

EPPS Test Application Development For Selecting Students to Participate in Cooperative Program on Small and Medium Enterprise

Tan Amelia*, Tri Sagirani*, Rr. Dewintha Indriyanti**

* Department of Information System, STMIK STIKOM Surabaya

** Faculty of Psychology, Universitas Surabaya

Article Info

Article history:

Received Jul 15, 2014

Revised Sep 21, 2014

Accepted Sep 24, 2014

Keyword:

Cooperative education

Edward's personal preference
schedule (epps)

Small and medium enterprise
the application of personality
test

ABSTRACT

Cooperative Education (CO-OP) is a program that aims to sharpen its participants' entrepreneurship action and spirit. In order to select the students to participate in this program, STMIK STIKOM of Surabaya uses EPPS psychological test which can measure the achievement, deference, autonomy, affiliation, nurturance, and endurance of CO-OP participant. The used of EPPS psychological test is based on the reason that this test is one of the personality tests prepared to measure the power of someone's need. By the existence of EPS application in selecting CO-OP participant, a proper result's validity is expected to be reached.

Copyright © 2014 Institute of Advanced Engineering and Science.
All rights reserved.

Corresponding Author:

Tan Amelia,

Department of Information System,

STMIK STIKOM Surabaya,

Jl. Raya Kedung Baruk No. 98, Surabaya, Jawa Timur, Indonesia, 60298.

Email: meli@stikom.edu

1. INTRODUCTION

As a social system, higher education does not produces merely graduates as outcomes, but also these graduates are capable to be independent self-employed, considering that macroeconomic problem is unemployment. STMIK STIKOM of Surabaya is called to participate responsibly in improving the learning outcomes of the sort.

In order to sharpen the entrepreneurship spirit and action, STMIK STIKOM of Surabaya also welcomes the educational method of business in the form of Cooperative Education program (CO-OP). This Program was greeted strategically because it is Experiential Learning, using real-life modeling in SMEs.

To execute CO-OP program in the SMEs, then the system approach done is as follows: recruitment and selection of participants, ethics and business coaching, mentoring-control and quality assurance. So expect the transformation process occurs and produces students who have spirit and entrepreneurial action include: knowledge, skill and attitude [1].

Selection of participants - the first step to find the students who really have the ability to execute the basic co-op programs in SMEs - is done using an psychological test instrument named Edward's Personal Preference Schedule (EPPS).

EPPS test is one of the inventories, since it is used to determine the characteristics of a personality such as interests, attitudes and values. It should also be highlighted within the context that EPPS test on participant selection of CO-OP program for SMEs is not a primary source, but rather as supporting data during the interview process to learn further about the participants': motivation and ability to communicate with others, courage to take a risk, tenacity, toughness, and commitments.

According to Murray H.A theory of needs [2], 15 simplified needs in the form of personality test method by Allen L. Edward is used [3]. Regarding the selection of participants in SMEs co-op that aims to cultivate the entrepreneurship mentality, 6 aspects of needs, which are expected to have value above the average, will be chosen from those 15 needs of Murray H. A in the EPPS test. These 6 aspects are taken from the basis of entrepreneur characteristics as described in Geoffrey G. Meredith's book [4].

The 6 aspects of needs required to be observed consists of: achievement (the urge to excel), deference (confident), autonomous (self-sufficient), affiliation (social-at-heart), nurturance (sympathy) and endurance (responsible).

2. THE ENTREPRENEURIAL NATURE

Entrepreneurship is the ability that is owned by someone to see and to assess business opportunities, to collect resources-the resources are needed to take appropriate action and to take advantage in order to achieve success. Entrepreneurship, in principle, is the characteristics and nature of someone who has willingness in realizing innovative ideas into real world creatively. Entrepreneurship emerges when an individual dares to develop efforts and his new ideas. The entrepreneurial process includes all functions, activities and actions related to the acquisition of opportunity and the creation of business organization [5].

An entrepreneur is one who creates a new business in the face of risk and uncertainty for the purpose of achieving profit and growth by identifying significant opportunities and assembling the necessary resources to capitalize on them [6].

