

Programmer Performance Influence Factors with Sequential Explanatory Model

Case Study in Data Warehouse and IT Center of UIN Sunan Kalijaga Yogyakarta

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Abstract— Implementation is one of phases in Software Development Life Cycle (SDLC). Programmer as software development lead actor decided whether software is completed on time or postpone according to development schedule. Data Warehouse and IT Center (PTIPD) as a software developer official vendor in UIN Sunan Kalijaga, they developed a growing number of software to facilitate administrative processes in college academic community. This is an analysis to determine the factors that most influence the developers.

The object of this research are 9 (nine) people. They are all software programmer in PTIPD. The research using Mixed Methods Research that combines two methods of research, qualitative and quantitative. Two factors from previous research are factors materialistic and non-materialistic factors. Materialistic factors are Reward and Punishment; Career Development and Contra-Accomplishment, Incentive and Bonus. Non-Materialistic factors are: Usefulness; Relationships and Spirituality. Preliminary data taken from interviews, observation and documentation study to discover object opinions and views. Validity Test and Reliability Test using SPSS software for qualitative data is provided.

The most influence factor for programmer performance SDLC of PTIPD UIN Sunan Kalijaga is Usefulness with the highest value at 3 (three) informant: Oscar, Bravo, Mike and Relations with the highest value at 3 (three) informant: Delta, Sierra, Zulu .

Keywords: *Career development, programmer performance, relationship, sequential explanatory, mixed method research.*



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I. INTRODUCTION

What do people build to be able managing documentation, simplify work and store it digitally? The answer is no other than software. According to Pressman, software has now become a decisive force. It is become control decision engine in the business world; serves as basis for form of services and modern scientific research. Software is attached to all system forms; transportation, medical, telecommunications, military, industrial processes, entertainment, office products, and others¹

Software development is also become requirement in organizations, including UIN Sunan Kalijaga. Based on the Decree of the Minister of Religion Republic of Indonesia number 385 of 1993 at December 29, 1993, about Organization and Work Procedure in IAIN Sunan Kalijaga Yogyakarta. Article 60 explains about Pusat Komputer (*Computer Center*), which explains that Pusat Komputer is a supporting element of IAIN Sunan Kalijaga in the field of computers (article 60 paragraph 1), therefore software as academic support activities built in UIN Sunan Kalijaga.²

In Tresnasari, it is explained that Pengembangan Sistem Informasi (*Information System Development*) division was part of the Pusat Komputer dan Sistem Informasi (*Computer Center and Information System*) PKS (later called PTIPD) was an active element in software developing for Sunan Kalijaga UIN. She did an observations for two weeks and found several facts that influenced software development at PTIPD.³

1. PTIPD is a unit in UIN Sunan Kalijaga as university, not as independent software developer organization. PTIPD build software and information system for universities considering as non-profit product, as PTIPD form of service. They do not implement a finance management. The success of the project is generally seen by software availability and on-time software deliverance, also software resolving the problem.
2. Development division does not yet have a fixed programming standard.
3. Divisi pengembangan belum menerapkan standar tertentu untuk mengelola mutu pengelolaan pengerjaan proyek.
4. The development division has not applied certain standards to manage project quality management.

Now, software built by PTIPD UIN Sunan Kalijaga become one of facilitation for various administrative and lecture activities. Development involves actor (programmer), time, target and objectives and implementation.

In the of SDLC implementation, affected actors from software developers are the programmer. The Internal and Non-Technical domain is also divided into 2 (two), Intangible and Tangible. Both of these can affect the development actors behavior (software programmers) as told by Irvine⁴

There are 9 (nine) people currently in Implementation process for software in PTIPD UIN Sunan Kalijaga. Apakah faktor-faktor non-teknis internal yang mempengaruhi kinerja programmer dalam proses pengembangan perangkat lunak di Pusat Teknologi Informasi dan Pangkalan Data UIN Sunan Kalijaga?

What are the internal non-technical factors that influence programmer performancer in the software development process at PTIPD? This research only in software implementation phase (coding). We will discuss scale and study about the sequence of factor in each research subject.

