005). The above citation cannot be more applicable to anyone other than students, studying in any given academic program, in any part of the world.

As per a research workshop done by (Newman J et. al. 2004) in a High School, post compulsory education involves inducting the student into a community of learners. Within such a community, learning results not only from student – student and student – tutor interactions, but also via 'vicarious learning' from observed interactions among other community members. Students learn from observation of one another's contributions to task solutions and the queries, feedback and discussions these give rise to.

While conducting research on Online Communities in Bradford University (United Kingdom), (Hafeez K and Alghatas F, 2007), examined a number of Knowledge Management Tools such as story telling and Discourse analysis to illustrate how knowledge is transferred and learning takes place in a Virtual Community of Practice.

3.2 Methodology

The methodology adopted for this paper is graphically depicted in the following diagram:-

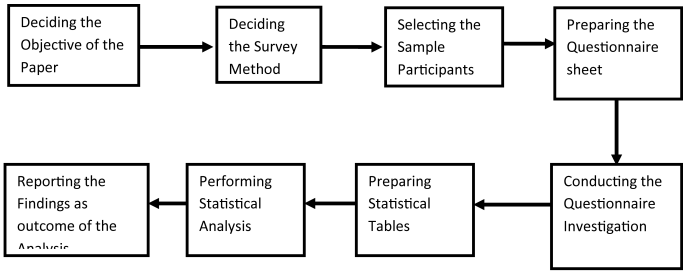


Fig 3.1 Graphical Depiction of the Methodology

As shown in the above figure, following steps were carried out:-

1. After doing a literature Review of more than 30 research papers in the fields of Online Communities and Knowledge Management, a proper objective was decided to explore gap in the research studied.

2. After careful consideration of factors such as objective, availability of resources, time and finances, it was decided that Questionnaire tool would be used for primary data collection.

3. A random sample of respondents (students) was formed - Several students from undergraduate and post graduate academic programs, from various Institutes in UAE were selected in the sample group. These students belonged to various nationalities. Some of them were students who had recently graduated and were currently working.

4. A Questionnaire sheet was meticulously designed so as to attain the primary objective of data collection and to support statistical analysis.

5. Questionnaire Investigation was undertaken in one of these two ways – 1) paper and pen method, wherein the respondents filled in blank questionnaire sheets in presence of the author, 2) Remotely situated respondents were send questionnaire by email and were requested to fill out the same remotely and send the filled sheets back by email to the author.

6. Statistical Tables were prepared. They are covered in the next section (4.1 Statistical Tables).

7. Statistical Analysis was performed. The details are covered in next section (4.2 Statistical Analysis).

8. The Outcome of the Analytical Process is discussed in Section (5.1 Findings)

3.3 Statistical tools employed

The Statistical Analysis Methods followed in this paper is that of Mode Analysis as a measure of Central tendency, as the data can be categorized as ungrouped data. The Mode factor undertaken in this analysis is the Maximum factor in each statistical table generated in the following section in response to respondent's answers to each question from the Questionnaire (Annexure I).

4 Analysis

As discussed in the previous section, several students from undergraduate and post graduate academic programs, from various Institutes in UAE were approached to participate in the Data Collection Process (through Questionnaire sheets). These students belonged to various nationalities. Some of them were students who had recently graduated and were currently working for various organisations. They were requested to fill out a Questionnaire for collection of Primary Data for this paper. The mode of filling the Questionnaire Sheet was either in presence of the author (pen and paper) or through email (digitally). The questions covered in this questionnaire were divided into two sections – Section I (Participant Details) and Section II (Participation Details). The Questionnaire sheet has been included in Annexure I of this paper.

After collecting the primary data, Statistical Tables were formulated in order to perform Statistical Analysis of the data.

