

Adolescent Social-Emotional Learning Instrument in the Philippine Context: Development and Validation

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ABSTRACT

The ability to control one's emotions, create and accomplish objectives, demonstrate empathy, form and sustain meaningful relationships, and make responsible decisions is known as Social and Emotional Learning (SEL). The five elements of SEL are self-awareness, self-management, social awareness, relational skills, and responsible decision-making. Adolescents with higher SEL can better integrate their skills, viewpoints, and actions to deal with challenges in their daily lives ethically and effectively. Therefore, it is necessary to create a method that can assess the SEL of adolescents. This project aimed to develop an SEL tool that could be used to monitor and evaluate adolescent performance. The study's participants range in age from 15 to 25 years, with an average age of 18.05. It used the Adolescent Social and Emotional Learning Questionnaire (ASELQ), a 105-item self-report questionnaire graded on a Likert scale of 1 to 5. Factor analysis was used to divide many variables into broader categories. The questionnaire-building procedure, reliability testing, and factor analysis supported the conclusion that the ASELQ is a valid and reliable instrument for assessing SEL in adolescents. The validity and reliability of the ASELQ were assessed by examining its psychometric properties. Through pilot testing, its ecological validity was confirmed, guaranteeing that it accurately represents the experiences and situations of young people. The questionnaire's content validity was determined via committee deliberations and expert review, which ensured that the social-emotional learning domains were adequately addressed. Factor analysis supported the suggested social-emotional learning dimensions. It also assessed construct validity and found six components that explained 42.63% of the variance. The ASELQ showed strong internal consistency and reliability, with an alpha value of 0.96. The ASELQ may be used by educators, researchers, and other professionals working with young people to assess their SEL capabilities and identify improvement areas.

Keywords: Social and Emotional Learning (SEL), Adolescents, Instrument development/validation

INTRODUCTION

According to The Collaborative for Academic, Social, and Emotional Learning (CASEL) (2019), SEL is how adolescents and adults regulate their emotions, grow and achieve constructive goals, experience and exhibit empathy for others, build and maintain healthy relationships, and make responsible decisions (CASEL, 2019; DePaoli et al., 2017). Prior studies have shown that SEL improves students' ability to combine abilities, perspectives, and actions to handle everyday activities and obstacles ethically and successfully (CASEL, 2019).

SEL is an umbrella term for several psychological constructs, making it a multi-faceted and complex construct. It is comprised of several domains including: relationship skills (i.e., the capacity to build wholesome connections and relationships with others), self-awareness (i.e., the capacity to recognize one's feelings, thoughts, and values), self-management (i.e., the capacity to control one's emotions, thoughts, and behaviors), and social awareness (i.e., the capacity to understand the feelings and intentions of others) (CASEL, 2019).

SEL Domains

Self-awareness is one of the SEL domains, described as the ability to see one's thoughts, emotions, and values and how it influences conduct. It is the ability to precisely recognize one's strengths and shortcomings while clinging to a firm sense of optimism and adopting a "growth mindset." This skill includes feeling emotions, accurately assessing oneself, appreciating one's abilities, being confident in oneself, and raising self-efficacy (Bridgeland et al., 2013).

The second domain of SEL is Self-management. It is the ability to effectively regulate feelings, ideas, and behavior in various situations, such as self-motivation, impulse control, and stress management. It is the ability to set and achieve both personal and academic goals. It includes self-discipline, self-motivation, impulse control, stress management, goal-setting, and organizing abilities (Schwab & Elias, 2014).

Social awareness, another SEL domain, is the capacity to understand and sympathize with others, particularly those from different racial and cultural origins. It is the ability to perceive community resources and assistance, as well as social and ethical standards of behavior. It entails adopting a different viewpoint, being empathetic, respecting differences, and tolerance for others (Eklund et al., 2018).

