Identification of Students' Perceptions and Practices about Informal Learning: A Case Study of Bahawalpur, Pakistan

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Abstract

The changing dynamics of education have transformed the whole landscape of learning. The conventional teaching methods, such as class room lecture, hamper students' cognition in multiple ways. They limit students' creativity and innovation in the process of learning and teaching. Due to these limitations of the conventional teaching methods, students seek knowledge to address multiple academic problems to satisfy their needs of learning. They seek help from modern educational technologies and digital learning. Therefore, the purpose of this study was to measure the current trends in informal learning among the students at The Islamia University of Bahawalpur, a leading learning institute in southern Punjab. A survey was conducted at The Islamia University of Bahawalpur. The population of the study comprised undergraduate, graduate, and post-graduate level students. The data was collected through a

structured questionnaire. The reliability of the questionnaire was measured using Cronbach's alpha value. A non-probability convenience sampling methods was used to collect the data. The response rate of the surveyed students was 68.5%. The collected data was analyzed using Statistical Package for Social Sciences (SPSS version 22) software. The findings were reported in the form of descriptive statistics. Results demonstrated that the students were using various informal learning sources and have a positive perception about their use. Moreover, the study signifies the importance of teachers' motivation, encouragement, and training to boost the culture of informal learning. However, sometimes the unavailability of internet connectivity was a main barrier students faced during their informal learning practices. The study is one of the pioneering efforts to explore the practices, perceptions and importance of informal learning and will prove useful for further research on this topic.

Keywords: Informal learning, practices, perceptions, Bahawalpur, Pakistan.

Introduction

Informal learning is a type of learning that usually goes on in or around an educational institute, a cafeteria, or even during travel; whereas the formal or planned education is contributed by skilled teachers having instructional efficiency**.** It was Tamir (1990) who first used the term 'informal learning' for out-of-classroom education. Formal education is not able to fulfill the rigorous demands of the job market (Small, Arnone, Stripling, and Berger, 2012). In the 21st century, students prefer to study and learn in functional, independent, technical and informal places (Acker, Ohio, and Miller, 2005; Watson, 2007). Persons may learn informally by reading books or reading materials from libraries, academic websites, and social media. However, very limited research has been carried out in the context of higher education institutes focusing on the students' comprehension of informal learning as an improvement to formal learning. Informal learning is thought of as self-directed, geared by self-interest, and

occasionally (Lai, Khaddage and Knezek, 2013; Lai and Smith, 2018). Informal learning is a multifaceted net of knowledge and conversations from indoor to outdoor places, classrooms, cafes, libraries and campus setting (Jamieson, 2013). The activities of informal learning include course readings, project activities, class assignments, and activities for pupils to study between formal classes (Jamieson, 2009). Because students usually do not develop the appropriate knowledge and skills, they require in their work places (Corlu, Capraro, and Capraro, 2014).

It is turned out that 70% of the places are informal from learning point of view. Thus, Borghans et al. (2006) also found that about 94% of the time is consumed on informal learning. In general, informal and formal learning includes education practiced in the classrooms and learning informally occurs in daily activities and tasks. Generally, informal learning on university campuses is currently taking place in various informal learning spaces (ILS) (Harrop & Turpin, 2013). The surrounding climate has a profound impact on the informal learners' capability to learn and employability activities (Crans, Gerken, Beausaert and Segers, 2021). Both traditional and e-learning have their pros and cons in the process of students informal learning choices and methods especially in emerging subjects' courses i.e. Science, English, Mathematics and technology (Abumandour, 2021). As students use various tools with the help of internet access, and growing mobile ownership has also increased the informal learning practices in recent years. Digital gadgets, such as mobile phones, tablets, and laptops have blurred this differentiation between informal and formal education. Students can achieve formal course materials digitally from their home devices, and they can also use these gadgets to help them find online informal learning resources (Lai and Smith, 2018). They also use sites of social networking, such as Facebook, Twitter, YouTube to support their informal and formal learning (Magogwe and Nkosana, 2014; Staines and Lauchs, 2013). Informal and formal teaching of students with focus on digital cellular tools can help schools to receive an informal

and formal education. Informal learning may add prosperity to formal learning (Bosman and Strydom, 2016; Clough et al., 2008; Dabbagh and Kitsantas, 2012; Madge et al., 2009). In informal learning, people are specially assisted by social relations with companions, caregivers etc (Jeon & Kim, 2012). They employ various informal learning approaches to consider the process of evaluating the results of a learning experience, and choose where the focal point (Conlon, 2004). The other factors impacting informal learning are the obligation to learning and feedback of informal learning and the colleagues and supervisors' communications (Schürmann and Beausaert, 2016).

