The Adversity Quotient Between Teacher Professionalism on Student’s Autonomous Learning

Fatimah Saguni¹, Hamlan², Gusnarib³

Abstract

The purpose of this study was to determine the AQ correlation between teacher professionalism and student autonomous learning at Madrasah Aliyah, South Banawa District, Donggala Regency, Central Sulawesi, Indonesia. The research design used a quantitative approach. The number of research samples was of 36 students and 19 teachers with a simple random sampling technique. The main data collection was performed by means of a questionnaire. Product moment correlation was employed in data analysis, by checking the normality and timeliness of the data. The first finding revealed no relationships \((r= 0.073)\) between AQ and teacher professionalism. While the second finding showed a relationship \((r= 0.961)\) between the AQ between teacher professionalism and student autonomous learning. This finding can likely provide evidence as references for educational institutions, particularly for those at the Madrasah Aliyah level, educators, and the government to increase the AQ between teacher professionalism and student autonomous learning so that it can enhance student achievement and enable supports for national developments in the future. It is essential to provide positive supports given the low professionalism of teachers in remote areas, albeit the potential for student’s autonomous learning also deserves deliberation as a form of social justice for all Indonesian people.

Keywords: Adversity quotient, Teacher Professionalism, Autonomous Learning

Introduction

Adversity quotient (AQ) is the most significant element in assessing a person’s ability to succeed in a particular career (adversity intelligence). The literature states that in the realm of education, the performance of teachers, workers, and students in the process is strongly influenced by factors such as AQ and resilience to failure (Villagonzalo, 2013; Singh & Parveen, 2018; Puspitacandri et. al., 2020; Sigit et. al., 2019; Wang et. al., 2021; Zhao et. al., 2021). The AQ is the key point in helping teachers, students, and staff subdue problems or challenges they may encounter within their work in efforts to achieve the initially set goals related to education. Numerous handicaps most likely emerge during the endeavors to achieve those goals.

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AQ is a factor to determine a person's level of success in life. Individuals' capacity to overcome any hurdles or issues in their lives are evaluated using AQ (Stoltz, 2000). The employee holding a high AQ is a diligent worker equipped with a solid self-control. As a result, close monitoring over work completions is no longer necessary. Regardless of their job, one's AQ will always correspond with one's performance (Ablaña & Isidro, 2015; Hong, 2020; Phoolka & Kaur, 2012; Runta et. al, 2019). In general, when someone's hardship quotient is intense, likewise his or her performance. Alternatively, once someone has a poor ability to cope with predicaments; hence, his or her performance is severely affected.

Recent studies revealed that students' self-reliance in fulfilling their demands or goals well is referred to as autonomous learning (Du, 2020; Edward Flores, 2021; Mehdiyev, 2020). In this instance, the student is capable of managing his or her learning, determining how to learn successfully, executing learning tasks and conducting learning activities effectively on his or her own. In the realm of education, self-reliance is an extremely essential element since students who scarcely hold self-determination to study will find it strenuous to take charge of all aspects of their lives, particularly in the learning process. Furthermore, children are unable to make their own choices and unequipped with thoughts, ideas, and efforts in response to every presented issue due to their reliance on others, particularly on his parents and classmates, as well as inclination to rely on people at all times (Hurlock, 1980).

Children equipped with self-dependent learning capacity may likely be identified by their learning activities; they administer learning activities on their own initiatives and hardly require instructions during learning process (Khulaifiyah et. al., 2021). It is pivotal to perceive the qualities of self-reliance in learning to determine whether or not a learner has this ability (Thomas & Rohwer, 2020). Autonomous learning is a situation wherein individuals engage in autonomous learning activities without relying on others and exercise their own free choices and accept personal responsibility for addressing barriers to their learning (Cao, 2013). When students actively manage their work, assess their progress, and subsequently plan for future learning; consequently, they acquire learning independence. Additionally, students most likely wish to be active participants in the educational process (Du, 2020; Gairola, 2019).

Performance in an organization is most likely enhanced if the staff are highly motivated, creative-minded when faced with challenges, contented with their jobs and convenient with their working environment (Budiharso & Tarman, 2020). Similarly, the school administrative staff of education
also play the key roles (Tubosun & Umar, 2016). Moreover, the frequent hurdles or challenges the administrative staff encounter in the line of duty most likely emerge due to internal as well as external factors such as work facilities and pre-retirement preparation, working environment conditions, and so forth (Nakpodia, 2010; Shah, 2014; Tus, 2020). Administrators working in distant regions as in Central Sulawesi are also included in this category of staff members.

South Banawa Sub-district is a subdivision of the Donggala Regency in Indonesia. This sub-district is located approximately 27 kilometers south of the capital city of Donggala Regency, which is located in the province's northern area. Wataru village is where the administration headquarter located. This sub-district comprises the most villages in Donggala Regency, of 114 villages in total. As was the case at Madrasah Aliyah School, the teaching and learning process in this region is beset by great deal of barriers and complexities, both in terms of facilities and infrastructure. Consequently, achieving the school’s educational goals is complicated for the school elements consisting of teachers, students, and administrative staff. Previous researches investigating this topic have yet been found, particularly regarding the relationship between AQ and teacher professionalism within students' autonomous learning in remote areas.