II. RESEARCH METHODOLOGY

A. Mixed Methodology Research

The researcher used Mixed Method with the Sequential Exploratory model. As explained in Creswell it is said that:

“As with the Explanatory Design, the intent of the two-phase Exploratory Design is that the results of the first method (qualitative) can help develop or inform the second method (quantitative)”⁵

¹ Pressman, R. (2007). *Rekayasa Perangkat Lunak: Pendekatan Praktisi. Software Engineering: A Practitioner's Approach* (Terjemahan ed.). Yogyakarta, Yogyakarta, Indonesia: Andi.

² Kalijaga, P. U. (2012, Januari 11). *Pusat Teknologi Informasi & Pangkalan Data UIN Sunan Kalijaga Yogyakarta*. Retrieved April 22, 2014, from <http://it.uin-suka.ac.id/page/content/1-sekilas-pksi.html>

³ Tresnasari, N. A. (2012). *Implementasi Model Penjaminan Mutu pada Organisasi Pengembang Perangkat Lunak Skala Kecil (Studi Kasus : PKS UIN Sunan Kalijaga)*. Yogyakarta: UIN Sunan Kalijaga.

⁴ Irvine, D. (2009, Mei 29). *The Role of Tangible vs. Intangible Rewards in Strategic Recognition*. Retrieved 12 3, 2014, from Recognize This! : <http://www.recognizethisblog.com/2009/05/the-role-of-tangible-vs-intangible-le-rewards-in-strategic-recognition/>

⁵ Creswell, J. W., Plano Clark, V. I., Gutmann, M., & Hanson, W. (2003). *Handbook of Mixed Method in Social and Behavioral Research*. Thousand Oaks, CA: Sage.



Sequential Exploratory model is taken from qualitative data, explores phenomena and continues with the second phase, the quantitative phase. The researcher applied this design began from qualitative finding in the first phase then develop the instrument, identify variables and test in the second phase.

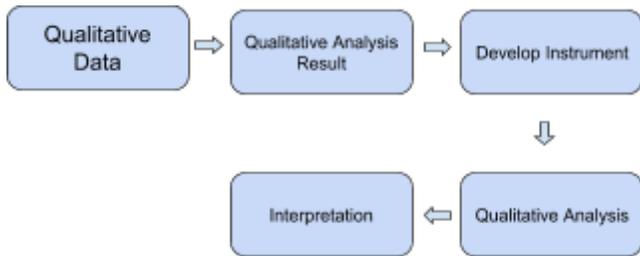


Figure1. MODEL SEQUENTIAL EXPLANATORY METHOD

The Exploratory Sequential Design method is divided into two phases. At First Step, researcher make instruments and collect data. The data collected is qualitative data, either coding or themes. These themes and parameters are then analyzed with the results obtained in the field with interview and observation, researchers get results in the form of Qualitative Finding (findings of qualitative research). The second step, all qualitative finding developed into a qualitative instrument in the form of numbers (ordinal or nominal) and tested by statistical techniques. The combination of the two methods of data is connecting (connecting) from the results of the first phase of research (the results of qualitative research) with the results of the next stage (the results of quantitative research). In many mixed research methods, participants in the first phase of the study are also participants in the next phase.

B. Parameter Test

Materialistic Factor Parameters

Previous studies have examined relationship of reward and punishment to colleague in research with title "Relationships Between Leader Reward and Punishment Behavior and Subordinate Attitudes, Perceptions, and Behaviors: A Meta-Analytic Review Of Existing And New Research" by Philip M. Podsakoff, dkk, explained that there is a relationship between subordinate behavior and punishment and reward made by the leader.⁶

From the literature on materialistic factors and non-realistic factors. Now it is grouped into 3 (three) major groups of factors. In materialistic factors there are 3 (three) parameters:

1. Reward dan Punishment (Leader reward and Punishment Behaviour from Podsakoff, etc, Punishment Preventif and Punishment Reprisif from Jayanti⁷)
2. Career Development (from Pengembangan Karir oleh Jayanti)
3. Achievement and Bonus (from Insentif dan Bonus oleh Jayanti, Kompensasi dan Imbalan by Jayanti).