Statement of the Problem

Informal learning is a growing learning trend at higher education institutions (HEIs) world over with evolutionary advancement in information and technology mediums. It may enhance the learning activities of the students to develop their skills in self-learning. Online learning tools increase the activities of informal learning which further opens many doors of knowledge to the students and enhances their skills as students and in the future as a professional. In Pakistan, due to lack of IT infrastructure and ICT skills, university teachers opt conventional teaching methods which hinder students in understanding and thoughts in multiple ways. Informal learning with social media tools can modify the minds of students to promote conceptual education instead of conventional studies. Therefore, there is a dire need to introduce informal learning properly as the compulsory method of teaching and learning in underdeveloped countries, specifically Pakistan.

The proposed study would explore the effectiveness of current trends of informal learning among students at the Islamia University of Bahawalpur. Some studies have been conducted on informal learning at the national and international levels such as identification of informal learning (Greenhow and Robelia, 2009). Self-regulated learning (Wang et al., 2013),

and so on. No such kind of study had been carried out at the south Punjab level to measure the current trends on informal learning among students. Therefore, the current study is an effort to probe the informal learning practices, perception of students regarding informal learning, causes of motivation for informal learning and barriers faced by students regarding informal learning among the students at the Islamia University of Bahawalpur.

Literature Review

Background

Informal learning could be conceived as learning that takes place the learner's or learners' self-rules without either ordered mandatory curricular or a assigned teacher (Livingstone, 2001). In other words, out-of-classroom education is called "informal". Due to mingling abstract and procedural confronts, it is not easy to define informal learning (Hofstein and Rosenfeld, 1996; Osborne and Dillon, 2007). Informal learning chances are central to filling the space between digital and non-digital media, older and newer patterns (Meyers et al., 2013). The practices of Informal learning can be developed in the process of two-way interaction between persons and between people and the vicinity environment (Marschke, 1988; Tamir, 1990; Aghazamani, 2011). The environments of Informal learning tend to be less constructed in the class room environment and the learning administration is turned from teacher to student (Tamar, 1990). Learning by acting is also seen as informal learning or it is might the output of daily based activities (Jeon and Kim, 2012; De Grip, 2008). Among students of various environments, the access, control, and perception of students' choice are the main anomalies between formal and informal learning (Tan, 2013). In the future, the increased numbers of learners and changed learning priorities for those learners will produce through these changes. The potential of adult informal learning helped in response to the priorities from several ways i.e., in the periods of unemployment and retirement these will help

to find the meaning and purpose, sharing individuals' transferable expertise and abilities in life to help out better career opportunities and allowing a way to contribute the information and experiences between generations. Then informal learning for adults can assist to furnish the individual with the abilities, knowledge and reason they require to face the challenges of a speedily transforming society (Hague and Logan, 2009).

The features of informal learning comprise inherent, unintentional, timeserving and formless learning and the deficiency of a teacher (Eraut, 2004). Research in informal learning is being carried out for a longer period. In this regard, perhaps, one of the pioneering works on informal learning was done by Scribner and Cole's in 1973 to begin hypothesizing the association between formal learning and informal learning in the decade of the early 1970s. Latter, Resnick in 1987 in her presidential address at the American Educational Research Association (AERA) highlighted the learning in and out of school issues. Albeit, it is because of the invention of the technologies like Web 2.0 and the academic community has been confronted to give a bigger focus to the association between informal learning and the modern technology and to review the trend of learning in informal space and how formal learning can notify by informal learning (Motiwalla, 2007). The basic terminologies of informal learning (e.g. contents, objectives, processes and means of gaining, evaluation, outcomes duration and applications) are decided by the persons and clusters that select to appoint in it (Livingstone, 2001). Informal learning is frequently visualized in sense of the location of the learning environment and this context informal learning implies widely to the learning that happens out of the institute (Callanan et al., 2011; Sefton-Green, 2004). Eraut (2004) briefly describes the typology of the informal learning into three general types viz. implicit learning (selection of experience from memory) reactive learning (experiences of noting facts, ideas), and deliberative learning (engagement in decision making and problem-solving). These types are