The fourth SEL domain is Relationship skills, defined as creating and sustaining satisfying connections with various people and organizations. It is the ability to ask for and provide help, communicate, listen closely, collaborate with others, resist unjustified social pressure, and constructively settle problems. It involves communication skills, social engagement, relationship-building, and teamwork (Ferreira et al., 2020).

Finally, Responsible decision-making, the fifth SEL dimension, refers to the capacity to make morally correct choices based on relationships, safety concerns, and other influences on behavior. It is the practical evaluation of the consequences of various actions and care for one's own and other people's welfare. It includes issue identification, scenario analysis, problem solution, assessment, reflection, and ethical responsibility (Van Huynh, 2018).

It is, therefore, essential to measure the various domains of SEL because it provides a holistic picture of an adolescent's SEL. It gives an idea of what domains they are strong at and what they need to improve. SEL relates to their empathy, self-awareness, and relating with others, which would also

significantly impact their future. Moreover, practitioners like counsellors and educators could utilize such measurements to assist young people in developing as mature adults. Finally, policymakers could utilize such data to formulate helpful programs and laws for adolescents.

Measuring Social-Emotional Learning

CASEL (2019; Hamilton & Stecher, 2018) suggests a conscientious process of measuring SEL. Rather than advocating for a single tool, CASEL recommends exploring various available tools. However, many available tools are psychometric tools catering to school-going children.

One example is the Social and Emotional Competencies Evaluation Questionnaire (QACSE) developed in Portugal. In the said study, a sample of 683 pupils participated to verify the said questionnaire. Moreover, six teachers took part by completing the teacher version of the questionnaire pertaining to 111 pupils. QACSE categorizes the SEL dimensions into social isolation, social anxiety, relational skills, self-control, and social awareness (Coelho et al., 2015).

Similarly, Cavioni et al. (2023) formulated the Social Skills Improvement System (SSIS SEL) brief scales for students. In the said research, 1,175 students took part. Confirmatory Factor Analysis (CFA) showed that self-awareness, self-management, social awareness, and responsible decision-making make up SEL. Related to the school setting, Hinerman et al. (2022) used structural equations modeling (SEM) and CFA which helped them find additional components of SEL such as self-control, pro-social behaviors, respect at school, respect at home, honesty, and self-development.

Another example would be the Social and Emotional Health Survey (SEHS), validated with student participants in the United States. Nevertheless, the said study focused on the health aspect of adolescents' social and emotional dimensions rather than learning. The SEHS measured young people's self-belief, other-belief, emotional intelligence, and engaged living (Furlong et al., 2014).

In the educational setting again, the Test of Regulation in Understanding Social Situations in Teaching (TRUST) was developed to measure teachers' social-emotional competence in various teaching situations. This questionnaire divides social-emotional competence into two facets: emotion regulation and relationship management skills. It is more geared towards how teachers think, feel, and act in teaching situations (Aldrup et al., 2020).

The previous questionnaires are either (a) self-report questionnaires, (b) reported by significant persons (family, teachers, and school authorities), or other performance measures. Therefore, there is a need to develop a tool which will be able to evaluate social-emotional learning for adolescents.

Applications and Outcomes of SEL

Why is it necessary to consider SEL in educational or development programs? Four meta-analyses on the adoption of SEL in the US school system were evaluated by Mahoney et al. (2018). They found that pupils who take part in SEL programs exhibit significantly more positive results in SEL competencies, academic success, and reduced emotional and behavioral concerns. Moreover, SEL programs tend to support student's academic success rather than undermine it.

Lack of SEL, on the other hand, impacts a person's lifetime results in addition to their academic performance. Lower levels of SEL is correlated with adverse outcomes, including a higher probability of losing your job, being divorced, being sick, and reduced prosocial behaviors (Brotto et al., 2018).