Non-Materialistic Factor Parameter

Spirit comes from Latin, spiritus, which means breath. According to the Oxford Dictionary that "spirit" is "non-physical part of a person which is the seat of emotions and character; the soul "which means" the non-physical part of a human being which is the center of emotion and character; soul"

In a study conducted by (Kinjerski & Skrypnek, 2006) measuring the assessment of spiritual experience in the workplace. From the study, it stated that 333 (three hundred thirty three) employees from major universities in the midwest, ranging from traders to senior administrative employees, responding to 102 item instruments that examined aspects of spirit at work. Analysis factors to be a parameter are 4 (four) different factors: interest work, sense of togetherness, spiritual connection, and mystical experience.⁸

In non-realistic factors there are also 3 (three) parameters:

1. Usefulness (taken from Meaningfulness of Their Work by Duchon),⁹
2. Relation (taken from the Sense of Community by Kinjerski etc., Relations Co-workers were taken from May et al, the Supervisor Relations were taken from May etc.) and
3. Spirituality (Spiritual Connection taken from Kinjerski, Mystical Experience taken from Kinjerski).



C. Qualitative Analysis Result

Data Coding

In research subject, there are 9 (nine) people works as Software Developer in PTIPD. All of them given pseudonym as Oscar, Delta, Bravo, Sierra, Victor, Mike, Zulu and Quebec.

Materialistic Factor code is FM with Reward and Punishment is FM1, Career Development FM2 and Achievement and Bonus is FM3. In Non Materialistic Factor, the code is FNM with Usefulness is FNM1, Relationship FNM2 and Spirituality FNM3.

In observation, code from observation result in paper or in sheet are coded by Ob-[research object/name of actor/ e.g Oscar]-XX (data of observation - YY (serial number in the attachment)).

In interview, code from observation result in paper or in sheet are coded by Wa-[research object/name of actor/ e.g Oscar]-XX (data of observation - YY (serial number in the attachment)).

Data Collection: Observation

Data collection carried out simultaneously with the ongoing research, the possibility of interview data, observation and documentation studies reported immediately is possible. Data collection took place from the first week of January - the first week of February 2015. The result are 12 observation sheets containing research records during observation.

Data Collection: Interview

Interview taken place in several spot including a lake in Yogyakarta when the researcher come together in a nice small vacation in at January 24, 2015. Sometimes, it is in the middle of working office also. Like in transcript Oscar-Wa-22-XX it is concluded that Oscar didn't have time to do a freelancer outside PTIPD because Oscar really busy with Academic Information System that Oscar involved in.

Data Reduction

By doing data reduction, it will give a clear picture and make it easier for researchers to do further data collection and doing another search for more data. At this stage the data that has been coded with Factor Materialistic (FM) and Factor Non-Materialistic with code (FNM), grouped and will be summarized to give a clearer view.

Data Analysis



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Data analysis is for understand and answer data characteristic from problems related to research activities, by trying to process data into information, as in "A positive approach to qualitative policy and evaluation research."¹⁰

Data retrieve from two kind, secondary data and primary data. In Moleong, primary data are interview or direct observation.¹¹

Primary data is directly obtained from informants that is all programmer in PTIPD UIN Sunan Kalijaga. Secondary data is obtained from documentation studies for example from the informant's twitter account and Facebook status. Secondary data is easy and fast because it is always available.

D. Quantitative Analysis

Sample Population

Population are 9 programmers at PTIPD UIN Sunan Kalijaga

⁶ Podsakoff, P. M., & Todor, W. D. (1981). *Effect of Leader Contingent and Noncontingent Reward and Punishment Behaviours on Subordinate Performance and Satisfaction*. Academy of Management, 810-821.

⁷ Jayanti, Novita Dwi. (2014). *Peran Reward dan Punishment Dalam Rangka Peningkatan Produktivitas Kerja Pegawai Pada Bank (Studi Pada PT. Bank Rakyat Indonesia Cabang Malang)*. Fakultas Ekonomi dan Bisnis. Universitas Brawijaya, Malang.

⁸Kinjerski, Val; Skrypnek, Berna J (2006). *Measuring The Intangible: Development of the Spirit at Work Scale*. Handbook of Faith and Spirituality in the Workplace: Emerging Research and Practice, DOI

⁹ Duchon, Dennis & Plowman, Donde Ashmos. (2005). *Nurturing The Spirit at Work: Impact on Work Unit Performance*. Leadership Quarterly, 16 807-833.

10.1007/978-1-4614-5233-1_23, 383-399.

¹⁰ Bogdan, R. a. (1990). *Introduction to Qualitative Research Method – A Phenomenological Approach to the Social Sciences*. Qualitative Sociology, 183-192.