Several previous studies were conducted with the same theme -- investigating the effect of AQ on teacher performance (Kartikasari & Wiarta, 2021; Sanusi, 2017; Sekreter, 2019; Sukardewi et al., 2013). While other literature surveyed the impact of AQ on the quality of graduates of educational institutions (Puspitacandri et al., 2020), and the use of AQ in strong leadership (Tripathi, 2011). The research novelty is reflected in the relationship of AQ; thereby the impact emerged on students' autonomous learning through teacher professionalism. It is intriguing that the research scrutinizes the role of teacher professionalism within students’ autonomous learning located in rural schools supplied with limited facilities, infrastructure, and the internet. In this context, the researcher emphasizes AQ described as an aspect for measuring the abilities of teachers and students at rural schools. Autonomous learning is a learning system designed for students supplied initiatives, motivation, and responsibility for learning things in their preferred way. While professionalism is the skills and abilities of teachers in performing their duties as educators despite the existing limitations in rural areas. Previous studies found that school location has a significant impact on students' learning motivation and academic achievement (Owoeye & Yara, 2011; Lamb, 2012). The findings indicated that the students at urban areas acquired greater academic achievement than those at rural areas. It is noted that in this case, the professionalism of teachers can most likely
encourage students to improve their students' academic performance. Unfortunately, rural schools are less captivating to professional teachers; therefore, serious problems concerning educational inequality emerge (Yang et al., 2019). The poor quality of rural school education correspondingly results in unfavorable conditions for schoolchildren graduated from rural schools to enroll in higher education. This creates serious problems in the socioeconomic development of rural areas (Yapparova & Kuznetsova, 2021). A recent study found that the development of teacher professionalism using the AQ learning method increased students' autonomous learning (Al-Busaidi & Al-Seyabi, 2021; Jodaei et al., 2021; Yazdani & Ghasedi, 2021).

The Covid-19 pandemic situation has prompted teachers to hold greater professionalism in applying autonomous learning so that learning remains effective. The implementation of student autonomy provides opportunities for students to think creatively, confidently, and responsibly so that students' academic achievements are expected to be better. Therefore, it is crucial to explore this problem and identify the AQ between teacher professionalism and student autonomy learning with a quantitative approach to determine the correlation among AQ, teacher professionalism and student learning independence in rural areas. The authors' hope is to find a promising solution for a better quality education. Based on the presented literature review, the research concentrates on looking into the AQ between Teacher Professionalism on Student's Autonomous Learning at rural schools. This research is expected to reveal the educational gap that occurs in AQ between teacher professionalism and student autonomous learning in rural areas.

**Research Questions**

Based on the background of the problem, the research focuses on three topics; namely AQ, teacher professionalism, and autonomous learning students. From these three topics, the researcher formulated three questions as follows:

1. Is there any relationship between AQ and Teachers Professionalism at Madrasah Aliyah Donggala?
2. Is there any relationship between AQ and autonomous learning at Madrasah Aliyah Donggala?
3. Is there any interaction among AQ, Teachers Professionalism, and autonomous learning at Madrasah Aliyah Donggala?
Hypothesis
There are three hypotheses shown to test the relationship between the variable of X and Y. The problems tested in this study are;

Ha₁: There is a correlation between AQ and Teachers Professionalism of Madrasah Aliyah Donggala Teachers

Ha₂: There is a correlation between AQ and autonomous learning at Madrasah Aliyah Donggala

Ha₃: There is interaction between AQ, Teachers Professionalism, and autonomous learning of Madrasah Aliyah Donggala

Literature Review

Adversity Quotient
AQ is an individual’s ability to observe and process difficulties with their intelligence so that adversities turn into challenges to be solved by the individual. Four main characteristics of AQ provide the basis for the organization of AQ measurement tools in children; namely, (1) Control dimension is related to a person's slow or spontaneous reaction to a problem; (2) Origin, ownership, and size of a person's ownership; (3) Reach is regarded as a quantity facilitating a person's existence by reducing the handicap level that surrounds him; (4) Endurance that shows how a person perceives adversity (Stoltz, 2000).

Previous studies discovered factors that influence the formation of AQ. The first factor is Adversity and Competitive Quotient. Individuals dealing with pressures or work pressures will likely hold low intelligence because of a lack of competitiveness; thus, it leads to the loss of the ability to create opportunities in the midst of problems (Singh & Sharma, 2017). The second factor is productivity positively correlated with employees performance. Thus, one's constructive reaction to a problem will help improve performance. Conversely, one's destructive response will impair performance (Bautista et. al., 2016). The third factor is individuals equipped with strong motivation to invent opportunities amid adversity; i.e, highly-motivated individuals shall attempt to solve problems by manipulating all available skills (Susanto & Sofyani, 2019). The fourth factor is people supplied with excellent resilience and willingness to take risks in contrast to their performed activities. For instance, those who possess a high AQ are supposedly better at producing constructive responses once they encounter complicated circumstances (Shohib, 2013). The fifth factor is great adversity intelligence by which someone attempts to solve problems by means of
concrete actions. For instance, despite the adversity, someone attempts to change varied parts of his/her life to mitigate problems from worsening and affecting the other parts of their life (Singh & Sharma, 2018). The sixth factor is Perseverance or someone’s ability to produce self-endurance amid an adversity should always be rewarded. In terms of learning, someone equipped with positive reactions shall learn a lot and gain greater success compared to the one who shows pessimism (Phoolka & Kaur, 2012; Sereig et al., 2018).

Research conducted by Suprapto et al. (2021) found a relationship between the factors that affect AQ with the teacher's work ethic. The findings reveal that if teachers hold sound traits and attitudes, beliefs, motivations, personality, culture, family, and curriculum; consequently, their work ethic should intensify and dispense benefits for their lives. Wang et al., (2021) surveyed AQ students and analyzed the factors that influence them. The results revealed the average score of students’ AQ was moderate. In other words, they explained that students are most likely self-caused of the adversity; they attributed the causes of learning handicaps to themselves in addition to other triggers like psychosocial and cultural problems. Another study discovered a significant effect of AQ on students' ability to complete tasks given by the teacher (Hulaikah et al., 2020). The literature finds AQ's contribution to teacher performance; i.e, the amount of AQ's contribution to teachers performance in completing their duties is the key to improve education quality (Kartikasari & Wiarta, 2021).