The list of characteristics and character of an entrepreneur profile [4] is:

Characteristics:

1. Confidence
2. Results and customer tasks oriented
3. Risk takers (seekers)
4. Leadership
5. Originality
6. Future oriented (forward-looking)
7. Diligent and honest

Character:

1. Assurance, independence, individuality, optimism.
2. The need to achieve, profit-oriented, having the perseverance and fortitude, having determination, loving to work hard, energetic, and having initiative.
3. Having the ability to take risks and liking challenges.
4. Behaving as a leader, able to get along with others, and willing to accept constructive suggestions and criticism.
5. Having a high creativity and innovation (Extremely/Very creative and innovative), flexible, versatile and possessing a vast business network.
6. Perceptive and having a way of looking/ the future-oriented way of thinking (forward-looking).
7. Having confidence (Believing) that life is equal to work

3. PERSONALITY VARIABLES OF EPPS

EPPS is an inventory tool developed by the Allen L. Edwards. The original purpose of early designation of this tool is to develop a research and counseling tool that provides an appropriate measurement to the various personality independent variables [3]. However, it is now widely used as a selection tool.

Basic variable naming refers to a definition of personality [2]. Following are 15 personality variables included in EPPS:

Table 1. Tables Need EPPS

No	High Score	Low Score
Achievement (ach)		
1	The urge to act better and interested in the challenging and complex task	A boost for low achievement, give up quickly surrender to the complicated situations or shy away when faced complex situations.
Deference (def)		
2	Personal tendencies easily influenced by others, the attraction will be the success of others, depends a lot from other people.	Not interested in the success of others, focus on own self (themselves), difficult to comply with others, and tend to do in (their) own way.
Order (ord)		
3	The tendency to have a high regularity, organized, tidy in planning and its activities.	The way of working or acting tends to irregularity, more controlled by the situation of feelings, lack of planned in the act (less-prepared/planned to act), and the attitudes are easily changeable.
Exhibition (exh)		
4	A high tendency to show off, showing what is owned to the surrounding environment.	Not interested in social situation, tend to not care for what are happening around, neglect to what others are experiencing.
Autonomy (aut)		
5	Personal convenience to act as individual's wish, not depending on others.	High dependency on other figures, must seek the approval of others to act, avoiding action that can be brought to the attention of the society and tend to seek protection figures before acting.
Affiliation (aff)		
6	High loyalty to the social situation, easy to participate and active.	Closed individuals, highly introvert, hard to get along, and not happy with social activities.
Intracception (int)		
7	Easy to correct, judge and evaluate their selves and feelings.	Too ignore feelings, almost never evaluates each action based on feelings, attitudes are more dominated by logical or cognitive.
Succorance (suc)		
8	High dependence to others, seeking the support of others to reassure their acts by receiving affection and other friendliness from.	An independent personality, not depending on the social situation, pleased with self-activity and neglected their social situation although their-selves became the center of attention.
Dominance (dom)		
9	High dominance of social situations, easy to control and direct the groups, including leading to act base on personal desire.	Personal follower in group, yes-men against authority, easily controlled. Hard to say no to the group situation.
Abasement (aba)		
10	Personal inclination is easy to feel guilty, self-regretted, deserves to be punished as a consequence of the actions. The personality leads to inferiority.	Positive thinkers, not too concerned for the mistakes that have been made, open, easy to forgive and apologize in case of mistake he has done.
Nurturance (nur)		
11	Open personality, easy to help others, polite, and easy to sympathize.	Closed personality, considered to be stiff, difficult to sympathize and easy to say rude.
Change (chg)		
12	High interest to the new situation, changing frequently included trying new way in working activity.	Routine situations making themselves comfortable, quiet with a monotonous daily activity, concerned with procedures, and their working ways based on habit.
Endurance (end)		
13	High responsibility to the job, finish what has been started. Diligently and not easy to saturate with the faced-situation.	Low durability of stressful situations, conflict, uncertain situations or purpose, easy to give up, and quickly saturated to an uncomfortable situation.
Heterosexuality (het)		
14	High interest for mingling with the opposite sex, attempting to get the affection and attention to the opposite sex.	Not easily attracted to the opposite sex, not too affected by the opposite sex, hard influenced by the figure of the opposite sex.
Aggression (agg)		
15	Encouraged by high aggression, triggered by conflict and pleased with a confrontation when differences of opinion occur.	Quiet personality, relying on peace, mutual acceptance, avoidance of conflict and confrontation.

4. EPPS INSTRUCTION

Instruction that must be done by CO-OP participants for SMEs in completing EPPS personality test can be described as follows [7]:

1. Test participants chooses one of the two provided statements provided (A or B) which is more describe himselfthemselves.
2. When two statements are equally disliked or equally preferred, test participants must choose the one which is more typically describe himselfthemselves.

3. The chosen ones should be based on the test-participant's' feelings, not based on instead of what is deemed reasonable.
4. There is no right or wrong answer.
5. Don't late an exceeded item. (Do not skip to answer any item/Do not let any item remains unanswered)

5. IMPLEMENTATION OF EPPS TEST

CO-OP Participants in SME do EPPS test directly using the EPPS applications that have been created. Next, the analysis report of test participant may be printed.

