

Self-Actualization Measurement on Non-English Coastal Students' Achievement: Rasch Model Analysis

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ABSTRACT

The measurement of self-actualization can accommodate facilitators to know their students' learning achievement in English. The dynamism of high and low self-actualization through their origins will give impact on learning processes. Their abilities to seize the best achievement in learning correspond to their multiple talent. The objectives of this study are: (1) describing those whose self-actualization is high will have satisfactory achievement in learning English, and (2) deciphering those whose self-actualization is low will have poor achievement in English learning. The researcher used descriptive qualitative. This research was conducted in Universitas Maritim Raja Ali Haji (UMRAH), located in Riau Archipelago in December 2017. The subject was the first-year of non-English students. The data were in the form of qualitative and quantitative taken from documents and questionnaire to know their self-actualization levels. The researchers analysed the data by using Rasch model measurement approach. The results are: (1) those whose self-actualization is high (60.71%), come from rural areas (36.90%), from urban areas (23.81%), female participants (47.62%), and male (13.10%). They can maximize their potentials and abilities to reach the satisfactory achievement in learning English; and (2) Those whose self-actualization is low (38.10%), come from rural areas (17.86%), from urban areas (20.24%) female participants (33.33%), and male (4.76%). They cannot develop their potentials and abilities bringing them about to attain the poor achievement in learning English. Through this way, the facilitators will find it easy to reflect on what should be done in their classes in the future.

Keywords: self-actualization; achievement; non-English coastal students; Rasch model

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INTRODUCTION

Learning processes have been designed for students in order to engage, study, and activate themselves to a certain material which is being taught. Through those processes, the designed outcomes can be successfully obtained or otherwise. To engage them in meaningful learning processes, they need a very experienced active facilitator. His or her duties as a facilitator are not a piece of cake. His or her reflections on learning processes will be comprehensible input for learning outcomes formulation later on. The way in which the students engage in the learning processes is dynamic. Some are able to show their multiple talents in learning certain materials. Some others are at the level of average. The rest need to be highly boosted. The different levels in learning processes give the facilitator inspiration what to do and how to do in a class. The different levels of students' engagement can be measured through their self-actualization reflected on their learning achievement.

Maslow views self-actualization as the first level needs of his design of the hierarchy of needs referring to someone's desire to be the best that she or he is able to by enhancing all of her or his abilities and talents. Pajouhandeh (2013) states that self-actualization is the tendency of actualizing what people desire as self-fulfillment potentially. Self-actualization is a motivated individual's capability to develop all the abilities and talents to make her/his potential talents realize (Agust, Ngadiso, & Asib, 2012). In a learning context, the hierarchical needs also include the cognitive needs. These needs boost an individual to desire knowledge and perception of the world around him or her (Pajouhandeh, 2013). Prospective teachers and parents can help their students and children seize the self-actualization through enthusiastic role models and mentors. Through this way, they are able to develop their multiple potentials to step and reach self-actualization levels (Rawat, 2015). Besides, learners whose self-actualization is high will have no a serious problem in learning English course even though they are non-English students. They will always have a high desire to seize better understanding of learning and they will always show their stunning capability to achieve the best scores. They will not cease after they get them. Their strong impulse to keep obtaining the best in their lives, especially in learning English is incessant.

Moreover, the concept of self-actualization may be equivalent to the concept of general creative personality factors that pervade and influence all behaviors Maslow (1971) in (Kitcher, 1997). There are three kinds of behaviors: awareness, spontaneity, and intimacy Berne in (Bíró, 2009). Then, Stewart – Joines (2001: 273-283) in (Bíró, 2009: 23) describe them as follows: (a) Awareness: the ability to receive pure and deep impressions without interpretation, like a newborn; (b) Spontaneity: the whole range of feelings, thoughts and attitudes, as well as the capability of free choice among the ego-states; and (c) Intimacy: a time-structuring method in which individuals express uncensored and authentic feelings and demands toward each other.