**Teacher Professionalism**

According to Yamin (2007), professionals are people in pursuit of work on the basis of knowledge, abilities, methods, and processes based on intellectual abilities. A professional holds special abilities that enable him to take responsibilities and perform duties to the best of his ability. In the field of education, the management of teacher professionalism is a collection of functions, obligations, and responsibilities based on abilities obtained through specific education and training in the field of work to develop scientifically. Teacher professionalism refers to a set of functions, duties, and responsibilities within education field based on skills acquired through specific education and training provided within work field. Those functions shall develop scientifically in addition to their professional field (Sockett, 1993). In its development, the definition of teacher professionalism is associated with increasing accountability, educational standards, performance appraisal, and teacher education. This study argues that teacher professionalism is built through
performance management, standards, and increased accountability as managerial professionalism. Unfortunately, teacher education policies fail to recognize the importance of preparing research-literate teachers and the requirements for accountability. Additionally, poor education policies can cause teachers to become less professional (Mayer & Mills, 2021; Moody, 2020; Morris, & Chapman, 2020).

The literature states that teacher professionalism is often centered on issues of teacher salary, status, autonomy, and respect for teachers. As such, these matters are critical and particularly brought up when recruiting gifted individuals to teach particularly challenging subjects (Darling-Hammond, 1990; Shrestha, 2019). Levels of teachers professionalism are not only related to their professional orientation but also it involves the trust of educational institutions where they work. Educational institutions' perceptions of the professionalism of their peers were found to be strongly related to the professional orientation in exercising authority by administrators, as well as the trustworthiness of educational institutions. Furthermore, to encourage greater teacher professionalism, school leaders should avoid bureaucracy and express implicit distrust to. They can provide better services by exerting their administrative authority with a professional orientation and extending adaptive discretion to teachers in performing their work. Additionally, they can adopt practices directed to the building of strong trust among school leaders, teachers, students, and parents (Tschannen-Moran, 2009). Goodwin (2021) explains that teacher professionalism refers to meeting certain and skill-related standards in education. Global teachers are to think and teach beyond local boundaries in order that teacher professionalism be reshaped by globalization forces. In this case, teacher professionalism can be assessed from the pedagogic aspect, professional aspect, social aspect, and personality characteristics (Demirkasimoğlu, 2010). Fostering transformative professionalism can be applied by developing AQ learning methods, especially by making curriculum changes (Carey & Coutts, 2021).

**Autonomous Learning**

The word autonomy is defined as a form of freedom and independence to manage one's affairs. It is generally understood as the ability to manage one's affairs as opposed to a dependency situation in which one is subject to the decisions and control of others (Broady & Kenning, 1996). According to Holec (1980), taking charge of one's learning means being able to take responsibility for decisions concerning all learning aspects either in setting goals, defining content or development, selecting methods, and techniques to be used. In addition, the person is also able to monitor the
acquisition procedure and evaluate what has been learned and obtained. People are considered autonomous when they have five qualities, which consist of (1) self-confidence; namely, having confidence in abilities and self-assessment in terms of completing tasks and choosing the most successful method; (2) Having the ability to work alone refers to one's own efforts to create something that prides itself on its sincerity and competence; (3) Master abilities and skills compatible with his work to enable performances consistent with the anticipated potential in his work environment; (4) Appreciating time; namely, the ability to manage daily plans prioritized on useful and efficient activities; (5) Being responsible for something; namely, doing or performing what are assigned (Alfaiz et. al., 2019).

Uswatun (2013) explains that students are to be independent thinkers and to hold a clear view of the learning process, including learning objectives and methods, choices of learning materials, and so forth. Autonomous Learning is a goal of many benefits and it requires class members’ collaboration to achieve it; including that of teachers and students. Independent learning is an attitude oriented to an awareness of independent learning and that students are the decision makers for all actions and considerations related to learning activities, thus making students fully responsible for the learning process (Boud, 2012). The YouTube platform can promote student autonomous learning to foster independent learning to students (Zaida, 2021). Students’ ability to build self-reliance within learning process determines their success. However, the achievement of independent learning is not only addressed to students but it is also related to the role of parents and school teachers to expand it. In this case, independent learning to be expectedly more open to allow awareness of student learning responsibilities to be achieved optimally (Firman et. al., 2020). In this case, students perceive independent learning as a full understanding; i.e., a learning situation containing self-targeted learning, either from styles, strategies, and initiatives with the teachers’ or other parties’ nonexistent help (Khulaifiyah et. al., 2021).

Methods
Research Design
This research is quantitative research with the type of correlational method. Creswell, (2009) asserted that the quantitative correlational research design is a research wherein statistical methods are employed to measure each component between two or more variables. This study aims to examine the effect of each component of the AQ variable (independent) between the teacher professionalism variable (dependent 1) and the student learning independence variable (dependent
The research location was at Madrasah Aliyah, South Banawa District, Donggala Regency, Central Sulawesi, Indonesia and conducted in the even semester of the 2019-2020 school year.

Sample
Participants in this study were a sample of 36 students and 19 teachers of Madrasah Aliyah Donggala. According to Bertram (2007) in determining the number of samples for correlational research, there are approximately 30 subjects (people) or multiples of the total population taken.

The sampling, hence, has met the criteria to be used a sample in this study. In addition, the choice of the smallest sample is determined on the basis of far-reaching distance between students' residence and Madrasah Aliyah Donggala. Conversely, if the largest sample is taken, the research should cost a lot and miss the submission due date. The sampling technique used a cluster sampling technique based on the consideration of sample size to provide a stable sample variation. Grades 10-12 were sampled because they share similar characteristics, whereby the class division does not provide a superior class so that student autonomy is treated equally. The criteria for teachers are PGA (Religious Teacher Education) graduates besides those who continue to take Diploma programs and Bachelor’s Degree majoring in education at the Open University. Teachers graduated from PGA were sampled because their didactics or pedagogical knowledge portion reached 70%, and methodologies were honed during their education so they hold sound dedication and professionalism to fit the criteria for the research sample.