based on past, current experience and future expected behavior of a learner. Over the years, in informal learning, there is an increasing concern developed and how it can be supported by modern technology (Clough et al., 2008). Due to the social media's utility and ease availability, there is an increasing trend to its more effective use both formal and informal learning (Putman, 2019). Recently it is explored that formal learning and informal learning both are a way of continuous learning and cannot be separated. It is assumed that students spend almost 75% of their learning in an informal way and settings (Barron, 2006; Cross, 2007; Banks et al., 2007).

Identification of Informal Learning Practices

Nowadays, in our routine daily the assimilation of technologies makes it difficult to distinguish between the formal and informal that is why a combined approach should be adopted (Johnson et al., 2015; Jones and Dexter, 2014; Lai et al., 2013). In this regard, it is recommended the use of personal learning environments (PLEs) to merge the networks of formal learning and informal learning networks (Chatti et al., 2012; Dabbagh and Kitsantas, 2012; Downes, 2010). Because of the ways, strategies, contexts of informal learning vary place to place and culture to a culture which students have adopted in the different learning environments (Ninnes, 1996). It is found that about 80% of the learning occurs in informal settings in a person's life (Bransford et al., 2006). Informal learning is depicted as "natural learning" (Boulton-Lewis et al., 2010). Furthermore, learning is not limited to a campus setting, it is estimated that more than 92% of 3rd level learning is informal (Banks et al., 2007). Informal learning includes a compound interaction of individual, setting and technology. Moreover, informal learning is balancing and vast which happens in schools and educational institutes (Meyers et al., 2013). It is a continuous and lifelong procedure where every person attains and gathers information, talents, character and insights from daily knowing and contact to the environment at home or work or play (Plavsic and Dikovic, 2016). Generally, informal

learning is an unstructured and often disorganized activity and it counts for the huge mass of an individual's total lifelong learning as well as that of even a greatly "schooled" individual (Coombs and Ahmed, 1974). Informal learning can take place in institutions of learning (such as libraries museums, online websites), bodies (e.g. Boys /Girls Scouts, junior achievement); or daily positions like watching TV, visiting libraries, working on avocation, buying clothes. Thus, the environment of informal learning is a collection of actions that occur when students are not formally in the classroom when the instructor is present. Informal learning addressed several professional and scholarly disciplines, usually from multiple discourses and perspectives. These perceptive are not different but an integrated approach allows students to experience learning with a different lens (Lankshear and Knobel 2008; Eshet-Alkalai and Chajut 2009; Jones and Hafner 2012).

The spaces for informal learning often called informal learning spaces (ILSs) are the places essential for practicing informal learning. In developed countries, these spaces are reserved in higher education institutes. They encompass large and wide physical settings both internal and external spaces like a classroom, cafe, plaza, and the library the most commonplace (Jamieson, 2013). Additionally, a study conducted at Loughborough University (UK) identified various spaces of informal learning spaces within the campus including a noiseless study area, eleven group study rooms, seven bookable group booths, quiet study areas, a cafe and individual study carrels. During term time the opening hours are extensive (Cunningham and Walton, 2016). Another study was conducted to examine the undergraduate students' character and worth of practices with the educational library. Questionnaires were used for obtaining the replying information of more than 300,000 students (during 1984 and 2002) of college student practices. Albeit library usage didn't seem to make an independent contribution to the wanted results of college, however, these practices were concerned with vital and

precious academic activities. Because the prominence of a campus place on the literacy of information is a firm forecaster of Students getting information literate and aid to create chances for Students' assessment for the value of the knowledge they attain (Kuh and Gonyea, 2003). Next, in education, the broad utilization of technologies has made it possible to twist many places in universities campuses into a learning spot i.e., library, lounge, student common room, corridor, zoo and aquarium, museum, club, sports team and internet resources are all now potential places to learn (Vo, 2015; Meyers et al., 2013). Even informal learning takes place at unusual places as Bonk (2010a) has investigated informal learning by focusing on learning with new technology even in strange channels like when foreign different types of transportation, for instance, subway, buses, planes, boats, etc.), non-academic spaces or virtual worlds.