¹¹ Moleong, L. (2011). *Metode Penelitian Kualitatif (Edisi Revisi)*. Bandung: PT. Remaja Rosdakarya

Data Label

In research subject, there are 9 (nine) people works as Software Developer in PTIPD. All of them given pseudonym as Oscar, Delta, Bravo, Sierra, Victor, Mike, Zulu and Quebec. Materialistic Factor code is FM with Reward and Punishment is FM1, Career Development FM2 and Achievement and Bonus is FM3. In Non Materialistic Factor, the code is FNM with Usefulness is FNM1, Relationship FNM2 and Spirituality FNM3. In observation, code from observation result in paper or in sheet are coded by Ob-[research object/name of actor/ e.g Oscar]-XX (data of observation - YY (serial number in the attachment). In interview, code from observation result in paper or in sheet are coded by Wa-[research object/name of actor/ e.g Oscar]-XX (data of observation - YY (serial number in the attachment).

Scoring

We use Likert scale to interpret qualitative research results from from non-technical and factors internal influencing programmers performance in the software development process. The result are number. Likert scale is a scale used to measure attitudes, opinions, and perceptions of a person or group of people about social phenomena. The scale is 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree and 1 for strongly disagree.

Validity and Reliability Test

$$r_{xy} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \cdot \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

Formula 1. PRODUCT MOMENT CORRELATION FORMULA

III. DISCUSSION

To find the initial interpretation, researchers used qualitative research methods, purposive sampling method, interviews and observations to 9 (nine) research objects at PTIPD Sunan Kalijaga UIN.

A. Actors and Research Object Result

Oscar

Urutan faktor yang mempengaruhi Oscar, Usefulness (FNM 1) dengan nilai interpretasi 4.4; Relation (FNM 2) dengan nilai interpretasi 3.3; Reward dan Punishment (FM1) dengan nilai interpretasi 2.4; Pengembangan Karir FM 2 dengan nilai interpretasi 2.2; Kontraprestasi, Insentif dan Bonus FM 3 dengan nilai interpretasi 2; Spiritualitas FNM 3 dengan nilai interpretasi 1.667



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The result from Oscars are, Usefulness (FNM 1) with values 4.4; Relation (FNM 2) with interpretation values 3.3; Reward and Punishment (FM1) with interpretation values 2.4; Career Development (FM 2) with interpretation values 2.2; Achievement, and Bonus (FM 3) with interpretation values 2; Spirituality (FNM 3) with an interpretation value of 1,667.

Delta

The result from Delta are, Relation (FNM 2) with interpretation value 4.15. Usefulness (FNM 1) with interpretation value 2.727. Career Development (FM 2) with interpretation value 2.4. Spiritual (FNM 3) with interpretation value 2.333. Reward dan Punishment with interpretation value 2.2. Achievement and Bonus (FM3) with interpretation value 2.

Bravo

The result from Bravo are, Career Development (FM 2) with interpretation value 4.2. Usefulness (FNM 1) with interpretation value 3.09. Relation (FNM 2) with nilai interpretasi 3. Reward dan Punishment (FM 1) with interpretation value 2.4. Spiritual (FNM 3) with interpretation value 1.667. Achievement and Bonus (FM3) with interpretation value 1.

Sierra

The result from Sierra are, Relation (FNM 2) with nilai interpretasi 3.2. Reward dan Punishment (FM 1) with interpretation value 3; Spiritual (FNM 3) with interpretation value 0; Usefulness FNM 1 with interpretation value 0; Career Development (FM 2) with interpretation value 0; Achievement and Bonus (FM3) with interpretation value 0.

Victor

The result from Victor are, Spiritual (FNM 3) with interpretation value 4.67; Kebermanfaatan with interpretation value 3.73; Relation (FNM 2) with nilai interpretasi 3.3; Reward dan Punishment (FM 1) with interpretation value 3; Career Development (FM 2) with interpretation value 2.6; Achievement and Bonus (FM3) with interpretation value 0.

Mike

The result from Mike are, Career Development (FM 2) with interpretation value 3.8; Reward dan Punishment (FM 1) with interpretation value 3; Usefulness FNM 1 with interpretation value 2.55; Relation (FNM 2) with nilai interpretasi 1.45; Spiritual (FNM 3) with interpretation

value 1; Achievement and Bonus (FM3) with interpretation value 1.