Table 1.
Research sample

<table>
<thead>
<tr>
<th>Grades</th>
<th>Students Gender</th>
<th>Total number of students</th>
<th>Age of students</th>
<th>Teacher Gender</th>
<th>Total number of teachers</th>
<th>Age of teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>female</td>
<td>Male</td>
<td></td>
<td></td>
<td>female</td>
<td>male</td>
</tr>
<tr>
<td>Grade 10</td>
<td>9</td>
<td>6</td>
<td>15</td>
<td>15-16</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Grade 11</td>
<td>6</td>
<td>2</td>
<td>8</td>
<td>16-17</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Grade 12</td>
<td>7</td>
<td>6</td>
<td>13</td>
<td>17-18</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>14</td>
<td>36</td>
<td>15-18</td>
<td>8</td>
<td>11</td>
</tr>
</tbody>
</table>
Instrument
The instrument in this study was a questionnaire utilized to measure AQ between teacher professionalism and student learning independence. The indicators in each variable were determined and consisting of: 1) learning autonomy traits and attitudes, beliefs, motivation, personality, culture, family, and curriculum; 2) teacher professionalism; namely, being able to develop sound responsibilities; able to appropriately manage its roles and functions; to work for the manifestation of school educational goals; to exercise the roles and functions in classroom learning and 3) student learning independence; namely; self-confidence, responsibility, initiative, and discipline. The indicators have 14 items in form of a checklist. Each question is given a Likert scale with 5 answer criteria with scores ranging from 5, 4, 3, 2, and 1. Alternative answers are provided; namely, strongly disagree, disagree, in doubt, agree, and strongly agree.

Validity and reliability testing was carried out after distributing the questionnaires to teachers and students as research samples. According to Sugiyono (2009), validity is conducted to measure the validity or instrument validity. The type of test used is a product-moment correlation (Pearson) with r criteria of 0.30. The results of the instrument test are said to be valid because they have a significant correlation or > 0.30 where the parameter value is at a score of 0.6-0.8 (high/good validity). Reliability is a series of measurements containing the consistency when measurements are repeated. The reliability test results contain Cronbach's alpha value of 0.600, meaning that the instrument is of great reliability. The results of the calculation of the reliability of the data are 0.830; thus, this research instrument is reliable.

Data Collection Procedures
Researchers began to collect data through questionnaires and then analyzed the documents. The questionnaires were distributed directly to teachers and students of Madrasah Aliyah Donggala to ensure that the results of filling out are of great clarity and accuracy. Student-related questions were listed according to the general description of respondents, concerns, and opinions concerning the effect of AQ on student learning independence. Moreover, teacher-related questions are listed regarding the general description of respondents, concerns, and opinions towards the influence of AQ between teacher professionalism and student learning independence. The questionnaires were distributed upon the completion of even semester exams for the 2019-2020 school year. Questionnaires addressed to teachers and students were dispersed through class groups using the
WhatsApp application specifically designed for research purposes. In addition, participants were to answer instantly and correctly in numbers as the responses to the questionnaire were provided for them.

The documents collected contained school profile data, organizational structure, location plans, teacher and student data, and school facilities and infrastructure obtained from the principal. The collected documents were subsequently adjusted to each variable and converted into numerical evidence by giving a value ranging from 0-10. The assessment was organized by researchers by concentrating on the indicators of AQ, teacher professionalism, and student independence.

**Data Analysis**

This study utilized the Anova correlation data analysis technique aimed at testing hypotheses to draw conclusions. According to Creswell (2009), hypothesis testing employing the Anova test was conducted to determine the number of total variability in the dependent variable and to be explained by contingencies between categories in the independent variables whose basic assumptions include normality, variance similarity, and independent observations. The first step is the classical assumption test consisting of tests of normality and linearity. The purpose of the classical assumption test is to discover whether the data has met the analytical assumptions as a prerequisite to perform Pearson's product-moment correlation analysis. While the AQ with teacher professionalism is not linear. The second step is the Anova test; i.e., upon fulfilling the three assumptions, the next test is to test the hypothesis by means of Anova. The first step is to calculate the means of each group and its total. Next, it is to calculate the deviation from the group mean value as well as the total mean to see the overall variability of the data sample. All variability of the whole sample was measured and the degree of freedom was also calculated. Subsequently, it is to perform calculations for inter-group variables and in-group variances by calculating the F-ratio value by comparing the mean squared. The calculated F-ratio value was then compared with $F_{table}$. If the F-ratio is greater than the value of $F_{table}$, the null hypothesis is rejected. It means that there is a significant distinction between the mean of the data groups. The final step is to draw conclusions.
Results

The Anova test was performed accordingly and the data was ensured to have met the assumption--the sample was randomly taken, normally distributed, and the sample variance was homogeneous. The first assumption has been fulfilled wherein the value contained in one group scarcely depended on the value in the other group. Meanwhile, the fulfillment of the second and third assumptions was managed with the help of SPSS. The results of the analysis of the assumption test obtained by the researcher are as follows.

1. Normality test

The normality test aims to determine that data distribution in this study is normal, with the K-SZ criteria being smaller than the p-value.

Table 2
Data normality test results

<table>
<thead>
<tr>
<th>Variable</th>
<th>K-SZ</th>
<th>Value p</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student autonomous learning</td>
<td>.070</td>
<td>.200*</td>
<td>Normal</td>
</tr>
<tr>
<td>Teacher professionalism</td>
<td>.114</td>
<td>.200*</td>
<td>Normal</td>
</tr>
<tr>
<td>AQ</td>
<td>.058</td>
<td>.200*</td>
<td>Normal</td>
</tr>
</tbody>
</table>

Note: * p > 0.05 data that is typically dispersed

The results of the calculation of the data normality test produce the K-SZ value for the three variables smaller than the p-value of 0.200, so that the processed data is normally distributed. Normally distributed data shows that the data distribution occurs around the average value of the variable and is distributed in a balanced way between the values located above and below the average variable. This implies that the data of the variables mentioned above contains a uniform inclination and meet the correlation test to be performed at the correlation analysis stage. The normal status of these data indicates that if grouping is managed by means of the percentile method, it should beworkable.