Perceptions of Students about Informal Learning

One of the main perceptions of informal learning is to stimulate students' and learners hidden abilities and robust the thought process to enhance his or her curiosity. These skills or abilities are titled "Information age" which transforms the whole teaching and learning system (Eisenberg et al., 2004). New advancements are keys to the model's development of informal learning. For instance, digital Open Educational Resources (OER) and, more recently, Massive Open Online Courses (MOOC) are two dissimilar yet concerned ways of attaining such development possible. Few ways still rising and developing, many such ways emerge to be efforts at validating the informal learning.

Generally, the objectives of informal learning are to learn different languages, to watch motivational videos or posts, to check reviews or comments of others on a post, etc., or research purposes e.g., to find information regarding synopsis and thesis, to explore scientific literature of other countries, to follow educational peer groups. Due to the lack of informal learning

among youth, there is a lack of learning deprivation is observed in many students, the cause is youths do not hold skilled knowledge which hampered their overall performance (Small et al., 2012). Since the last few decades, researchers have underscored the importance of inculcating informal learning's readiness. Informal learning is found a flexible learning model but needs strong technical skills to enjoy the real essence of this sort of learning (Smith et al., 2003). In Pakistan, It is also found that teachers outside the classroom environment may produce a suitable learning setting stand on necessary inspirational devices, to persuade even less talented and timid Students. Self-guided informal learning is embraced intent job oriented and general job-related learning (Islam, 2019).

Self-guided learning willingness plays a main job in anticipating adults' priorities for their learning settings particularly for the high level of rational confront (Chu and Tsai, 2009; Lai and Smith, 2018) have undertaken a study in a university of New Zealand on 30 educators to conceptualized informal learning and their approaches of implementation to aid informal learning of Students'. It is found that researchers have encouraged participated Students to appoint in informal learning by attempting to make their courses attractive, describing the price of informal learning, patterning informal learning, and furnishing students with the resources of informal learning. Schürmann and Beausaert (2016) conducted a study in a German manufacturing unit. They used a semi-structured interview to get data from 20 employees (10 human resources and marketing employees each). They coded the interviews and applied Cohen's Kappa calculations to validate the data. Findings suggest that most of the employees learned by talking, mutual collaboration, online searching of information, reading and feedback from colleagues and supervisors. Other drivers also influence their learning through informal learning i.e. job drivers, organizational drivers, individual drivers and formal learning affected workers' informal learning. The workplace of informal learners is also one of the significant

determinants that directly affect learning capability. Yoon et al. (2018) found that at the workplace, informal learning between workers is important because information and skills sharing are openly related to worker's behavior and associational advantages i.e. improved form and output.

Objectives of the Study

The study is a deliberate effort to accomplish the following main objectives:

1. To identify informal learning practices among students at Islamia University of Bahawalpur.
2. To identify students' perceptions of informal learning practices at the Islamia University of Bahawalpur.

Research Questions

1. What are the informal learning practices among the students at Islamia University of Bahawalpur?
2. What are the students' perceptions of informal learning practices at the Islamia University of Bahawalpur?

Materials and Methods

The study was carried out to measure the current trends in informal learning among students of the Islamia University of Bahawalpur. To conduct the current study, the researcher has adopted a quantitative research design. The population of the present study comprised of undergraduates, graduates, and postgraduates, students of the Islamia University of Bahawalpur (Table 1).