Maslow hierarchy of needs of a five-stage model expanded adds cognitive and aesthetic needs (Maslow, 1970a) and also transcendence needs (Maslow, 1970b). Maslow develops the alterations of the original five-stage model through an eight-

stage model; both developed during the 1960s and 1970s: (1) Biological and physiological needs (2) Safety needs; (3) Love and belongingness needs; (4) Esteem needs; (5) Cognitive needs; (6) Aesthetic needs; (7) Self-actualization needs; and (8) Transcendence needs. Through a hierarchy of needs theory, a major contribution has been made to teaching and classroom management in schools (Maslow, 1962). Maslow views the complete physical, emotional, social, and intellectual qualities of an individual and how they affect learning. A student can meet their cognitive if they have already fulfilled their basic physiological needs like food for the solution of their hungry feeling, sleep for taking a rest at night, water for the solution of their thirsty feeling, etc. If they cannot fulfill their basic needs, they cannot also concentrate on learning any material. The safe and accepted feelings both emotionally and physically in a classroom to deal with the learning process and reach full potential must be obtained by them. Teachers as facilitators should create a conducive and supportive learning atmosphere in order that can feel to be valued and respected in the classroom (McLeod, 2018).

Dealing with this research, some earlier researches have been done. Okech & Chambers (2012) who investigate 90 junior and senior psychology students at a predominantly Black university in Texas mentioned that there is significant difference on self-actualization between Black female and male university students. Black female university students reported having more self-actualization than Black male students. Chandaliya (2015) who investigates gender differences in self-actualization among Rajkot district college students found that female college students have higher self-actualization compared with male. He concluded that gender differences play significant effect on self-actualization. In contrast, who conducts a research on 400 boys and girls students primarily from Science and Arts belonging to five co-educational schools in Metropolitan City Calcutta discovered that the students whose self-actualization measurement is high are high creative students, and those whose self-actualization measurement is low are low creative students. She revealed that boys and girls are having the same criterion measure of self-actualization (Panda, 2015).

Emanating from coastal rural and urban islands and working-class or “fishing-class” (the researchers use the “fishing class” term because 95% of Archipelago Riau areas is ocean and most people fish for a living) families around Riau Archipelago does not mean that learners have no self-actualization. What makes their self-actualization different in level is their desires. Their desires to have better lives against poverty eradication are pursued through education. Making poverty become over is the world concern today and it is the biggest global challenge. Sustainable development, particularly for developing countries is an indispensable requirement (IOC/UNESCO, IMO, FAO, & UNDP, 2011). Education is another sustainable development which is believed to be able to reduce poverty. The opportunity to have a better education is a great bonus for non-English coastal students both live in rural and urban areas. However, the quality of the education which they will elicit depends on how high their self-actualization is. The higher self-actualization they have, the stronger desire they belong to learn and study English materials very seriously in order to get a better achievement. The lower self-actualization they own, the weaker impulse they have and the poorer achievement they might seize. Furthermore, those whose self-

esteem (the fourth level of the Maslow's hierarchy needs) is low will have no progress academically at an optimum rate until they are able to strengthen their self-esteem (McLeod, 2018).

To measure how high and how low the students' self-actualization in learning English course of the non-English coastal students, Rasch model will be used in this research. Rasch model in the development of social science measures is a response to the various weaknesses of the Classical Test Theory (CTT) and Rasch model can be used as a method of restoring data in accordance with its natural condition (Sumintono & Widhiarso, 2013). Rasch measurements can be said as techniques in which the scale of questionnaire measurements or tests can be implemented in reliable research instruments to measure human nature and have the same function as used in instruments in science (Boone, Staver, & Yale, 2014). The present study has been discussing researchers' judgments on students' achievements in learning English. This research is focused on how the non-English coastal students both from rural and urban areas whose self-actualization is high and low view English course reflected on their achievement. The other focus is on the students' adequate learning experiences which lead them to have good ability to learn English viewed from sexes. Besides, English learning in the university level has been stated and regulated in Government Regulation of the Republic of Indonesia Number 19 the Year 2005 about the National Standard Education. It is said that higher education unit level curriculum is required to cover education subject religion, civic education, Indonesian, and English.