For example, the normal status of teacher professionalism reflected the average contained in the data distribution of teacher professionalism can represent the value of all teacher professionalism statistically. There is a spread of data around the average, but the distribution of data is balanced, whether the data is larger or smaller around the average. The dismal it is from the average, the lower are the scores of teacher professionalism.
2. Homogeneity test

The homogeneity test aims to determine a good and homogeneous research sample with the criteria for the Glejser coefficient value greater than 0.05. The results of the homogeneity test are illustrated in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Data homogeneity test results</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig. Glejser</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.73</td>
<td>1</td>
<td></td>
<td>.789</td>
</tr>
</tbody>
</table>

Note: * p < 0.05 The two linear variables

The calculation results obtained a significance value of 0.789 which means the variance between population groups correlate with homogeneous variance. The homogeneity test revealed that the data tend to be uniform and have a balanced data deviation. The implication of homogeneous data showed that the external factors made up the data score were mostly alike. The results of the homogeneity test supported the results of the previous normality test.

As the purpose of the Glejser test is to examine the uniformity of the residue through the research model, the homogeneity obtained shows that the data diversity arising from the external model was most likely similar. Furthermore, external factors that triggered teacher professionalism were the same. The homogeneous status of the research data is expected to provide the results of the correlation analysis on the Teacher professionalism, autonomous learning and AQ data applicable to the population.

3. Descriptive statistic results

Descriptive statistics provides an overview of the descriptive results of demographic sampling, the variable trends, and the percentage level of each determinant. The following are descriptive statistics containing the three variables based on the data obtained with categorized criteria:

Table 4

<table>
<thead>
<tr>
<th>Means and Standard Deviations for all AQ, TP, and AL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>AQ</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Teacher Profession (TP)</td>
</tr>
<tr>
<td></td>
</tr>
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<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>
Based on table 4, the results of processing descriptive statistical data consist of three criteria. First, the smallest value in the total AQ questions (X minimum) is 42, and the largest value (X maximum) is 55. The tendency of the participants’ AQ variable is in the high category, as many as 47 participants (85.45%) out of the total sample of 55 participants. Second, the value of the smallest total TP questions (X minimum) is 15, and the largest value (X maximum) is 19. The tendency of the participant TP variable is in the moderate category; namely, 10 participants (52.63%) out of the total sample of 19 teachers. Third, the value of the smallest total of AL questions (X minimum) is 20, and the largest value (X maximum) is 34. The inclination for the participant AL variable to be in the high category is 28 participants (77.77%) out of a total sample of 55 participants. The mean value of the three variables is greater than the standard deviation value. In other words, the occurrence of data deviation is low, the the values are evenly distributed and the mean value could be utilized as a representation of the entire data.

The results of descriptive analysis are related to the results of homogeneity and normality tests. The average Teacher Professionalism is 4.02 with normal data conditions providing information that the data is centered around a score of 4.02 and a uniform deviation of values greater and less than the average. With normal data conditions, it means that the value of 4.02 can represent Teacher Professionalism data as a whole and the minimum score of Teacher Professionalism is 15 and the maximum score of 19 is very unlikely to happen. This value can be a data outlier to be possibly eliminated. The condition of the homogeneous model shows that albeit there are maximum and minimum values that are beyond the average, the maximum and minimum values can still be utilized in the overall model.
4. Hypothesis testing

Ha1: There is a correlation between AQ and Teachers Professionalism of Madrasah Aliyah Donggala Teachers

Table 5 reveals the extent to which the variables AQ and TP are related. The product-moment person correlation coefficient (r) indicates the strength and direction of the linear relationship between AQ and TP.

Table 5. 

<table>
<thead>
<tr>
<th></th>
<th>Self-confident</th>
<th>Responsible</th>
<th>Initiative</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles and functions as a teacher</td>
<td>0.361**</td>
<td>0.310**</td>
<td>0.268**</td>
<td>0.391**</td>
</tr>
<tr>
<td>Work for education</td>
<td>0.433**</td>
<td>0.278**</td>
<td>0.296**</td>
<td>0.455**</td>
</tr>
<tr>
<td>developed responsibilities</td>
<td>0.455**</td>
<td>0.302**</td>
<td>0.410**</td>
<td>0.277**</td>
</tr>
</tbody>
</table>

Note: ** correlation is sig. (2-tailed) at .001, * correlation is sig. (2-tailed) at .005

The correlation coefficient of the AQ and TP dimensions is in the p category of 0.001 at two different degrees, medium and low. The researcher found that several AQ dimensions were moderately correlated with the TP dimensions. For example, work for education is shown with self-confident (0.433) and developed responsibilities with initiative (0.410). However, it is also found that there are dimensions of a weak correlation; for example, work for education with responsible (0.278). A positive relationship was found, meaning that the higher the AQ is, the higher is the professional status of the teacher, and conversely, the lower the AQ is, the lower is the professional status of the teacher.

The hypothesis test shows a correlation between the components of TP and AQ, so we can accept Ha1. In general, it can be said that the correlation between variables in table 5 is below 0.5, this value indicates that there is a weak positive correlation. Respondents' perceptions of high TP are not followed by respondents' opinions about high AQ, as well as low TP scores are not followed by low AQ scores, and vice versa. In other words, the positive relationship between the TP and AQ components is weak. Respondents' high perception of one component of the TP is not followed by a high perception of respondents on the AQ component.

The correlation between developed responsibilities and self-confident is of 0.455, indicating that when respondents perceive develop responsibilities as a high achievement, at the same time, respondents perceive self-confidence as a low achievement. However, there are some respondents
show a high opinion of both components, but the number is less than the other respondents who do not agree.

**Ha2: There is a correlation between AQ and AL of Madrasah Aliyah Donggala**

Table 6 reveals the extent to which the variables AQ and AL are related. The person product-moment correlation coefficient (r) indicates the strength and direction of the linear relationship between AQ and AL.