Table 1: Population of the Study

Name of the University	Total Population
Islamia University of Bahawalpur (IUB)	24,500

Data Collection

The data collection procedure was started from 13-07-2020 to 01-08-2020. Data were collected through an online survey. The researcher has sent a Google doc file of a questionnaire in Email, WhatsApp, and Messenger groups of The Islamia University of Bahawalpur, Bahawalpur, Pakistan. Questionnaires were sent to the 400 participants through Email, WhatsApp, and Messenger, 300 responses were received and 274 were considered valid for data analysis (Table 2).

Table 2: Response rate of the participants

Name of the University	Total Distributed	Returned	Rate	Valid	Rate
IUB	400	300	75%	274	68.5%

A questionnaire was developed after reviewing the relevant literature. The first part of the questionnaire was consisted of the demographic information of the respondents, while the second part of the questionnaire includes preferred technological devices and identification of informal learning practices. A set of thirteen statements were asked in subscale (i) which includes informal learning practices and a set of four statements were asked in subscale (ii) which measure the perception of students about informal learning. A set of thirteen statements were asked in subscale

Sampling Procedure

Data were collected through a non-probability convenience sampling technique because the population of the study was geographically scattered. The researcher has limited time and resources. Also, the population of the study was too large and it was not possible to include every individual. Therefore, the researcher conveniently distributed a questionnaire among participants to reach the desired sample size and 274 responses were gathered from the students enrolled in undergraduate, graduate, and post-graduate programs (Table 3).

Table 3: Sampling procedure

Faculty	Number of the respondents
Faculty of Science	86
Faculty of Pharmacy & Alternative Medicines	67
Faculty of Arts	64
Faculty of Veterinary & Animal Sciences	18
Faculty of Education	15
Faculty of Agriculture& Environmental Sciences	10
Faculty of Engineering	7
Faculty of Management Sciences	7
Total	274

Data Analysis

To identify the students' informal learning perceptions and practices a five-point Likert scale was used, having five levels about the practice of informal learning tools. Keeping in view the weight 5 points for (Strongly Agree), and 4 points for (Agree), 3 points for (Slightly Agree), 2 points for (Disagree) and 1 point for (Strongly Agree). Then the collected data was analyzed using Statistical Package for Social Sciences (SPSS) software. The collected data was different from the level of measurement. Demographic information of the respondents, i.e. gender, age group, and education level were measured on a nominal scale. The questions related to the informal learning practices and perceptions were measured on nominal scale and analyzed in SPSS and presented in mean and standard deviation. The findings were presented in tables and interpreted in the text.

Results

Respondents' Demographic Information

Data presented in the table shows that the majority of the respondents were male 173(63.1%) and 101(36.9%) were female. About half of the respondents (47.1%) were aged between 21 to 25 years. Half of the respondents 138(50.4%) were enrolled in post-graduate programs. Whereas 83(30.3%) of the respondents were from the graduate program. In the case of the faculty, about 153(60%) of the respondents were from the Faculty of Science and Faculty of Pharmacy and Alternative Medicines. Only 14(5.2%) of the respondents were from the faculty of engineering and faculty of management science (Table 4, 5).

Table 4: Demographic information of the respondents

Gender of the respondents	**Frequency**	**Percentage**
Male	173	63.1%
Female	101	36.9%
The age group of the respondents		
< 20 years	14	5.1%
21-25 years	129	47.1%
26-30 years	79	28.8%
> 30 years	52	19.0%
The educational level of the respondents		
Undergraduate Program	53	19.3%
Graduate Program	83	30.3%
Post-Graduate Program	138	50.4%

Table 5: Educational Background of the respondents

Faculty of the Respondents	Frequency	Percentage
Faculty of Science	86	31.4%
Faculty of Pharmacy & Alternative Medicines	67	24.5%
Faculty of Arts	64	23.4%
Faculty of Veterinary & Animal Sciences	18	6.6%
Faculty of Education	15	5.5%
Faculty of Agriculture& Environmental Sciences	10	3.6%
Faculty of Engineering	7	2.6%
Faculty of Management Sciences	7	2.6%