METHOD

In this study, descriptive qualitative was used in its research design. This research also used the quantitative data to analyze the participants' self-actualization through the questionnaire. There were 87 participants consisted of 70 female students and 17 male students. They are the first-year students of non-English students in the academic year of 2017/2018. Those students come from rural and urban coastal areas studying one-semester English course at Universitas Maritim Raja Ali Haji (UMRAH), which is located in Riau Archipelago. This study was conducted in December 2017. The researchers used two instruments to collect the data needed. The data were in the form of qualitative data taken from the questionnaire to know the students' self-actualization levels, and documentation was used to know their achievement in learning English.

One variable, students' self-actualization, was measured in this study. Participants' demographic information which was obtained conceived of sex and origin. A Likert scale consisting of four categories of response, adapted from Jamieson (2004), was used. In this study, Rasch model was used to measure questionnaire items' validity based on Sumintono & Widhiarso (2013) who say that the accepted score of Outfit Mean Square (MNSQ) $0.5 < \text{MNSQ} < 1.5$, the accepted score of Outfit Z-Standard (ZSTD) $-2.0 < \text{ZSTD} < +2.0$, and the score of Point Measure Correlation (Pt Mean Corr) $0.4 < \text{Pt Mean Corr} < 0.85$. Based on those criteria and the calculation of questionnaire items' validity test, therefore, the questionnaire can be used as one of the instruments in this study.

In this study, the researchers used Rasch model software called Winsteps version 3.73 to analyze the raw data gathered from the questionnaire. The raw data were in the form of ordinal scale which was converted into interval scale. A Rasch model solves the problem of data intervention by accommodating logit transformation or applying the logarithm to the odd ratio function (Sumintono & Widhiarso, 2013). In the summary statistics, it can be seen that the Cronbach alpha (KR-20) person raw score "test" reliability was 0.89 with valid responses of 98.7% and there were 3 lacking responses.

FINDINGS AND DISCUSSION

FINDINGS

The measured person score was +0.90 logit which means that respondents in this research chose 'strongly agree' mostly through the given items. The instrument was able to be used to measure students' self-actualization. The score of the INFIT MNSQ of the person table was 1.02 and the score of the OUTFIT MNSQ was 1.00. In addition, the score of the INFIT ZSTD of the person table was -.1 and the score of the OUTFIT ZSTD was -.2. Both scores closely reached score 0.0. It means that the quality of the research item was good. The reliability test of the measured person was 0.68. It can be concluded that the research instrument test was fair in the category. The person separation score was 1.45. The score of "H" formula to get the separation was 2.27. It was rounded below and the result was 2, which means that there were two groups of respondents whose self-actualization was high and low. The obtained score corresponded to the research objective to measure the students' levels on self-actualization whether it was high or low which took the English course while they were non-English students.

In this research, the Cronbach Alpha (kr-20) which measured the interaction between person and item was 0.89. it is very good in the category. The reliability test of the measured item was 0.96. It can be concluded that the research instrument test was excellent in the category and the instrument fulfilled the requirement of the Rasch model. The instrument was able to be used to measure students' self-actualization. Besides, the score of the INFIT MNSQ of the item table was 1.00 and the score of the OUTFIT MNSQ was 1.00. In addition, the score of the INFIT ZSTD of the item table was -.2 and the score of the OUTFIT ZSTD was -.1. Both scores closely reached score 0.0. It means that the quality of the research item was good. The item separation score was 4.72, meaning that the items that had been used were able to separate the students' ability.

The subject of this research was the college students of Universitas Maritim Raja Ali Haji which were in total 87 students. They could be divided into two groups of the demographic information i.e. sex and origin. There were 17 (19.54%) male students and 70 (80.46%) male students involved in research. The number of students who come from the rural areas was 49 (56.32%) students and from the urban areas were 38 (43.68%) students.