### Table 6.

**Correlational Coefficients for AQ and AL**

<table>
<thead>
<tr>
<th>Roles and functions as a teacher</th>
<th>Work for education</th>
<th>Developed responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traits and Attitudes</td>
<td>0.362**</td>
<td>0.370**</td>
</tr>
<tr>
<td>Confidence</td>
<td>0.428**</td>
<td>0.440**</td>
</tr>
<tr>
<td>Motivation</td>
<td>0.430**</td>
<td>0.409**</td>
</tr>
<tr>
<td>Personality</td>
<td>0.359**</td>
<td>0.422**</td>
</tr>
<tr>
<td>Culture</td>
<td>0.320**</td>
<td>0.320**</td>
</tr>
<tr>
<td>Family</td>
<td>0.301**</td>
<td>0.411**</td>
</tr>
<tr>
<td>Curriculum</td>
<td>0.348**</td>
<td>0.344**</td>
</tr>
</tbody>
</table>

Note: ** correlation is sig. (2-tailed) at .001,* correlation is sig. (2-tailed) at .005

The researcher found that the AQ dimension was moderately correlated with the AL dimension; for example, traits and attitudes were moderately correlated with work for education (r=0.370), confidence develop responsibilities (r=0.534), and so on. On the other hand, there were certain weak correlations such as traits and attitudes with develop responsibilities (r=0.180). From table 5 it is noted that the relationship between the two variables is inversely proportional to the relationship between AQ and TP, which means that the higher the AQ is, the greater is the student's learning independence, and the lower the AQ is, the lower is the student's learning independence. The researcher found several variables that were moderately correlated with the AQ items.

The hypothesis testing shows a correlation between the components of AL and AQ, so we can accept Ha2. In general, it can be said that the correlation between variables in table 5 is below 0.5, this value indicates that there is a weak positive correlation. Respondents' perceptions of high AL are not followed by respondents' opinions about high AQ, as well as low TP scores are not followed by low AQ scores, and vice versa. In other words, the positive relationship between the AL and
AQ components is generally weak. Respondents' high perception of one component of AL was not followed by high respondent's perception of the AQ component.

There are only two correlations containing a value above 0.5: namely, the correlation between Developed responsibilities and 2 components of AL (Traits and Attitudes and Confidence). Most of them show a weak correlation. The correlation of Traits and Attitudes to Roles and functions as a teacher is of 0.362, indicating that when respondents view Traits and Attitudes as a high achievement, at the same time, respondents think that Roles and functions as a teacher are hardly high achievements. However, there are some respondents who show a great opinion of both components, but the number is less than the other respondents who disagree.

**H3: There is interaction between AQ, Teacher Professionalism, and autonomous learning of Madrasah Aliyah Donggala**

Table 6 shows the extent to which the variables AQ, TP, and AL are related. The criteria for assessing the Pearson moment product correlation coefficient are zero (no correlation) to <=+0.4 (low), > +0.4 0 (medium), and > +0.9 (high). The results of statistical tests are shown in Table 7.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>AQ (independent variable)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student autonomous learning</td>
<td>0.961</td>
<td>0.001**</td>
</tr>
<tr>
<td>Teacher professionalism</td>
<td>0.073</td>
<td>0.654</td>
</tr>
<tr>
<td>AQ</td>
<td>0.607</td>
<td>0.016*</td>
</tr>
</tbody>
</table>

Note: * p < 0.05; ** p < 0.01

From table 7, the person product-moment correlation coefficient (r) shows the strength and direction of the linear relationship between AQ, TP, and AL. The correlation coefficient of the strength of the relationship between AQ and TP is very weak (r=0.073). The correlation coefficient of the strength of the relationship between AQ and AL is very high (r=0.961). The researcher found a significant positive correlation between the three variables (r=0.607) which were interrelated where AQ manifested TP and AL. Although the strength of the relationship between AQ and TP is very weak, the relationship is positive. The direction of the significant positive relationship indicates that the higher the AQ, the higher the overall TP and AL. Meanwhile, the lower the AQ, the lower the overall TP and AL.
Discussion

In the study discussion, according to the research problem formulation, the first part presents the correlation of findings between AQ and Teacher Professionalism, the second part discusses the correlation of findings between AQ and autonomous learning, and the third part indicates an interaction between AQ, Teacher Professionalism, and autonomous learning. In research on teacher professionalism, researchers focus on the teachers' ability of teachers to perform their main duties as educators and teachers, which include the ability to plan, conduct, and manage evaluations over student learning. In this case, the researcher refers to the four professional teacher competencies have been stipulated in the Law of the Republic of Indonesia Number 14 of 2005 concerning Teachers and Lecturers; namely, pedagogical, personality, professional, and social competencies. Therefore, in addition to being skilled at teaching, a teacher must also hold broad knowledge, wisdom, and social nature. In addition, the teachers at Madrasah Aliyah, must also be provided with qualified Islamic religious education skills such as reciting and reading the Quran, the holy book.

Research on student learning focuses on student performance after the implementation of independent learning. The autonomous learning is conducted out of the far-reaching distance between students residence and school. Students are required to perform self-learning. Despite all the limitations such as inadequate school facilities and infrastructure and internet, students are motivated to organize either learning strategies, time, or place such as reading textbooks, listening to materials, and taking important notes. Students are also trained to be responsible by improving the way of learning and regularly doing exercises and assignments from the teacher. Students attempt to take advantage of various existing learning resources, either obtained from modules, the internet, and books in the library. In terms of interactions on AQ, professionalism, and student self-learning, the researcher focused on student learning styles.

The relationship between AQ and Teachers Professionalism of Madrasah Aliyah Donggala

The strength of the relationship between AQ and teacher professionalism is very weak. However, the relationship between the two variables is positive, meaning that the higher the AQ, the higher the professional status of the teacher, and conversely, the lower the AQ, the lower the professional status of the teacher. The weak relationship probably occurs because teachers professionalism is
considerably low due to the failure of both schools and government policies to prepare teachers in remote areas who are technology literate so that AQ becomes weak. The literature shows that poor education policies can lead to unprofessional teachers (Mayer & Mills, 2021). Another problem identification appears in some teachers who scarcely teach subjects within their educational qualifications due to limited teaching staff. Previous studies found that teacher professionalism is centered on issues of teacher salary, status, autonomy, and respect for teachers; therefore, recruiting talented individuals to teach complicated subjects is required (Darling-Hammond, 1990).