Golf

All results of Golf's research are dominated by numbers 0.

Zulu

The result from Zulu are Career Development (FM 2) with interpretation value 3.4; Relation (FNM 2) with nilai interpretasi 3.3; Usefulness FNM 1 with interpretation value 2.91; Spiritual (FNM 3) with interpretation value 2.67; Reward dan Punishment (FM 1) with interpretation value 2.2; Achievement and Bonus (FM3) with interpretation value 1.5.

Quebec

The result from Quebec are Reward dan Punishment (FM 1) (FM1) with interpretation value 4.2; Relation FNM 2(FNM2) with interpretation value 2.45; Spiritual (FNM 3) with interpretation value 2; Career Development (FM 2) with interpretation value 2; Usefulness FNM 1 (FNM1) with interpretation value 1.9; Achievement and Bonus (FM3) (FM3) with interpretation value 1.

TABLE I. FIRST PHASE CONCLUDE

No	Object	Materialistic Factor			Non-Materialistic Factor		
		FM1	FM2	FM3	FNM1	FNM2	FNM3
1.	Oscar	2.4	2.2	2	4.091	3.3	1.667
2.	Delta	2.2	2.4	2	2.73	4.15	2.33
3.	Bravo	2.4	4.2	1	3.091	3	1.33
4.	Sierra	3	-	-	-	3.2	-
5.	Victor	3	2.6	-	3.73	3.3	4.67
6.	Mike	1.8	3.8	1	2.55	1.45	1
7.	Golf	-	-	-	-	-	-
8.	Zulu	2.2	3.4	1.5	2.91	3.3	2.67
9.	Quebec	4.2	2	1	1.9091	2.45	2
AVERAGE		2.35	2.28	0.94	2.33	2.68	1.74

From Table 1 it can be seen that Achievement and Bonus (FM3) is considered the lowest value because the inadequate data found in the field. Career Development (FM 2) is also considered not to have sufficient data. The factor that has the largest average value is FNM2: Relationship. Both FM 3 and FM 2 factors are omitted from the list of factors to be tested in the Reliability and Validity Test.

B. Reliability and Validity Test

Materialistic Factor: Reward and Punishment

In addition find influence factor in each research subject, this study also tested the validity and reliability of each data processing.

TABLE II. CORRELATION TEST RESULT IN FM1

		Correlations					
		YQFM1	QFM1.1	QFM1.2	QFM1.3	QFM1.4	QFM1.5
YQFM1	Pearson Correlation	1	.835**	.864**	.915**	.918**	.731*
	Sig. (2-tailed)		.005	.003	.001	.000	.025
	N	9	9	9	9	9	9
QFM1.1	Pearson Correlation	.835**	1	.524	.596	.958**	.412
	Sig. (2-tailed)	.005		.148	.090	.000	.270
	N	9	9	9	9	9	9
QFM1.2	Pearson Correlation	.864**	.524	1	.888**	.629	.607
	Sig. (2-tailed)	.003	.148		.001	.070	.083
	N	9	9	9	9	9	9
QFM1.3	Pearson Correlation	.915**	.596	.888**	1	.717*	.705*
	Sig. (2-tailed)	.001	.090	.001		.030	.034
	N	9	9	9	9	9	9
QFM1.4	Pearson Correlation	.918**	.958**	.629	.717*	1	.593
	Sig. (2-tailed)	.000	.000	.070	.030		.092
	N	9	9	9	9	9	9
QFM1.5	Pearson Correlation	.731*	.412	.607	.705*	.593	1
	Sig. (2-tailed)	.025	.270	.083	.034	.092	
	N	9	9	9	9	9	9

** .Correlation is significant at the 0.01 level (2-tailed).
* .Correlation is significant at the 0.05 level (2-tailed).

TABLE III. RELIABILITY TEST RESULT IN FM1

Case Processing Summ		N
Cases	Valid	
	Excluded ^a	

From Tabel II seen that Reward and Punishment (FM1) with 0.005 < 0.05 significance value parameter mean this is a significant correlation. From the results of the reliability test it can be seen that the Alpha value is 0.816 > 0.7. This means that it fulfills the value (sufficient reliability).



Non-Materialistic Factor: Usefulness (FNM1)

TABLE VII. RELIABILITY TEST RESULT IN FNM2

Other than Materialistic factor (FM), FNM also tested the validity and reliability. FNM 1 is Usefulness (FNM1).