4.1 Statistical Tables

The study involved approximately 106 participants comprising of students from a variety of Institutes in the UAE. The author contacted 47 participants personally and took the survey by physically distributing the questionnaire to these participants. The remaining participants were surveyed using email as a medium for sending the blank questionnaire sheet and collecting the duly filled questionnaire sheet. Following are some facts collected about the participants:-

The research participants were primarily from the following Institutes:-

- MAHE Manipal Dubai Campus (MMDC)
- AL Ghurair University (AGU)
- University of Wollongong in Dubai (UOWD)
- BITS – Pilani Dubai Campus etc (BPDC)
- Other Institutes (Ajman University, S. P. Jain, I.M.T, Dubai etc)

Out of the Sample group of 106 respondents, only 81 respondents were active members of Online Communities. Remaining 24% of the respondents were either unaware of the concept of Online Communities or had never been a part of one. Following Statistical Tables were created as outcome of the different Questions pertaining to Section II from Questionnaire sheet (Annexure-1). Only 81 respondents were applicable for this section:-

The following table is created from response to Q 8 from Questionnaire:-

Q8) : What are the usual methods you follow for solving your academic Problems – such as Computer Programming Problem, Theoretical Assignment Problems etc?

Preferred Problem Solving Method	Total Number of Respondents applicable
Asking Questions to Faculty	35
Searching for Online Information Resources (such as Wikipedia etc)	75
Searching in Text Books	40
Participating in Seminars/ Workshops/ Coaching Classes/ Computer Institutes	12
Connecting to Online Communities	81

Table IV. 1 Statistical Table for Question 8 from Questionnaire sheet

The following table is created from response to Q 9 from Questionnaire:-
Q9) : What type of Learning Environment is preferred by you?

Preferred Learning Environment	Total Number of Respondents applicable
Classroom Teaching	75
Directed Reading	14
Online Tutorial	45
Studying Online Community Discussions	47

Table IV. 2 Statistical Table for Question 9 from Questionnaire sheet

The following table is created from response to Q 10 from Questionnaire:-
Q10) : What was your primary motive of joining an online community?

Primary Motive for Joining Online Community	Total Number of Respondents applicable
Trying to find solutions for a problem	69
Learning from Discussions	9
Casual Surfing	3

Table IV. 3 Statistical Table for Question 10 from Questionnaire sheet

The following table is created from response to Q 11 from Questionnaire:-
Q11) : What was your personal gain from participating in the Online Community?

Personal Gain from participation	Total Number of Respondents applicable
Acquired Skill/ Knowledge	64
Problem was Solved	56
Opportunity to Voice Opinion	5
Social Interaction	2

Table IV. 4 Statistical Table for Question 11 from Questionnaire sheet

The following table is created from response to Q 12 from Questionnaire:-
Q12) : Are you involved is the Online Community after your primary motive was solved?
YES / NO _____ If YES, kindly specify the reason.

Reason for Continued Participation	Total Number of Respondents applicable
Continuously Updating Knowledge/Skills	23
Contribute to the Online Community	19
To maintain online peer interactions	18
To gain Recognition for skills	10
To aim to gain rewards by regular contribution	7

Table IV. 5 Statistical Table for Question 12 from Questionnaire sheet

The following table is created from response to Q 13 from Questionnaire:-
Q13) : Why do you think that Online Communities are very important in the Academic Life of a student of the United Arab Emirates?

Importance of Online Communities in Academic Life of student in UAE	Total Number of Respondents applicable
Lack of Book Availability	20
Problem cannot be solved only through book content	35
Online Communities are fast in getting solutions	75
Online Communities are easy to access and use	81
Online Communities facilitate social networking	21

Table IV. 6 Statistical Table for Question 13 from Questionnaire sheet

1. Analysis of Responses to Q8)
As Shown in figure below the Mode for this Question is the option "Connecting to Online Communities" as the preferred Problem Solving Method among sampled respondents, the reason being that the maximum numbers of respondents (100%) have chosen this option

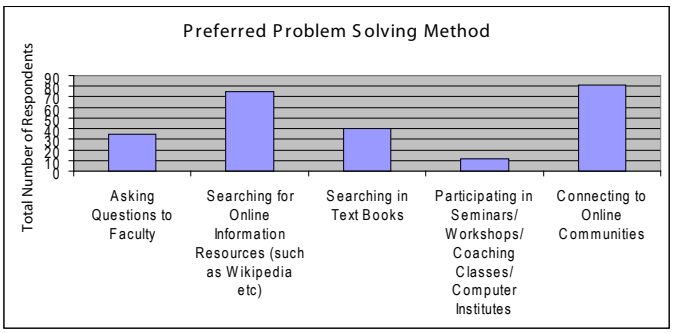


Fig 4.1 Graphical depiction of Respondent Answers for Q8 from Questionnaire

2. Analysis of Responses to Q9)
As shown in figure below the Mode for this Question is the option "Classroom Teaching" as the preferred Learning Environment among sampled respondents, the reason being that the maximum numbers of respondents (93%) have chosen this option.