In its development, the resulted positive relationship indicates the important demands of teachers to improve their AQ and professionalism. Goodwin (2021) explains that teacher professionalism refers to meeting certain standards in education and skills. Global teachers are to think and teach beyond local boundaries to reshape teacher professionalism by means of globalization forces. The findings of this study are not by the theoretical concept proposed by Sockett (1993). According to Sockett (1993), teacher professionalism relates to the role of the professional teacher, the moral demands he makes, and the practical art of teaching with educational institutions and contemporary problems. From the findings of this study, the relationship between AQ and the professionalism of Madrasah Aliyah teachers is relatively low, their professionalism as teachers is also low. The literature finds that one of the main reasons why teachers in Indonesia, particularly in remote areas, hold low professionalism is the heavy load and responsibility. Generally, the community’s education level in remote areas remain low in addition to limited learning facilities and infrastructure (Harjanto et. al., 2018). As a result, strong and innovative teachers are needed to improve the overall quality of education.

The level of teacher AQ is a determining factor for the quality of student learning outcomes. Teachers equipped with a high level of AQ can help students achieve a high level of academic achievement (competence). Teachers low levels of AQ, on the other hand, are associated with lower levels of student performance. According to Dorji & Singh (2019), the relationship between AQ and teacher professionalism must be strong in the context of learning. This shows that the tenacity, hard work, and patience of teachers in dealing with all kinds of learning problems in the field can help them improve their professionalism as educators. Teachers must hold a great deal of fighting spirit, efforts, creativity, innovation, willingness to try new things, and capability of learning from their mistakes in their approach to their work. All these factors shall encourage them to adopt a professional attitude towards their work.
Based on previous literature studies, researchers found differences in the AQ between educators working in developed and developing countries. While being compared to remote areas with developed urban areas, the difficulties and challenges of the education process are much higher in remote areas. As Stoltz points out, emotional intelligence is defined as a person's ability to observe difficulties and then process them with his intelligence to create problems to be solved (Stoltz, 2000). The barriers faced by Madrasah Aliyah teachers in remote areas are considered as challenges to be solved or coped with through the intelligence or potential application.

Recent studies stated that professional teachers are expected to have adequate teaching standards and become the mindset of a group of students who act as supervisors and class controllers. Teachers now have to think and teach following technological developments (Goodwin, 2021). Additionally, by creating a controlled environment and encouraging learning spirits in students, teachers ensure that every learning experience can influence student behavior and provide opportunities for the learned materials to be applicable in real life (Harisman et al., 2019). The literature states that with effective teacher professionalism, the information provided is hoped to be handy not only for teachers and students but also for other society members and national development (Iroegbu & Ogbodo, 2019). In this case, teachers at Madrasah Aliyah should not only present professionalism to take charge of their responsibilities, but they should also be able to position themselves as highly qualified educators in the process. Quality learning and education will naturally produce an educated generation and individuals. Hence, Madrasah Aliyah students will have autonomous learning that can support their learning achievement.

Professional teachers are considered to have the ability to motivate students to reach their full potential within the framework of meeting established educational standards. As professional educators, they have certain educational qualifications to be able to carry out their profession in harmony with the teaching profession (Demirkasimoğlu, 2010). Therefore, teachers professionalism is reflected in the implementation of task service characterized by the expertise in both material and methodology taught to students of Madrasah Aliyah. Since the study found that professionalism was low, this indicated that the teaching method remained inadequate in supporting student autonomous learning.

Professional teachers are required to have four basic skills in education consisting of professional, pedagogic, social, and psychological competencies (Demirkasimoğlu, 2010). Based on the existing literature, assessment of learning outcomes and student development aims for students to reach
their full potential. The mastery of diverse and extensive teaching materials is defined as a professional competence (Epstein & Hundert, 2002). This includes mastery of subject curriculum materials in schools and scientific substance that underlies curriculum materials, as well as the mastery of the structure and methodology of scientific inquiry (Grangeat & Gray, 2007; Kunter et al., 2013; Orazbayeva, 2016; Bazhukova et al., 2020). Pedagogic competence is the capacity to understand students, develop and implement learning activities, and evaluate learning outcomes. In this case, the effectiveness of relationship patterns between teachers and students is possible to be developed in the context of teachers' understanding of the characteristics and potentials of students (Nind & Lewthwaite, 2018). Social competence refers to a teacher's ability to communicate and interact successfully with students, education staff, parents/guardians of students, and other people from the surrounding community (Aleva, 2020). Psychological competence is related to perceived competence, commitment, self-esteem, and ethical orientation which play an important role in teacher identity (Granjo et al., 2021).

From the above-mentioned explanation, a teacher provided with a high AQ will perceive all adversities as a source of motivation to achieve success in his profession. Any shortage of existing learning facilities and infrastructure is deemed as a challenge to be handled. Teachers creativity shall emerge at this point of encountering all the challenges possibly arise in their classrooms. To deal with the existing limitations of the teaching and learning process, all available potentials, including pedagogic, personality, professional, and social competencies, should be utilized. Teachers furnished with a high AQ can develop the four competencies listed above to help them become professional teachers, wherever they teach as each location has its challenges and difficulties. A teacher, on the other hand, can turn adversity into a source of inspiration for students to achieve success.