The Present Study

This project aimed to create a Social and Emotional Learning (SEL) instrument that could be used to track and assess results among participants aged 15 to 25. Development workers use a tool based on the CASEL framework for Core SEL skills. The tool, however, was created and tested on younger people (6 to 10 years old). Therefore, this project is anticipated to provide a tool for older adolescents (ages 15 to 25).

METHODOLOGY

Participants

The participants of this study are youth aged 15-25 years old with an average age of 18.05 years old. This study had an overall $N = 300$ participants. One hundred eighty-three participants were females, while 117 were males. Sixty-one participants were in junior high school, 99 were in senior high school, 129 were in college, and four were at graduate level, at the time of the survey.

Instrument

The Adolescent Social and Emotional Learning Questionnaire (ASELQ) is a self-report 105-item questionnaire. It is a five-point Likert scale and rates as follows: 1=Very undescriptive of me, 2=Undescriptive of me, 3=Neither undescriptive nor descriptive of me, 4=Descriptive of me, 5=Very descriptive of me.

The self-report form tackles matters around adolescents' daily experiences at home, school/workplace, and their experiences with others in their environment. It consists of statements against which adolescents need to evaluate themselves. Since ASELQ is not a test, and there are no wrong answers to the items.

Higher scores indicate that the adolescent perceive themselves as someone with greater levels of social-emotional learning. On the other hand, lower scores on the questionnaire indicate that they characterize themselves in a way that is more in line with someone with less social-emotional learning.

The ASELQ can be self-administered or can be administered through a facilitated interview. Likewise, it can be administered individually or in groups.

Data Analytic Procedure

Since the ASELQ is at the development stage, Exploratory Factor Analysis (EFA) was utilized. EFA is a method to break down many variables into smaller categories. It is a statistical method that finds the similarities among a set of variables to break them down into smaller parts. It is a strategy for data minimization. This approach takes the maximum common variance of all the variables and combines them into a single score. For further analysis, this score may be used as an index of all the variables. Numerous similar patterns may be seen while examining many variables called factors. It is thus a statistical technique to ascertain if a group shares a variance (Gorsuch, 2014).

RESULTS AND DISCUSSION

It was revealed that the average ASELQ score was 3.74, which falls under Descriptive of Me, with a standard deviation of 0.39. The median for the distribution was 3.73, and the mode was 3.60. These scores meant that the respondents had a slightly high socio-emotional learning score. Table 1 shows the descriptive statistics for the total ASELQ scores.

Table 1. Descriptive statistics of total ASELQ Scores

Statistics	Value
Mean	3.74
Median	3.73
Mode	3.60
Standard Deviation	0.38
Skewness	-0.41
Standard error of skewness	0.14

Even though the distribution was negatively skewed, the absolute value of its skewness was less than 0.50, which indicated that it was approximately symmetric. Figure 1 shows the distribution of the ASELQ Scores via a histogram.