TABLE IV. CORRELATION TEST RESULT IN FNM1

		Correlations											
		QFNFM4	QFNFM5	QFNFM6	QFNFM7	QFNFM8	QFNFM9	QFNFM10	QFNFM11	QFNFM12	QFNFM13	QFNFM14	
QFNFM4	Pearson Correlation	1	.842*	.868*	.830*	.837*	.865*	.857*	.845*	.852*	.854*	.876*	.859*
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM5	Pearson Correlation	.842*	1	.876*	.888*	.889*	.744	.823*	.833*	.732	.666*	.676*	.818*
	Sig. (2-tailed)	.000		.002	.001	.002	.022	.000	.000	.028	.003	.003	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM6	Pearson Correlation	.868*	.876*	1	.878*	.874*	.868*	.873*	.872*	.831*	.828*	.816*	.866*
	Sig. (2-tailed)	.000	.003		.002	.002	.000	.003	.003	.000	.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM7	Pearson Correlation	.837*	.822*	.876*	1	.778*	.864*	.822*	.832*	.732*	.698*	.616*	.862*
	Sig. (2-tailed)	.000	.001	.002		.012	.000	.000	.000	.000	.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM8	Pearson Correlation	.865*	.855*	.877*	.883*	.883*	1	.812*	.722*	.766*	.848*	.782*	.818*
	Sig. (2-tailed)	.000	.000	.002	.002	.000		.008	.024	.018	.000	.011	.008
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM9	Pearson Correlation	.857*	.822*	.876*	.826*	.816*	.812*	1	.855*	.766*	.828*	.617*	.845*
	Sig. (2-tailed)	.000	.000	.002	.000	.001	.000		.000	.017	.000	.000	.004
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM10	Pearson Correlation	.845*	.855*	.877*	.883*	.883*	.812*	.812*	1	.722*	.838*	.676*	.866*
	Sig. (2-tailed)	.000	.000	.002	.002	.000	.000	.000		.018	.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM11	Pearson Correlation	.854*	.855*	.877*	.883*	.883*	.812*	.812*	.812*	1	.889*	.889*	.889*
	Sig. (2-tailed)	.000	.000	.002	.002	.000	.000	.000	.000		.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9

Case Processing Sum		N
Cases	Valid	
	Excluded ^a	

FNM2 view output with a significance value of 0.02 > 0.05 which means there is a significant correlation. From the results of the reliability test below it can be seen Alpha value is 0.770 > 0.7. This means that it is sufficient reliability.

Non-Materialistic Factor: Spiritual FNM3

TABLE VIII. CORRELATION TEST RESULT IN FNM3

		Correlations			
		YQFNFM6	QFNFM6.1	QFNFM6.2	QFNFM6.3
YQFNFM6	Pearson Correlation	1	.976**	.915**	.959**
	Sig. (2-tailed)		.000	.001	.000
	N	9	9	9	9
QFNFM6.1	Pearson Correlation	.976**	1	.854**	.918**
	Sig. (2-tailed)	.000		.003	.000
	N	9	9	9	9
QFNFM6.2	Pearson Correlation	.915**	.854**	1	.794**
	Sig. (2-tailed)	.001	.003		.011
	N	9	9	9	9
QFNFM6.3	Pearson Correlation	.959**	.918**	.794**	1
	Sig. (2-tailed)	.000	.000	.011	
	N	9	9	9	9

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Spirituality (FNM3) show output with a significance value of 0.001 > 0.05 considered significant correlation. It is said by Pearson Correlation, the value that is connected between each variable with asterisk has significant correlation between connected parameters.

Non-Materialistic Factor: Relation (FNM2)