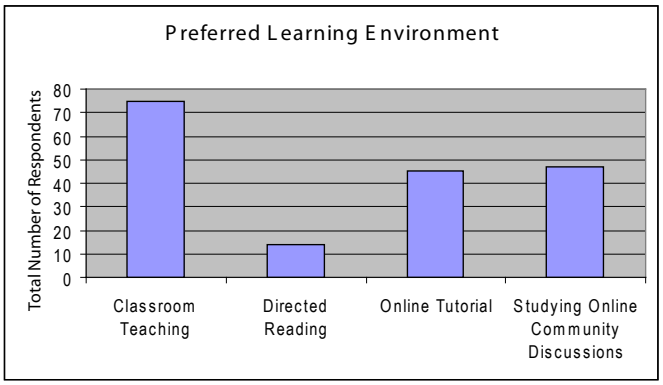
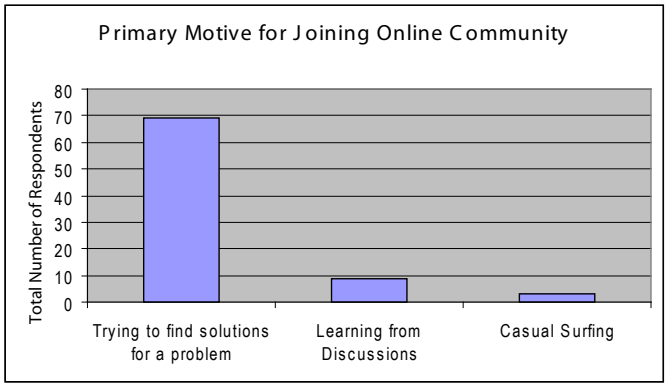


Fig 4.2 Graphical depiction of Respondent Answers for Q9 from Questionnaire

3. Analysis of Responses to Q10)
As shown in figure below the Mode for this Question is the option "Trying to find solutions for a problem" as the Primary Motive for Joining an Online Communities among sampled respondents, the reason being that the maximum numbers of respondents (85%) have chosen this option.



4. Analysis of Responses to Q11)

As shown in figure below the Mode for this Question is the option "Acquired Skill/ Knowledge" as the biggest personal gain from participation in Online Communities among sampled respondents, the reason being that the maximum numbers of respondents (79%) have chosen this option

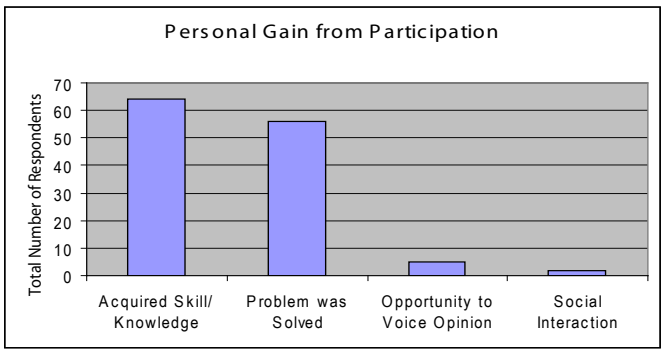


Fig 4.4 Graphical depiction of Respondent Answers for Q11 from Questionnaire

5. Analysis of Responses to Q12)

As shown in figure below the Mode for this Question is the option "Continuously Updating Knowledge / Skills" as the biggest motivational reason for continued participation in Online Communities among sampled respondents, the reason being that the maximum numbers of respondents (28%) have chosen this option.