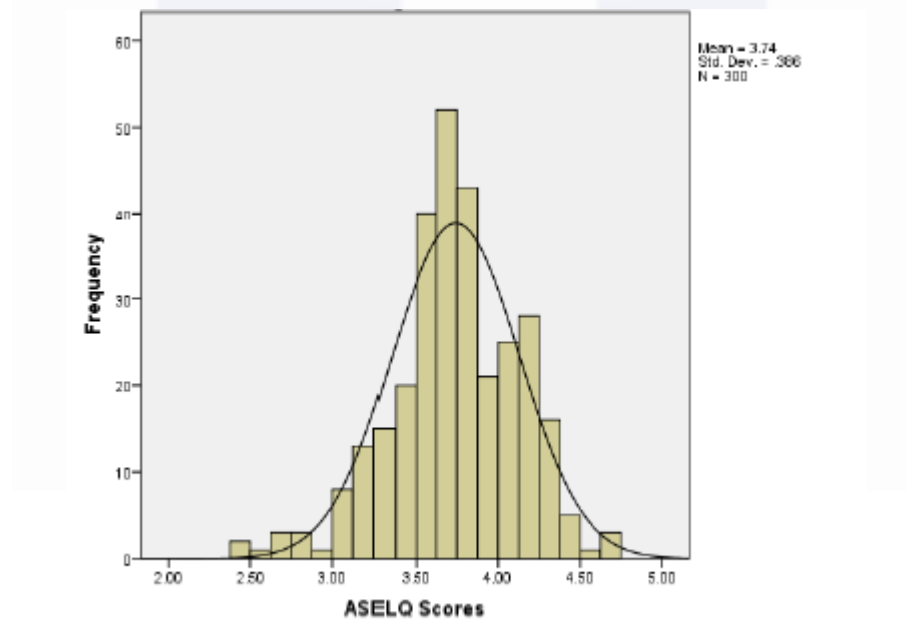


Figure 1. Histogram of ASELQ Scores

On the other hand, the descriptive statistics for each of the five SEL domains are shown in Table 2 and Figure 2.

Table 2. Descriptive statistics of scores in SEL domains

Categories	Number of items	<i>M(SD)</i>
Self-awareness	20	3.64 (0.40)
Self-management	23	3.75 (0.46)
Social awareness	29	3.79 (0.44)
Relationship skills	19	3.78 (0.47)
Responsible decision-making	15	3.80 (0.52)



Figure 2. Bar graph of scores in SEL domains

Even though Self-awareness had the lowest score while Responsible decision-making had the highest, all of the average scores of each category fall under Descriptive of Me.

Psychometric Properties

Validity

The capacity of a scale to measure what it claims to measure is known as validity. In this project, the Adolescent Social-Emotional Learning Questionnaire (Self Report Form) aims to estimate social-emotional learning and its domains (Souza et al., 2017).

- **Ecological.** Ecological validity means that the questionnaire reflects the realities of the target users. It was ensured by conducting focus group discussions among selected adolescents in the target communities—with due consideration of the context and the impact groups aimed at—to surface how the adolescents conceptualize Socio-Emotional Learning and its domains.

- Content.** Content validity refers to the representativeness of the scale relevant to the concept it aims to measure. It was done through an expert and committee approach, wherein a group of experts in adolescent development, human development and family studies identified a set of item pool from a literature review and from discussions with adolescents who are participants in a non-government organization's ASRH project who determined which of these items should be included in the piloting. The experts involved come from relevant disciplines such as human and family development studies, social work, psychology, and education and have had years of experience in catering to the psychosocial needs of adolescents both as educators and as development workers.
- Construct.** A factor analysis was conducted using a statistical software package to establish the measurement properties of the ASELQ. This technique seeks to convert the total number of observable variables into latent components by using the data's similarities and check if the statistical model supports the hypothesized model of social-emotional learning, composed of five domains.

Even though factor analysis is a large-sample technique (Kline, 2023), a sample size of between 100 - 250 (Gorsuch, 2014) or 300 (Tabachnick et al., 2013) is recommended as a general guideline (Kyriazos, 2018).

The Kaiser-Mayer-Olkin (KMO) Test was performed to examine whether sufficient participants performed CFA. The yielded KMO value was 0.90, which showed that there is more than enough sample size because it was more significant than 0.60. This finding is also supported by Costello and Osborne (2005), who recommended a minimum of 300 participants for factor analysis. In addition, there were ample correlations among variables with an r -value greater than 0.30 ($r > 0.30$). This finding was reinforced by Bartlett's test of sphericity with a p -value less than 0.01 ($p < 0.1$). These tests indicated that CFA may be performed since all requirements were satisfied.

From the initial 105 items, 83 items loaded significantly across six dimensions. This finding was supported by the scree plot that showed that a maximum of six factors may be extracted from the model (see Figure 3).