Respondents' degree of exercising informal learning practices

Respondents were provided with a set of 13 statements on several informal learning practices. All of the statements received a means score around 4 indicating that respondents were "agree" that they perform the following informal learning exercises "watching educational videos" " (M=4.02, SD=1.006), "to keep themselves updated about the current information" (M=4.03, SD=.985), "download content from the Internet" (M=3.96, SD=1.030), "to follow educational peer groups" (M=3.90, SD=1.000), "to record lectures" (M=3.89, SD=.999), "reading e-books" (M=3.88, SD=1.114), "listen to Podcasts" (M=3.88, SD=2.683)," to search the scientific literature" (M=3.86, SD=996), "finding material for class assignment" M=3.80, SD=1.220), "searching about video conferences and webinars" (M=3.76, SD=1.039) (Table 6).

Table 6: Degree of exercising informal learning practices

Rank	Sources	Mean	SD
1	Watching educational videos	4.05	1.006

2	To keep myself updated about the current information	4.03	.985
3	Download content from the Internet	3.96	1.030
4	To follow educational peer groups	3.90	1.000
5	Record lectures	3.89	.999
6	Reading e-books	3.88	1.114
7	Listen to Podcasts	3.88	2.683
8	To search the scientific literature	3.86	.996
9	Finding material for a class assignment	3.80	1.220
10	Searching about video conferences and webinars	3.76	1.039
11	To write notes	3.65	1.301
12	To browse the web	3.65	1.241
13	Conducting webinars over the internet	3.57	1.085

Scale: 1= Strongly Disagree, 2= Disagree, 3= Slightly Agree 4= Agree, 5= Strongly Agree

Respondents' preferred technological devices to find information about studies. Out of 274(100%) of the respondents, the majority 199(72.6%) preferred laptops to seek information relevant to their academics. On the other hand, 174(63.5%) of the respondents seek informal information from their smart phones. While only 40(14.6%) of the respondents used their Tablets to seek information (Table 7).

Table 7: Respondents' preferred technological devices to find information about studies

Rank	Technological Devices	Frequency	Percentage
1	Laptop	199	72.6%
2	Smart-phone	174	63.5%
3	Desktop Computer	55	20.1%
4	Tablet	40	14.6%

Respondents' perception about the informal learning practices

To measure the perception of the students about informal learning researcher has asked a set of 15 statements using the scale of agreement. All the statements received 4 mean values showing that respondents were "agreed" that "they understand that informal learning helps to improve the quality of their work" (M=3.89, SD=.937), "they understand the concept of informal learning" (M=3.88, SD=.890), "they understand that informal learning helps prepare assignment" (M=3.88, SD=.934), "they understand that informal learning is a natural activity by a self-motivated learner" (M=3.87, SD=.927), "they understand that informal learning is useful for research purposes" (M=3.87, SD=.978), "they understand that informal learning helps to utilize time in a better way" (M=3.86, SD=.979), and "they understand that informal learning helps greatly to learn anything at any time through the latest technologies" (M=3.86, SD=.997) (Table 8)

Table 8: Respondents' perception about the informal learning practices

Rank	Statements	Mean	SD
1	I understand that informal learning helps to improve the quality of my work	3.89	.937
2	I understand the concept of informal learning	3.88	.890
3	I understand that informal learning helps prepare assignments	3.88	.934
4	I understand that informal learning is a natural activity by a self-motivated learner	3.87	.927
5	I understand that informal learning is useful for research purposes	3.87	.978
6	I understand that informal learning helps to utilize time in a better way	3.86	.979
7	I understand that informal learning helps greatly to learn anything at any time through the latest technologies	3.86	.997

8	I understand that informal learning is helpful for presentations	3.84	1.032
9	I understand that informal learning makes an individual self-directed	3.81	.964
10	I understand that an individual becomes a lifelong learner due to informal learning	3.81	.957
11	I understand that informal learning is important to learn from sources other than the traditional classroom.	3.80	1.001
12	I understand that informal learning helps to learn new things	3.80	.963
13	I understand that I have sufficient expertise in finding information relevant to my interest through informal learning sources	3.80	.927
14	I understand that informal learning boosts the creativity and exploration among students	3.78	.995
15	I understand that a person learns better through informal learning sources than traditional classroom	3.65	.991

Scale: 1= Strongly Disagree, 2= Disagree, 3= Slightly Agree 4= Agree, 5= Strongly Agree

Discussion

In the present study at the Islamia University of Bahawalpur, approximately 24,500 students are enrolled in undergraduate, graduate, and post-graduate programs. The study showed that most of the time students preferred laptops for informal learning practices. Similarly, Clough et al. (2008) asserted that for informal learning the learners use technological devices, especially laptops and PDAs to support informal learning.