Table 1 Participants' Demographic Information

No	Demographic information	Total number	Percentage
1	Sex		
	Male	17	19.54%
	Female	70	80.46%
2	Origin		
	Rural	49	56.32%
	Urban	38	43.68%
	Total	87	100%

Students' self-actualization measurement; through the analysis result of the Wright map of the person map in figure 1, it can be summed up that the whole participants, 87 students, were above the item logit average (+0.00 logit). By virtue of the Wright map in figure 1, it shows that the left column is the person column and the right column is the item column. The items which were above item logit average (+0.00 logit) mean that they were considered as difficult to be accepted by participants and those which were below average were considered as easy for them.

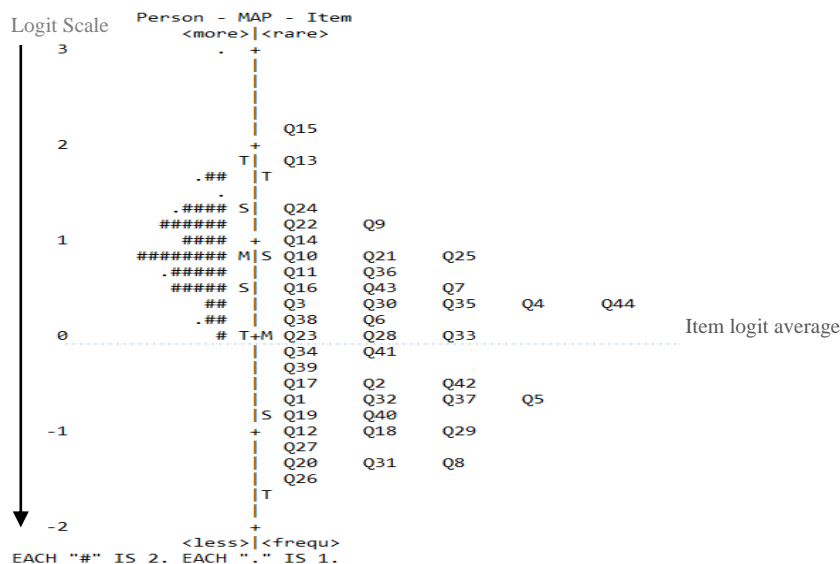


Fig. 1: Wright Map of items

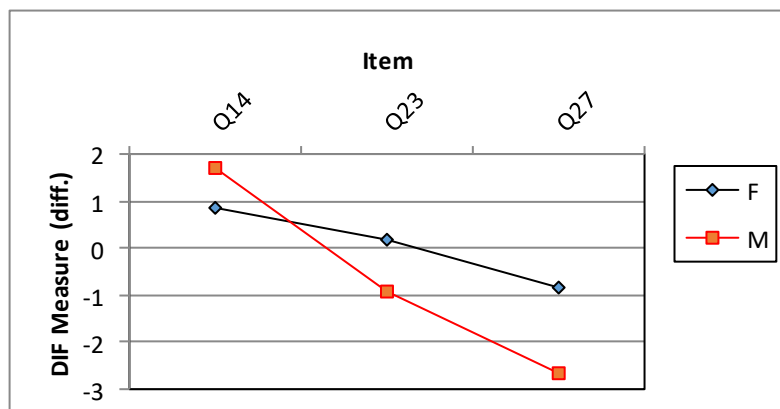


Fig. 2: Person Different Plot

Figure 2 explains the item 14 which the male students found it hard to choose ‘strongly agree’ or ‘agree’ and they found it easy to choose ‘strongly agree’ or ‘agree’ with the item 23 and 27. Otherwise, it describes the different perspective which the female students have. The items 23 and 27 were hard to be chosen as ‘strongly agree’ or ‘agree’ with them. They even found it easy to choose ‘strongly agree’ or ‘agree’ with the item 14. It can be said that the students both male and female had the different perspective on item 14, 23, and 27. The first item dealt with their fear on becoming incompetent person. The second one dealt with their selfishness on overcoming problem(s). The last one dealt with a talent they have.