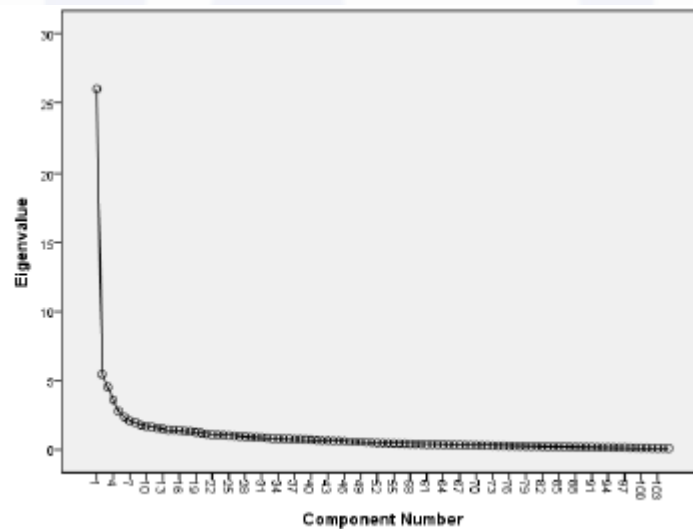


Figure 3. Scree plot for ASELQ

The model derived was satisfactory with a total variance explained of 42.63%, which meant that the ASELQ accounts for 42.63% of explaining socio-emotional learning for adolescents. Finally, the resulting scale reliability was $\alpha = 0.96$, which indicated that ASELQ is a highly reliable scale since the reliability score was greater than 0.70.

Table 3. Items loading in each factor

Item No.	Item	Component
Category 1		
89	Helpfulness when someone is hurt	0.736
87	Caring about others' feelings	0.672
94	Awareness of responsibility in decision-making	0.666
72	Perception of how family cares about him/her	0.665
73	Giving support to others	0.660
85	Helping other people	0.659
86	Being nice to other people	0.650
74	Acknowledging possibility of support from others	0.648
70	Having friends who care about him/her	0.644
71	Knowing where to seek help	0.642
90	Volunteering to help	0.641
96	Using both heart and mind to make choices	0.614
67	Seeing others perspective before criticizing	0.612
99	Looking at pros and cons before deciding	0.590
92	Consulting family before deciding	0.570
77	Respecting other people	0.562
88	Sharing to others	0.535
80	Taking turns in conversation	0.533
91	Consider others in decisions	0.490
75	Building friendships	0.470
83	Using appropriate gestures in communication	0.467
95	Focusing on goals during decision-making	0.461
93	Not using emotions only in decision-making	0.459
84	Using eye contact in a conversation	0.454
54	Respect other's views	0.453
57	Concern for less fortunate	0.451
103	Taking little steps before deciding	0.443
69	Parents are patient with him/her	0.412
76	Dealing with other people	0.410
Category 2		
32	Achievement of goals	0.656
33	Making clear plans	0.635
35	Setting standards for himself/herself	0.626
11	Identification of one's feelings	0.589
79	Trouble joining conversations	0.572
9	Feelings about situation and things	0.521

Item No.	Item	Component
16	Feeling left out	0.517
81	Blank facial expression	0.491
82	Flat or monotonous voice	0.481
15	Difficulty making friends	0.476
14	Doing bad things	0.468
18	Frequent sadness	0.467
68	Perception of other people towards him/her	0.436
58	Seeing other people's perspective	0.416
13	Getting in trouble	0.416
34	Value of achieved goals	0.409
Category 3		
21	Physical self-care	0.624
7	Loving one's self	0.608
4	Respecting one's self	0.592
22	Emotional self-care	0.591
28	Focusing on the present task	0.566
17	Being a happy person	0.541
23	Mental self-care	0.534
20	Peers think he/she has good ideas	0.531
19	Being an important member of the group	0.485
27	Self-discipline	0.475
12	Satisfaction with physical appearance	0.469
10	Understanding reasons for own behavior	0.467
5	Knowing strengths and weaknesses	0.463
8	Awareness of thoughts	0.458
2	Awareness of boundaries/limitations	0.453
3	Awareness of sexuality	0.420
24	Time management	0.408
Category 4		
78	Dominating conversations	0.560
59	Difficulty seeing things from others' perspective	0.526
63	Undisturbed by others' misfortunes	0.445
97	Making decisions without consideration of implications	0.415
Category 5		
49	Determining others' interests or preferences	0.647
44	Identifying people's motivations	0.586
45	Awareness of people's issues in the community	0.520
65	Awareness that there are two sides to every story	0.462
50	Listening to others' perspective	0.422
61	Feeling protective of others who are taken advantage of	0.407

