

# Smartphone Application Values: An Assessment of University Students

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## ABSTRACT

There is an increase in the use of technology via smartphones among students in present times. Sociologically analyzing, physical objects, techniques, and artifacts are manmade capacities that are meant to make life practicable. Values and beliefs are the guiding principles decisive in day to day aspect of life. Also, they are non-physical capacities that contribute to shaping up the culture. This investigation assimilated these concepts into smartphone application values, that was designed to assess and examine values persuaded in using a smartphone application for university students. The objective of the study was to examine the difference concerning gender and subject stream for values namely, knowledge, economic, aesthetic, social, political, nationalistic, creative, and humanistic. The data were collected utilizing researchers developed Smartphone Application Value Assessment Scale.

**Keywords:** Smartphone Applications, Values, Value Assessment, University Students

Technology makes the busy lifestyle manageable. The emergence of smartphones has made the work convenient, connectivity effortless and information readily accessible. The various devices such as phones, calculators, personal computers, pagers, television, etc. are now being readily replaced by one device, smartphone. With the growing usage and demand, smartphones are easily available and their technology is evolving at a rapid speed. Furthermore, compatible internet service is also readily available these days. Smartphones are getting affordable and accessible by-passing time due to convenience of use (Ahmad *et al.* 2014). A smartphone is now considered to be an essential part of a modern lifestyle. The user-friendly and personalized interface of a smartphone enables it to be individualized according to the needs and preferences of the user, which implies that users have more control over their smartphones (Verkasalo *et al.* 2010). Unlike the traditional mobile phone, a smartphone offers more functions. An innovative aspect of smartphones is multimedia

internet content and applications or apps that users can download from various app markets. The mobile operating system has its application store ready to download applications compatible with its technical specifications. Apps can be downloaded from these specified platforms such as Apple Store for Apple OS, Google Play Store for Google Android, etc. From these stores, apps can be downloaded for free or on a payment basis. Apps, also, come preinstalled on mobile devices.

Values are principles or standards of behavior considered to be one's decision of what is important. The term can be explained as certain standards of social behavior that are considered to be norms. When these norms become established rule over some time, they are considered to become values. In the social processes, values and technology

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can be explored in terms of culture by analyzing the association of ethos, also called non-material culture or values and beliefs, and eidos, or the material culture or the technology. Both are known to influence each other and also contribute to social change. A gap between material and non-material culture was analyzed and technology was argued to be a primary agent of social change. The lag in value adaptation with advancement in technology was responsible for culture lag (Ogburn, 1922). In this age of rapid globalization and increasing use and dependency on technology such as smartphones, the discussion in context to values and its evolving nature are undertaken by our society from time to time.

### **Values, Technology and Educational Policy Matters**

The relevance of value is a much-discussed policy concern of present times. Some values are debated to be on the verge of extinction, some considered forgotten, some claimed to evolve and some new ones are getting acceptability. Concerns were expressed over the erosion of essential values and increasing cynicism in society. While the core values like honesty, tolerance, helping others humanism and national values in personal and public life were, if not redundant, largely disregarded. Crime, violence, cruelty, greed, and apathy to human suffering appeared to be prevalent in all aspects of life be it political, social, or economic. Education was considered as a powerful medium for inculcating social and moral values and bring a change in the situation (National Policy on Education, 1986). A concern over erosion of the essential, social, moral, and spiritual values continued. An increase in cynicism in every social bracket was felt and educational institutions were directed to strive, resolve, and sustain the universal and eternal values focused on the harmony and integration of the community (National Curriculum Framework, 2000).

Now, emphasis on making values and culture part of the curriculum for ensuring the overall development of learner's capacities are being made. The important aim of education is to enable the students to be rational, caring, compassionate, and ethical. Thus, learners should develop character while preparing for future employment. The new

policy aims to achieve educational aspirations as per the needs of the present century aligning Indian values and traditions (National Policy of Education, 2020). The Sustainable Development Goal 4 (SDG4), as envisioned in the policy is now only possible while maintaining a balance between values and technology. When the growing technology and advancements are shaped by the ethos of a society, it would result in advancements consistent with a collective conscience. For higher education, an imperative prerequisite was noted for students and professors to receive training for incorporating mobile learning through mobile devices such as smartphones and tablets into pedagogical practice. For the reasons that in the absence of guidance of complete usage professors instead of transforming and improving methodologies of teaching-learning end up using new technology to continue with old methods (UNESCO, 2013).

### **Values, Smartphone Usage and University Students**

Smartphones have not only changed the way students access information and socialize but also, how they get their education and certifications. The foremost benefit of the ubiquitous nature of learning using mobile devices is an increase in flexibility for face-to-face and distance learning (Ally, 2009). Students, across universities also, find smartphones beneficial for academics regardless of gender and age group. Educational aims were reported to be achieved for the use of learning, motivation, and productive educational interactions. The use of apps developed specifically for university subjects was valued highly by students. University students were highly favorable towards the use of apps for learning, which upgraded learning and provided opportunities to establish collaborations within their subjects and nurturing cooperative work among students and professors (Vázquez-Cano, 2014).