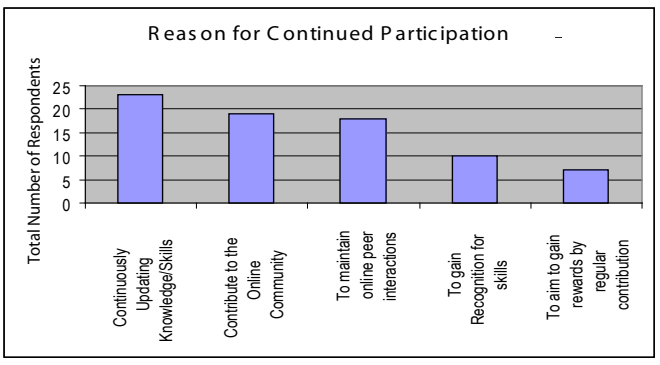


Fig 4.5 Graphical depiction of Respondent Answers for Q12 from Questionnaire

6. Analysis of Responses to Q13)

As shown in figure below the Mode for this Question is the option "Online Communities are easy to access and use" as the biggest factor that states the importance of Online Communities to UAE students, the reason being that the maximum numbers of respondents (100%) have chosen this option.

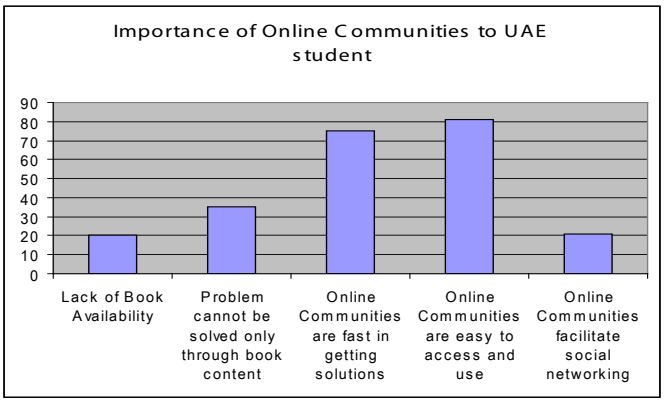


Fig 4.6 Graphical depiction of Respondent Answers for Q13 from Questionnaire

5 Findings and Conclusion

5.1 Findings

From the statistical analysis performed in previous section, there were some important interpretations made to co-relate the analytical findings and literature review findings. Some notable observations made are as follows:-

1. Online Communities play a very important role in the academic life of students form the United Arab Emirates as they find that it is one of the most readily available, easy to use, cost effective means of solving their academic problems. Study of literature supports this interpretation as most of the research papers have stated that most of Online Communities are free of cost for members and the success of the Online Community lies in member retention. They do it by motivating experts to share their field knowledge by offering rewards in various forms. This in turn is good from student perspective as it increases the probability of finding proper solution to their problems.

2. The most preferred learning method by UAE students is still classroom teaching, which casts serious doubts about the future acceptability to e – learning methods. Even though the primary motive for joining an Online Community is to find solution of the problems, but as Literature supports, the continued participation is due to varied factors such as acquiring and updating individual skill-set, gaining recognition in the society and personal satisfaction in contributing to solve problems of other members of the community. This is an important reading, and can be positively used by modern Institutes to initiate an innovative method of learning and knowledge transfer among student peers within an Institute.

3. One of the reasons why the respondents feel that

Online Communities are important from the academic perspective of the students is that Online Communities can be accessed from home or Institute or any Internet Café irrespective of the day of the week or time of the day. The same is not true for accessing Library books, or faculty for discussions. This is a direct resultant of the benefits of Internet Technology, and hence there lies a huge untapped potential in the United Arab Emirates to initiate Online Communities specifically for the vast ever increasing students community in this rapidly growing nation.

5.2 Conclusions

This work has been conducted with the focus on the United Arab Emirates Education and students studying in this part of the world. Further research can be conducted by expanding the domains from the United Arab Emirates to the other countries in the Middle East or even by including other Asian countries. This work was limited to students; further research could include professionals, academicians, housewives etc. Further work could be conducted in form of a workshop wherein an Online Community could be set up in an Institute and the students and faculty would be included as peripheral members of the Community. These peripheral members could then be encouraged to participate in the Community as part of their directed studies (concept of e – Learning) for some of the academic courses. The objective of this workshop would be to encourage knowledge transfer from faculty to students, among students or from senior students to junior students, from expert students to novices. The resulting transfer of knowledge could be measured on various parameters. The overall concept is feasible from an educational institute's perspective.

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