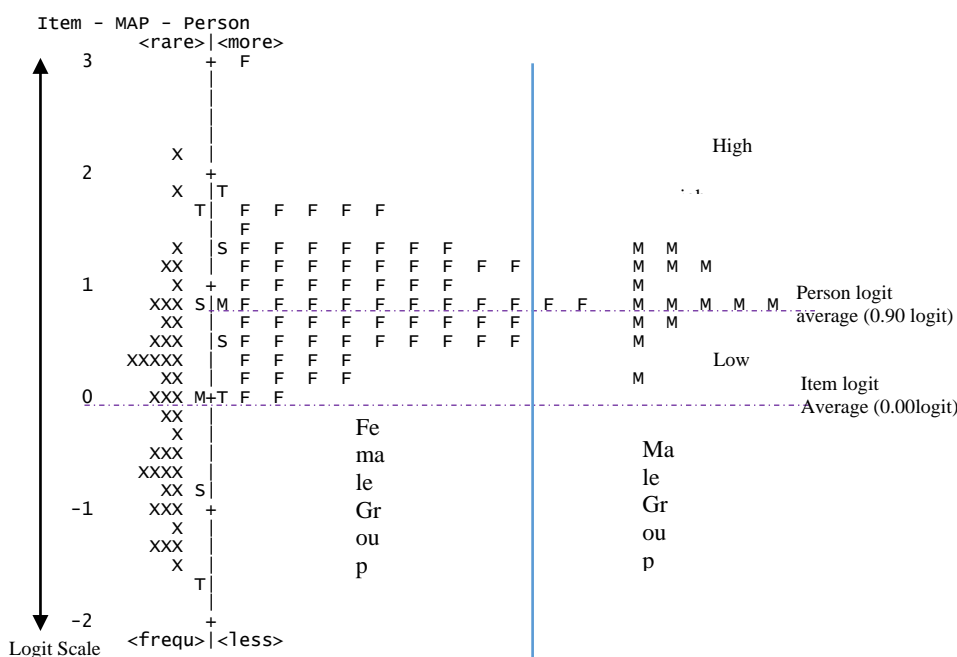


Fig. 3: Wright Map through the different sex

Figure 3 describes the self-actualization measurement through the different sex. It says that the participants whose self-actualization was high by virtue of the sex, female, had 47.62%, while the male participants had 13.10%. On the other hand, 33.33%, female participants, and 4.76%, male participants, got low self-actualization. In addition, based upon the summary statistics of Rasch model, there were 3 participants who could not be measured because of lacking responses. Therefore, the valid responses for this research were 98.7%. Through the percentage of each group above and the description of the summary statistics, it can be concluded that there was a significant number of participants both female and male who obtained high and low self-actualization.