Smartphones are personalized, it configures the apps according to individual preferences and adapts to mobile services individualized to the user's needs (Tossell *et al.* 2012). The personalized environment of smartphones implies that it is used to pursue individual goals. This gives the app using a personal characteristic. Just as values are highly individualized and contextualized in nature, the activities smartphone users engage in

and the values they pursue while engaging in those activities are distinctive. Taking a value-oriented approach for smartphone use, it becomes evident that certain values are preferred to be pursued while using a smartphone. Smartphone usage improves communication, socialization, positive social relations, social connections, confidence, and self-image (Jung, 2013). Smartphones have liberated the modern learner from constraints of place and time and made education flexible. Learners and educators are now able to collaborate, also, learners from developing countries can compensate for learning resources by using smartphones for education. While educational benefits for students are great, smartphone usage also has reported problems related to values like cheating on exams, internet addiction, bullying, hazing, etc. (Sarwar & Soomro, 2013). It is distinct from the present review that the use of technology also connects to our value systems. A need to examine values pursued while using these smartphone apps was identified.

### Significance of the Study

Dependency and usage of smartphones are increasing day by day. It is now an integral part of our daily lives and medium people choose to communicate. Smartphones are enabling mobile learning and hence have an ever-growing presence in the field of education among both the teachers and the students. Smartphones are connecting the student with the information superhighway. With the present blended learning approach and collaborative learning environment, students are getting more and more dependent on the use of smartphones for their education and social activities. It is a widely known fact the excessive use of smartphones is directly affecting cognitive ability and social life. Technology has a strong influence on culture and with the present lifestyle of modern students, the use of smartphones is essential. The investigators are inclined to find out how this particular technology links to the culture, in context to values. The applications installed on the smartphone are being used at a very frequent interval by students. The question arises, in this case, is, what are the values that are playing a role while accessing those apps. A social networking app like Facebook or WhatsApp can be used for education, socialization, commercial

activity, creative outlets, political debates, etc. The researchers were inclined to investigate in detail the values that were guiding the university students to use apps on their smartphones.

### Operational Definitions

#### *Smartphone Applications*

Smartphone applications also referred to as 'apps' are self-contained software programs designed to run a website on mobile devices such as smartphones and tablets. They provide users with similar experience and services as on personal computers with freedom of portability.

#### *Values*

Values are concepts that describe the attitudes and beliefs of an individual. They represent an important aspect of human life that controls and directs behavior. The eight values identified for the investigation were knowledge, economic, aesthetic, social, political, nationalistic, creative, and humanistic.

- ❑ *Knowledge*: To endeavour in quest of knowledge, education, truth, principal, etc.
- ❑ *Economic*: Tendency to collect or invest money, indulge in economic activities, means to acquire money, assessing benefits of a product or consumption pattern.
- ❑ *Aesthetic*: Involving beauty, arts, music, dance, acting, literature, love, etc.
- ❑ *Social*: Equality, awareness, social harmony, brotherhood, sympathy, help, narrowness, social, classes, etc.
- ❑ *Political*: Prestige, power, faith in excellence, leadership, ideas expressing the attitude of large social groups, the satisfaction of the needs of the political area, etc.
- ❑ *Nationalistic*: The ideals of citizenship, patriotism, cultural determinism, national upliftment, integration, assimilation, national characteristics, etc.
- ❑ *Creative*: This value is represented by the originality of ideas, the tendency of creativity, interest towards new inventions, interest towards science and technology, etc. This value defines the originality of the concept of an object or idea.

- ❑ *Humanistic*: Selfless service towards helpless and poor persons tendency to encourage self, kindness, emotions, human welfare, human dignity, etc.

### Objectives of the Study

- ❑ To examine the difference with respect to gender for knowledge, economic, aesthetic, social, political, nationalistic, creative, and humanistic values of smartphone applications for university students.
- ❑ To compare difference with respect to subject stream for knowledge, economic, aesthetic, social, political, nationalistic, creative, and humanistic values of smartphone applications for university students.

### Hypotheses

- ❑ There is no significant difference in knowledge, economic, aesthetic, social, political, nationalistic, creative, and humanistic value of smartphone applications of university students with respect to male and female university students.
- ❑ No Significant Difference exists for knowledge, economic, aesthetic, social, political, nationalistic, creative, and humanistic value of smartphone applications of university students with respect to science and social science university students.

### Delimitations

The study was confounded to final semester central university students in Bathinda. Also, the investigation was restricted to eight values namely: knowledge, economic, aesthetic, social, political, nationalistic, creative, and humanistic.

### Methodology

For the study, the researchers aimed to examine eight different values that were being utilized by the users for operating apps in their smartphones. The users were university students, who were stratified with reference to gender and subject stream. Here, research had to depict the conditions accurately as what they are without manipulating any variable hence descriptive survey method was identified to be most appropriate for the purpose. The investigation was undertaken in 2019.