Our results highlighted that majority of the students believed that with the help of different informal learning sources they watch educational videos and keep themselves engaged with the latest development in their subject area. Alongside, Husnain (2020) reported that students engage themselves in learning to be aware of popular or latest trends and news,

to be in touch with others, and to watch motivational videos or posts, etc. Our study showed that among social media informal learning channels, most of the students prefer using WhatsApp and YouTube for research and educational purposes. However, Madge et al. (2009) stated that students are likely to prefer Facebook for informal learning purposes. Results of the present study showed that among electronic informal learning sources students' preferences are for Google and Google Scholar. These findings are supported by Khan et al., 2020; Deng and Tavares, 2015; Garcia et al., 2015 that students engaged in research and favourably prefer Google Scholar, etc. The results of the study showed that students believed that informal learning improves the quality of their work. These results are quite compatible with the results of Tamir (1990) and Aghazamani (2011) reported that informal learning practices help individuals to develop their subject knowledge.

Informal learning has appeared generally an ideal supporter of ICT and particularly in online learning (Albert & Steve, 2013). Eom et al. (2006) used structural equation modeling in a study conducted to inspect the factors of the satisfaction of students' outcomes of learning regarding the online courses at the university. Total 397 valid original responses of the students recorded at a university having a minimum one online course to identify the model's structure. Findings showed that among all the variables which were hypothesized, six were significant to affect the satisfaction of the students i.e. feedback of instructor and style of and learning, etc. The structural model findings also disclose that satisfaction of the client is an important indicator of learning results. Further, it is suggested that online education may show a greater mode of training when it is goaled to Students with better learning styles (visual and read/write learning styles) and meaningful and due time response by the instructors of different kinds.

The study indicated that most of the time students faced the problem of unavailability of network connectivity is the main problem in learning something online and informal learning

can only be successful if teachers provide training in the use of technology for learning. Traditional teaching and learning approaches also make limited the students' creativity and innovation in the learning and teaching processes (Dabbagh and Kitsantas, 2012). Hence, for the promotion of creativity among students, it is required to comprehend the significance of the practices, trends, motivations, tools of informal learning and barriers which hinders the way of learning these useful skills and expertise. On the other hand, Meyers et al., (2013) stated that a lack of digital literacy is also a problematic issue. Another major hurdle is that little emphasis is given to students learning, allotting, and managing tasks and, producing a favourable environment for informal learning (Eraut, 2004).

Conclusion

The study was conducted to measure the current trends of informal learning among university students. The study concluded that due to technological advancements and increased access to portable devices the usage of informal learning platforms is increasing rapidly. Students are readily executing numerous informal learning resources and have a positive perception of their use. The study signifies the importance of proper teachers' motivation, encouragement, and training to boost the culture of informal learning. Hence, the ever-growing trends of seeking information from online resources decrease the use of traditional learning resources information from online resources decreasing the use of traditional learning resources i.e., library and its resources. Libraries in this regard should employ the necessary steps.

Recommendations

In light of the above conclusion and discussion and the responses of students, this research is formulating a few recommendations to make informal learning more effective and useful. So, it is recommended that:

1. There should be more digital facilities provide to make informal learning effective i.e. the tools and connectivity should be developed.
2. Digital literacy should be enhanced to be benefited from Informal learning.
3. Students should provide attractive spaces for practicing informal learning within the campus.
4. Students should be properly guided about the effective use of social media sites.
5. It needs to dissipate the advantages of informal learning.
6. Informal learning should be purpose and objective-based to avoid its misuse.
7. Universities and higher education institutes should promote informal learning via formal and non-formal learning.

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