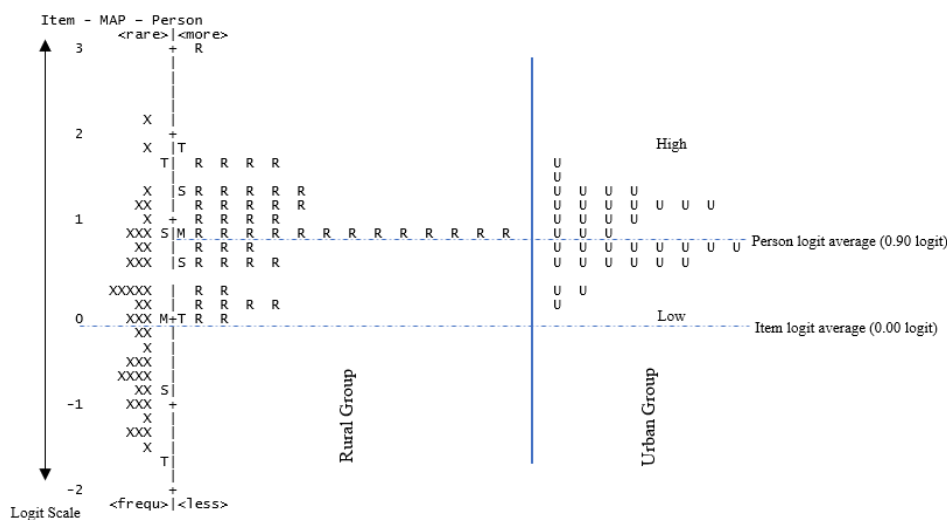


Fig. 4: Wright Map based on the respondents' origin

As shown in figure 4, it explains that the self-actualization measurement through the different origin was divided into two levels i.e. high and low. The female participants who are from rural areas surrounding Riau Archipelago had a high level of self-actualization for 36.90%, while the male participants got 23.81%. Otherwise, the participants who had a low level of self-actualization were 17.86% for female and 20.24% for male. These statements are supported by the summary statistics of Rasch model which states that 3 participants could not be measured and there were 98.7% valid responses due to missing data. Therefore, it can be emphasized that there was a significant number of participants, female and male, who come from rural and urban areas surrounding Riau Isle, who elicited high and low self-actualization.

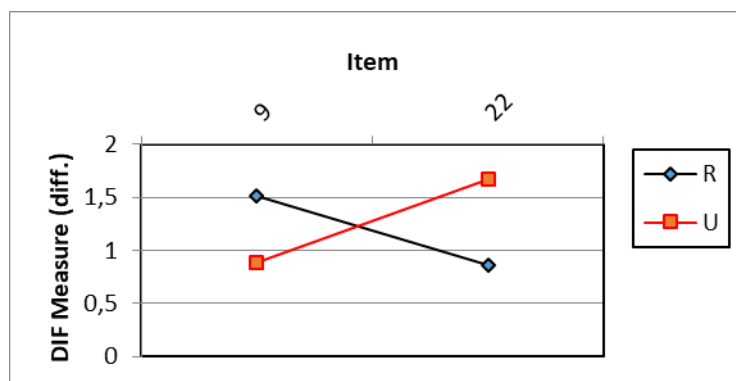


Fig. 4: Person different plot based upon the respondents' origin

Figure 5 deciphers that the urban students found it hard to choose 'strongly agree' or 'agree' with the item 22 and they found it easy to choose 'strongly agree' or 'agree' with the item 9. Besides, this figure also describes the different items which the rural participants chose. The item 9 was hard to be chosen as 'strongly agree' or 'agree' with them. They even found it easy to choose 'strongly agree' or 'agree' with the item 22. It can be concluded that the participants both coming from rural and urban areas surrounding Riau Archipelago had the different

perspectives on choosing the self-actualization items to make 'strongly disagree' or 'disagree' and 'strongly agree' or 'agree'. Their localities influence them much in responding the items.

DISCUSSION

High and low self-actualization can affect the students' learning processes. It is because the basic needs like food, drink, clothes, rest, etc. are a must to fulfill. If they do not have a problem with those basic needs, they can go to the higher level of self-actualization. The students can have different levels of it. Their origins even do not relate to the levels. Those who come from coastal rural areas surrounding Riau Archipelago are able to have low and high self-actualization potentially. It can happen to those who emanate from coastal urban areas. What determines them to have high and low self-actualization is on how adequate they fulfill and pass the basic needs of it. The fulfillment of the basic needs can give significant impact on seizing the high level of self-actualization.

The previous research which was conducted by Sharma & Anand (2017) reveals that there is significant difference in the self-actualization among males and females. They continue that males fall in the category of low self-actualization for 61.67% and the other 39.44% is for females who fall in the category of low self-actualization. Males fall in the category of high self-actualization for 7.78%, whereas females have 16.11% in the category of high self-actualization. This research views the same result. Those (female group) whose self-actualization was high had 47.62%, while the male participants had 13.10%. In addition, those (male group) who had low self-actualization went to 33.33%, whereas female participants came to 4.76%. The different percentage above shows how sex also influences the participants in learning English and this also leads them to achieving different achievement by enhancing their multiple talents and potentials.