### Sampling

The population for the present study consisted of final semester postgraduate university students enrolled in various courses broadly demarcated into the science stream and social science stream. As per the official record of the university, the total number of students enrolled in the final semester was 485 out of which 144 students were from the Social Sciences stream and 341 students were from Sciences stream. Further dividing based on gender (a) 81 were male and 63 were female students for social sciences stream and (b) 193 were male and 148 were female students for the science stream.

**Table 1:** Population of the study

Science Stream 341		Social Science Stream 144	
Male 193	Female 148	Male 81	Female 63
Population 485			

A sample of 215 with a 5% margin for error and a 95% confidence level was determined. The sample was further stratified using the proportionate stratified sampling technique. For a sample of 215, the students from (a) Social Science stream were 64 with 36 Male and 28 Female students, and from (b) Science stream were 151 students with 85 Male and 66 Female students.

**Table 2:** Sample of the study

Science Stream 151		Social Science Stream 64	
Male 85	Female 66	Male 36	Female 28
Sample 215			

### Tool for Data Collection

To collect data Smartphone Application Value Assessment Scale (SAVAS) was developed by the researchers, which was based upon already standardized and published tool entitled Television Programme Value Assessment Scale (TPVAS) developed by Mishra and Shankardhar. SAVAS consisted of 32 statements and 128 situations. Each statement had four situations reactions with it and each situation represented a specific value divided into eight different values namely: knowledge, economic, aesthetic, social, political, nationalistic, creative, and humanistic.

## Techniques for Analysis and Interpretation

The study sought to find the standard difference and compare the mean performance among a) male and female university students and b) science and social science students, with regards to knowledge, economics, aesthetic, social, political, nationalistic, creative and humanistic value of smartphone applications. The technique considered most appropriate for tabulating and interpreting the data were mean standard deviation and t-test.

## RESULTS AND DISCUSSION

From the given table 3, it is evident that There was a significant gender difference found with regards to knowledge, economic, and political smartphone application values. Whereas, there was no significant difference between male and female university students with regards to aesthetic, social, nationalistic, creative, and humanistic values for smartphone applications.

**Table 3:** Difference of smartphone application values of university students with respect to the gender

Values	Male 121		Female 94		t-value
	Mean	SD	Mean	SD	
Knowledge	42.02	7.10	44.61	6.42	2.58
Economic	38.47	5.33	40.30	6.42	2.26
Aesthetic	40.23	6.69	38.61	6.04	1.82
Social	41.05	5.65	42.03	5.46	1.26
Political	36.90	6.98	33.69	7.62	3.20
Nationalistic	40.98	7.29	40.37	6.27	0.64
Creative	34.28	5.98	34.53	6.57	0.26
Humanistic	38.85	6.41	38.62	4.78	0.29
N 215					
df 213					

\* Table value at 0.05 level is 1.97 and 0.01 level is 2.60.

From the given table 4, it was interpreted that no significant difference existed between science and social science stream university students with regards to knowledge, economic, aesthetic, social, political, nationalistic, creative, and humanistic value for smartphone applications. It was determined that science students use smartphones for the values equivalent to social science students.

**Table 4:** Difference of smartphone application values of university students with respect to the subject stream

Value	Science 151		Social Science 64		t-value
	Mean	SD	Mean	SD	
Knowledge	42.83	7.75	43.92	6.33	0.98
Economic	39.57	5.92	38.57	5.80	1.13
Aesthetic	39.18	6.39	39.66	6.48	0.49
Social	41.40	5.65	41.67	5.54	0.31
Political	36.42	7.41	35.11	7.42	1.17
Nationalistic	40.37	6.52	41.53	7.56	1.13
Creative	34.49	6.05	34.15	6.69	0.35
Humanistic	38.65	5.51	39	6.29	0.39
N 215					
df 213					

\* Table value at 0.05 level is 1.97 and 0.01 level is 2.60.

- ❑ The mean performance of female students was higher than male students for knowledge value. So, we may say that Female students used smartphone applications significantly more for knowledge value than male students.
- ❑ Female students scored higher mean score as compared to male students for economic value. Hence, it was concluded that female students exhibited economic value significantly higher than male students while using smartphone applications.
- ❑ A significant gender difference existed with regard to the political value of smartphone applications. The mean value exhibited by male students was higher than female students. Consequently, it was presumed that for political value male students used smartphone applications more than female students.

## CONCLUSIONS

Based on the results and discussion it can be concluded that the smartphone application value of knowledge was highest for the sample and hence there can be a greater number of applications that can be developed by the universities and teaching institutes to encourage asynchronous mobile learning and students can be engaged through mobile learning for better learning outcomes.

The university students used the smartphone application for the creative value the least. One of

the dimensions of creativity is problem-solving. And, problem skills are said to be one of the most necessary skills to survive the 21<sup>st</sup> century. Hence, an immediate need was felt to nurture and incubate creativity for university students.

### Limitations

- ❑ The study could not cover the entire colleges and universities of the Bathinda district due to the paucity of time and resources.
- ❑ This study was confounded to final semester PG students.

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