TABLE VI. CORRELATION TEST RESULT IN FNM2

Case Processing Sum		N
Cases	Valid	
	Excluded ^a	

		Correlations											
		QFNFM4	QFNFM5	QFNFM6	QFNFM7	QFNFM8	QFNFM9	QFNFM10	QFNFM11	QFNFM12	QFNFM13	QFNFM14	
QFNFM4	Pearson Correlation	1	.840*	.868*	.830*	.837*	.865*	.857*	.845*	.852*	.854*	.876*	.859*
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM5	Pearson Correlation	.840*	1	.870*	.888*	.888*	.744	.820*	.833*	.732*	.666*	.676*	.818*
	Sig. (2-tailed)	.000		.002	.001	.002	.022	.000	.000	.028	.003	.003	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM6	Pearson Correlation	.868*	.870*	1	.830*	.837*	.865*	.857*	.845*	.852*	.854*	.876*	.859*
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM7	Pearson Correlation	.837*	.822*	.876*	1	.778*	.864*	.822*	.832*	.732*	.698*	.616*	.862*
	Sig. (2-tailed)	.000	.001	.002		.012	.000	.000	.000	.000	.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM8	Pearson Correlation	.865*	.855*	.877*	.883*	1	.812*	.722*	.766*	.848*	.782*	.818*	.862*
	Sig. (2-tailed)	.000	.000	.002	.002		.008	.024	.018	.000	.011	.008	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM9	Pearson Correlation	.857*	.822*	.876*	.826*	.816*	1	.855*	.766*	.828*	.617*	.845*	.845*
	Sig. (2-tailed)	.000	.000	.002	.000	.001		.000	.017	.000	.000	.004	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM10	Pearson Correlation	.845*	.855*	.877*	.883*	.883*	.812*	.812*	1	.722*	.838*	.676*	.866*
	Sig. (2-tailed)	.000	.000	.002	.002	.000	.000	.000		.018	.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9
QFNFM11	Pearson Correlation	.854*	.855*	.877*	.883*	.883*	.812*	.812*	.812*	1	.889*	.889*	.889*
	Sig. (2-tailed)	.000	.000	.002	.002	.000	.000	.000	.000		.000	.000	.000
	N	9	9	9	9	9	9	9	9	9	9	9	9

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).



TABLE IX. RELIABILITY TEST RESULT IN FNM3

Case Processing Sum		N
Cases	Valid	
	Excluded ^a	
	Total	

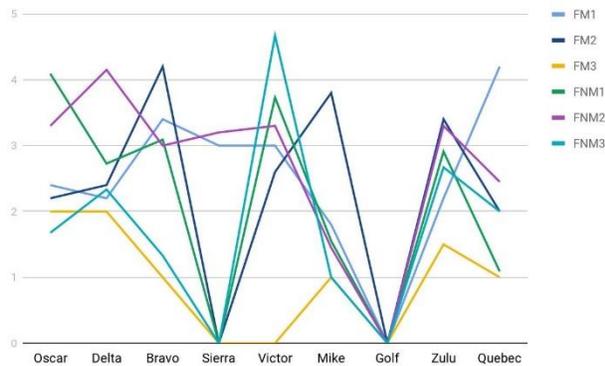
From the results of the reliability test above, it can be seen that Alpha value is $0.876 > 0.7$. This means that it is sufficient reliability.

IV. CONCLUSION AND SUGGESTION

A) Conclusion

Based the study, it can be concluded that the highest value in object of research, in this case the software developers at PTIPD UIN Sunan Kalijaga is the Relationship a Non-Materialistic Factor 2 spread throughout the population.

TABLE X. DISTRIBUTION VALUES FROM 6 FACTORS



Also found the most influence factor for each research object. Oscar with the most influencing factor is Non-Materialistic Factor 1, Usefulness with 4,091. Delta with the most influencing factor is Relationship or FNM2 with 4.15. Bravo with the most influential factor in developing software is Relationship with 3,091. Sierra with 3.2 on Non-Materialistic Factor 2 Relationship. Victor with is most influenced by Non Materialistic Factor 3 Spirituality with 4.67, become the highest value of all data. Mike with 2.55 in Non-Materialistic Factor 1 Usefulness made the most influential factor for Mike to develop software. Golf does not get value because the data is 0. In Zulu, the factor

that most influences him is Usefulness with a value of 2.91, while Quebec get high score 4.2 in Reward and Punishment.

From the explanation above, it can be seen that the highest score factor is the Non Materialistic Factor 1, that is Usefulness. It makes FNM1 the most influencing factor for programmer performance in the software development process.

B) Suggestion

In this study, researchers realized the lack of deep observation. Suggestion for the next research:

1. Validity Test per informant can be a requirement in order to show validity data per object.
2. In-depth research at the time of the initial interpretation using qualitative research methods will produce more complete information and data.
3. Need to do a survey similar to a wider object.
4. Further research not just research in the implementation phase (coding).

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