The research result that Rawat reveals (2015) is that through the self-actualization wise analysis of gender, the scores show that the mean score of the female self-actualization (166.80%) is slightly higher than that of the male (165.74%) for the B.Ed teacher trainees. The difference of the percentage is only 1.06%, he concludes that gender has no significant influence on self-actualization of Teacher Trainees. This research does not seem to support the above findings. If the participants are involved in different settings, the levels of the self-actualization will be significantly different between the female and male participants because those whose self-actualization is high, will struggle hard to utilize their potentials and multiple talents to make their desire come true.

Panda (2015) states that an important finding of the present study is that the students whose creativity is high, are significantly high on self-actualization measures, and those whose creative is low, are low on self-actualization measure. The characteristics of self-actualized students are spontaneity, autonomy, openness, problem centering, democratic, tolerance of ambiguity, philosophical humor in nature. They should not be desperate and mad for their failure in other than the field of their special interest. This research also measures the students' self-actualization through several indicators. Among others are perceiving reality

more accurately and objectively, being spontaneous, being problem-centered, being independent, having sense of humor, accepting others, and being creative. The students who fulfil those indicators can have high self-actualization and can give significant impact on their learning achievement in English.

Obtaining high self-actualization influences the students much on learning. Through this way, they will be capable of boosting their abilities, potentials, and talents which they have to make them come true. The previous research about self-actualization measurement states that the students having high self-actualization referred to individual's desire to become the best that they are able to – that is to develop all the abilities and talents that they possess to their fullest potential (Agust, Ngadiso, & Asib, 2012). The result of the study shows that those whose self-actualization was high could have better scores on learning reading than that of those whose self-actualization was in the low level. They even can utilize and make their abilities, potentials, and talents become much more creative and effective. It has been defined as using one's capabilities in the most creative and effective way (Ordun & Asli, 2017). Through the measurement of self-actualization, this research also reveals that those who come from coastal rural areas have higher percentage of high self-actualization than that of those who emanate from coastal urban areas. This is dominated by female participants and the difference is on 34.52%. In this case, they are able to maximize their potentials and abilities to reach the satisfactory achievement in learning English.

In addition, instead of having high self-actualization, this study also reveals that the participants who are from rural areas surrounding Riau Archipelago have lower self-actualization compared to those who come from urban areas. The female participants are still dominated by having this level of self-actualization. Previous research states that the lower self-actualization they own, the weaker impulse they have and the poorer achievement they might seize. Furthermore, those whose self-esteem (the fourth level of the Maslow's hierarchy needs) is low will have no progress academically at an optimum rate until they are able to strengthen their self-esteem (McLeod, 2018). The statement supports the result of this study, i.e. the participants who are having low self-actualization cannot develop their potentials and abilities bringing them about to attain the poor achievement in learning English. Thus, it is necessary to measure the students' self-actualization at the beginning to know how high and low their self-actualization is and how serious they engage themselves in learning processes of English to reach better achievement.

CONCLUSION

To sum up, students' self-actualization can determine a successful learning achievement in English. Through its measurement of how high and low they get will influence their learning processes and achievement as well. Their origins whether they are from rural or urban coastal areas cannot be set apart and are becoming a challenge for them affecting their learning experiences as well. Different sex indicates its influence. Dominant female and male students with high and low self-actualizations in a class can make it unstable. It can result in class tension and stress. The low self-actualization does not mean the worse

achievement. That can be early detection for English teachers to have meaningful reflection on what should be designed in their classes in the future. Through the reflection, those whose self-actualization is low are able to boost to be high, even though it will take time. Those who are with multiple talent can trigger their friends to have better achievement by giving a fateful opportunity in any occasion in academic settings. Self-actualized academic atmosphere can give significant impact on students' learning achievement.

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