**The relationship between AQ and autonomous learning of Madrasah Aliyah Donggala**

The relationship between AQ and student independence is very strong. The relationship is inversely proportional to the resulting AQ on teacher professionalism. It is noted that the higher AQ determines the greater independence of student's autonomy, and the lower AQ leads to the lower learning independence of students. The objectives of this study include estimating the adversity intelligence of students from various demographic backgrounds and geographic areas. Furthermore, the findings indicate that both male and female students living in remote areas are
not affected by adversity; this means that both students who live in remote areas have equal opportunities in terms of the AQ level. Unfortunately, the literature finds that school location has a significant impact on students' academic achievement (Owoeye & Yara, 2011; Lamb, 2012). In other words, student independence is insufficient to produce greater performance in rural schools because of the distance factor. Poor rural school education creates undesirable conditions for quality rural graduates to enroll in higher education (Yapparova & Kuznetsova, 2021).

Students’ autonomous learning to handle obstacles is essential for the successful learning. As such, each individual’s intelligence is distinct, and intelligence is considered as a relative term. If it is associated with the ability to tackle handicaps, the type of intelligence used is the Aq. The literature explains that the development and implementation of student-centered education meansto train students to possess autonomous learning. Thus, the emphasis needs to be placed on expanding teacher understanding obtained from theory to practice (Zabeli et. al., 2018). An individual can get through adversities accordingly as measured by his intelligence. Combating adversity is often incorporated into the AQ equation. AQ is deemed to help students improve their learning achievement. Students supplied with adversity intelligence are more likely capable of coping with the existing hardships. In contrast to students equipped with lower AQ levels, they are more likely to perceive adversities as the pinnacle of struggle, resulting in lower levels of learning achievement (Dorji & Singh, 2019; Puspitacandri et al., 2020; Singh & Parveen, 2018; Wang et. al., 2021).

There is Interaction between AQ, Teachers Professionalism, and Autonomous Learning of Madrasah Aliyah Donggala

There is an evidence revealing the strong relationship between AQ, teacher professionalism, and student learning independence. It is noted that the higher the AQ, the higher is the professionalism and independence of students' overall learning. While the lower AQ shall generate the lower teacher's professionalism and overall student learning independence. By increasing the realized AQ ability teacher professionalism and student autonomous learning are expected to encourage student achievement in the future.

The literature illustrated that students furnished with a high AQ can provide fighting power to deal with various obstacles occur during the teaching and learning process, as well as their personal
handicaps. Individuals of a high AQ can also provide endurance against the adversities and maintain a consistent and solid position (Bautista et al., 2016; Wang et al., 2021).

*Madrasah Aliyah* heightens the acquisition of knowledge and skills for their students by practicing intensive autonomous learning, student learning and teaching activities, as well as the process of shifting attitudes to a more positive direction. If students reflect consistent behaviors, their success in the teaching and learning process will be well defined. Students who practice consistency can build relationships between attitudes and behavior until goals are achieved. According to Robbins (1994), students' ability to learn is influenced by their ability to cope with obstacles. Moreover, students find it common to have a higher level of intelligence than those of their classmates in the field of education. Since the intelligence level of each individual is unique, therefore, intelligence is considered relative. Once associated with the ability to handle challenges, the type of intelligence used is the AQ.

Students' autonomous learning to enhance learning achievement is perceived to be vigorously influenced by their AQ. Students provided with adversity intelligence are more likely to be capable of tackling the existing challenges. Conversely, children equipped with a low level of AQ tend to see handicaps as the peak of their efforts; hence, their learning success rate is low. Students supplied with a high AQ can support their fighting power in dealing with various adversities possibly emerge during the teaching and learning process as well as within the self-learning process. In fact, student struggles have apparently raised severe concerns (Singh & Parveen, 2018). The low fighting ability of students shows the students' inability to deal with complicated situations. Inevitably, it generates a negative impact not only on the education progress but also on the students themselves. The consistent self-performance decreases as a result of the students' inability to overcome the existing hardships. The learning process of individuals supplied with a high level of AQ are inclined to be capable of dealing with adversities. However, once they successfully solve the problems, students must be able to remain steady, firm in their stance, and focus on the typical main task of students. Everyone demands great results; yet, it has hardly been easy to achieve success for it requires struggle as there will always be trials and obstacles to cope with.

In the end, the researchers succeeded in identifying the weaknesses of previous research regarding the effect of teacher professional development by means of the AQ learning method to upgrade students' autonomous learning (Jodaei et al., 2021; Al-Busaidi & Al-Seyabi, 2021; Yazdani &
Ghasedi, 2021), where the AQ method has a significant impact on teacher professionalism. Other studies elaborated the magnitude of AQ contribution to teachers’ performance in exercising their duties to improve education quality (Kartikasari & Wiarta, 2021). Research by Wang et. al (2021) investigates students’ AQ and analyzes the factors that influence them where average AQ score of students is found moderate. Students most presumably attribute the causes of learning barriers to themselves and to specific psychosocial and cultural problems. This research is novel for its disclosure of a weak correlation between AQ and professionalism. Whereas, when the AQ relationship is developed between teacher professionalism and autonomous learning the relationship grows strong and positive.

**Conclusion**

Based on the findings presented on the AQ Relationship between Teacher Professionalism and autonomous learning of *Madrasah Aliyah* Students Donggala, two things can be concluded. First, the relationship between AQ and teacher professionalism is very little since it is still extremely influenced by the geographical location of the research location in question. Second, the AQ Relationship between teacher professionalism and student’s autonomous learning indicates a very strong relationship.

There is a positive direction in this relationship. Thus, on average, the higher the AQ of students, the higher their learning independence; On average, the lower student's AQ leads to the lower learning independence of students. The study conducted on correlational analysis is limited to *Madrasah Aliyah* in one disadvantaged area, there is still little evidence of a relationship between AQ Teacher Professionalism and Student’s autonomous learning. Further research is suggested to improve the drawback of this research by increasing the number of senior high schools and *Madrasah Aliyah* since samples in this study are derived from one school. Consequently, the findings may most likely be different once a larger population is used. In addition, it is necessary that further study have an in-depth analysis into other factors that affect students' independent learning in order to support the national development by creating the next generation of an independent nation.


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