Item No.	Item	Component
Category 6		
41	Controlling his/her reactions	0.668
38	Keeping an even temper	0.638
40	Looking for creative ways to alter difficult situation	0.606
43	Looking for ways to replace losses	0.601
39	Staying calm during arguments	0.600
31	Monitoring own progress	0.515
30	Track behavior towards a goal	0.452
42	Growing by dealing with difficulties	0.421

Reliability

Reliability is defined as the consistency of a tool. It pertains to internal consistency (average intercorrelations among the items) or the test's ability to yield similar results across time or groups (Souza et al., 2017). The resulting scale reliability was $\alpha = 0.96$. Table 4 presents the reliability coefficient for each of the five domains.

Table 4. Reliability measures for each SEL domain

Categories	Number of items	Cronbach's Alpha
Self-awareness	20	0.74
Self-management	23	0.87
Social awareness	29	0.89
Relationship skills	19	0.84
Responsible decision-making	15	0.88

CONCLUSION

Based on the scale creation process, reliability testing, and exploratory factor analysis, it was found that the ASELQ is a valid and reliable measure for evaluating SEL among adolescents.

As shown by their average ASELQ score of 3.74, the participants in the research had a comparatively high degree of social-emotional learning. The five SEL domains, (1) Self-awareness, (2) Self-management, (3) Social awareness, (4) Interpersonal skills, and (5) Responsible decision-making, had higher scores. These findings suggest that participants had more positive characteristics in these areas.

The ASELQ's psychometric characteristics were investigated to determine its validity and reliability. Its ecological validity was assured in the pilot testing, ensuring that it reflects the youth's circumstances and experiences. The questionnaire's content validity was established via expert review and committee deliberations. This step guaranteed that the social-emotional learning domains were sufficiently addressed. The proposed model of social-emotional learning was confirmed by factor analysis. It also identified six components that accounted for 42.63% of the variation and evaluated construct validity. With an alpha value of 0.96, the ASELQ demonstrated good internal consistency and dependability.

This study's results advanced social and emotional development by offering a validated

instrument for adolescents. Teachers, researchers, and other professionals dealing with the youth may evaluate their SEL capacities and pinpoint areas that need development using the ASELQ. It has been advantageous in many areas to emphasize the value of the youths' social and emotional health in educational development initiatives. Investing resources in knowing their psychological needs will promote desirable outcomes. Examples of these are: developing social skills, promoting academic progress, reducing psychological discomfort, and appropriately managing behavioral dysfunctions.

Supporting socio-emotional development has long-term effects on the youth's general health and scholastic achievements. A link between improved socio-emotional skills and behaviors exists. These behaviors include a history of job retention, strengthened relationships, and proactive deterrents from participating in illegal activities. In order to assist adolescents' holistic development and set them up for success in various spheres of life, SEL must be included in educational and development programs for teenagers.

This research developed and validated the ASELQ, a crucial tool for assessing adolescent SEL. The questionnaire can reliably and accurately predict the SEL competencies. This contention is because of its strong psychometric features and coherence with the CASEL paradigm. The ASELQ may help experts, scholars, and educators better understand adolescents' social and emotional needs. It may also assist in creating treatments targeted explicitly at addressing those needs. Lastly, encouraging adolescents social and emotional development may be advantageous for their general well-being and prospects of success in life.

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