At the beginning of the test, the participants must fill personal information as seen on the figure 1.

Figure 1. Bio-data Form

After participants fill out personal information, the next step is test participant must complete the provided questions. The display (application's form) to answer those questions can be seen as in Figure 2.

Figure 2. Online Test Form

After test participant finish to answer 225 questions given, then generated report as below:

r	c	s	ss	Need	Category
7	10	17	10	Ach	Rata-Rata
8	7	15	10	Def	Rata-Rata
13	11	24	14	Ord	Tinggi
7	8	15	16	Exh	Tinggi
3	0	3	6	Aut	Rendah
9	11	20	16	Aff	Tinggi
9	7	16	10	Int	Rata-Rata
6	3	9	10	Suc	Rata-Rata
8	5	13	8	Dom	Rendah
11	7	18	10	Aba	Rata-Rata
8	9	17	9	Nur	Cenderung Rendah

Figure 3. The Analysis Results Report of EPPS Test

6. RECAP OF EPPS TEST RESULT

Here is the recap report from test results of CO-OP participants in SMEs.

Table 2. Recap of Test Participant Results

#	PARTICIPANT	ACH	DEF	ORD	EXH	AUT	AFF	INT	SUC	DOM	ABA	NUR	CHG	END	HET	AGG
1	PARTICIPANT 1	RT	RT	T	T	R	T	RT	RT	R	RT	CR	CT	R	R	R
2	PARTICIPANT 2	R	SR	R	ST	R	ST	CT	R	R	R	T	ST	RT	CR	SR
3	PARTICIPANT 3	T	T	R	T	CR	T	T	R	R	R	RT	RT	R	R	SR
4	PARTICIPANT 4	R	SR	RT	RT	T	T	RT	R	T	CR	RT	T	R	CR	SR
5	PARTICIPANT 5	CT	RT	R	ST	T	CR	R	CR	SR	RT	R	T	R	RT	CR
6	PARTICIPANT 6	T	R	CR	ST	T	SR	R	T	RT	SR	SR	RT	RT	T	T
7	PARTICIPANT 7	CT	R	CT	CT	RT	CR	RT	R	T	R	R	RT	R	T	R
8	PARTICIPANT 8	R	RT	RT	CT	CR	T	RT	R	T	R	CR	T	R	R	CR
9	PARTICIPANT 9	RT	CT	RT	CT	RT	RT	T	CR	RT	T	CT	SR	R	R	CR
10	PARTICIPANT 10	CR	R	R	SR	R	T	R	T	T	R	CT	T	SR	CR	SR
11	PARTICIPANT 11	R	T	R	ST	T	R	CR	T	R	R	R	R	RT	T	CR
12	PARTICIPANT 12	R	CT	R	T	T	R	RT	RT	RT	R	SR	T	RT	R	T
13	PARTICIPANT 13	R	RT	T	ST	R	CR	RT	RT	CR	RT	R	T	RT	R	SR
14	PARTICIPANT 14	CT	RT	RT	CR	T	RT	T	R	R	RT	R	T	CT	R	SR
15	PARTICIPANT 15	RT	CR	R	ST	ST	RT	T	CT	SR	R	CR	RT	R	CT	R
16	PARTICIPANT 16	T	R	RT	RT	RT	T	CR	ST	R	R	T	RT	CT	R	SR
17	PARTICIPANT 17	CT	R	RT	T	ST	RT	R	T	T	R	SR	RT	R	RT	CR
18	PARTICIPANT 18	RT	R	RT	ST	CT	RT	RT	R	T	RT	R	CR	R	RT	R
19	PARTICIPANT 19	R	SR	R	T	CT	ST	RT	T	CR	T	CT	R	SR	RT	R
20	PARTICIPANT 20	CR	R	CR	T	T	CR	CR	CR	RT	R	RT	R	R	RT	T

Description:

Table 3. Need Value Categories

CATEGORIES	INITIAL	VALUE
VERY LOW	SR	1
LOW	R	2
TEND TO BE LOW	CR	3
ON AVERAGE	RT	4
TEND TO BE HIGH	CT	5
HIGH	T	6
VERY HIGH	ST	7

Following the results of the test's participant, the next process is to calculate the average value of the 6 aspects of need which are the primary focus.

Once an average value of needs, which is the expectation of selecting CO-OP participant in the SMEs, has been produced, the following step is to sort the results in descending order.

The following is a need category results that can be seen in the table below:

Table 4. The Order of Result of Test's Participant Categories Need

#	PARTICIPANT	ACH	DEF	AUT	AFF	NUR	END	AVERAGE	RESULT
1	PARTICIPANT 16	6	2	4	6	6	5	4.83	TEND TO BE HIGH
2	PARTICIPANT 3	6	6	3	6	4	2	4.50	TEND TO BE HIGH
3	PARTICIPANT 14	5	4	6	4	2	5	4.33	TEND TO BE HIGH
4	PARTICIPANT 9	4	5	4	4	5	2	4.00	TEND TO BE HIGH
5	PARTICIPANT 15	4	3	7	4	3	2	3.83	ON AVERAGE
6	PARTICIPANT 2	2	1	2	7	6	4	3.67	ON AVERAGE
7	PARTICIPANT 5	5	4	6	3	2	2	3.67	ON AVERAGE
8	PARTICIPANT 11	2	6	6	2	2	4	3.67	ON AVERAGE
9	PARTICIPANT 1	4	4	2	6	3	2	3.50	ON AVERAGE
10	PARTICIPANT 4	2	1	6	6	4	2	3.50	ON AVERAGE
11	PARTICIPANT 17	5	2	7	4	1	2	3.50	ON AVERAGE
12	PARTICIPANT 19	2	1	5	7	5	1	3.50	ON AVERAGE
13	PARTICIPANT 6	6	2	6	1	1	4	3.33	ON AVERAGE
14	PARTICIPANT 8	2	4	3	6	3	2	3.33	ON AVERAGE
15	PARTICIPANT 12	2	5	6	2	1	4	3.33	ON AVERAGE
16	PARTICIPANT 20	3	2	6	3	4	2	3.33	ON AVERAGE
17	PARTICIPANT 10	3	2	2	6	5	1	3.17	ON AVERAGE
18	PARTICIPANT 18	4	2	5	4	2	2	3.17	ON AVERAGE
19	PARTICIPANT 7	5	2	4	3	2	2	3.00	ON AVERAGE
20	PARTICIPANT 13	2	4	2	3	2	4	2.83	TEND TO BE LOW

7. CONCLUSION

Based on the result of EPPS test's participants in SMEs using EPPS application, the EPPS calculation results are obtained quickly and accurately in order to be used as an overview/profile of the test participants which fits the expected.

REFERENCES

- [1] Sagirani, Tri; Wulandari, S.H.E; "Pendekatan Sistem sebagai Upaya Mempersiapkan dan Mewujudkan *Wirasaha Muda*", Proceeding Seminar Nasional Cakrawala Pembelajaran Berkualitas di Indonesia, Dirjen Dikti, Jakarta, 2012
- [2] Murray, H. A., "Explorations in personality", Oxford University Press, New York, 1938
- [3] Edwards, A. L.; "Manual for the Edwards Personal Preference Schedule,(Rev. ed.)", *Psychological Corp*, New York, 1959
- [4] Meredith, Geoffrey G., "Kewirausahaan", Pustaka Banaman Pressindo, Jakarta, 1996
- [5] Suryana; , "Kewirausahaan: Pedoman Praktis: Kiat dan Proses Menuju Sukses", Salemba Empat, Jakarta, 2001
- [6] Zimmerer, T.W.; Scarborough, N.M.; , "Essentials of Entrepreneurship and Small Business Management", Prentice Hall, New Jersey, 2005
- [7] Amelia, Tan; Indriyanti, Dewintha, "Pengembangan Aplikasi Tes Kepribadian Menggunakan Metode Edward's *Personal Preference Schedule (EPPS)*", Prosiding SNASTI STIKOM Surabaya, 2010

BIOGRAPHIES OF AUTHORS

Tan Amelia earned her Bachelor's degree from Department of Information System, STMIK STIKOM of Surabaya in 2004 and later her Master's Degree in Magister Management Technology from MMT-ITS, Institut Teknologi Sepuluh Nopember in 2011. Currently she is a lecturer at STMIK STIKOM of Surabaya and she can be reached through meli@stikom.edu



Tri Sagirani is a researcher and lecturer in Department of Information System, STMIK STIKOM Surabaya. She is interest in how human interact with computers through learning, such as technology for education, technology for special education, and user experience in aplication computer. Currently, she is a doctoral student in Departemen of Electical Engineering and Information Technology, Gadjah Mada University.
Email: tri.sagirani@gmail.com



Rr. Dewintha Indriyanti earned her Bachelor's and Master's degree in Psychology, University of Surabaya. She is a lecturer and interest with human resource development. Currently she is a psychologist in Center of Consultation and Psychological Services, University of Surabaya.
Email: inthagorantokan@yahoo.com