

# Subjectivity Study on Self Direction in Nursing Students: Q Methodological Approach

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## Abstract

**Background/Objectives:** Self direction reportedly affects the career adaptability for college students and the career attitude development. This research will apply the Q methodology to investigate the types of self-direction of the students.

**Methods/Statistical Analysis:** To analyze the value, belief, and attitude of the students in the department of nursing toward self-direction, we coded and input the collected data into the computer after completing the survey for the 23 people who were selected as P sample. We handled Q classification using QUANL PC program and acquired the result.

**Findings:** The result of analyzing the subjectivity of the students in the department of nursing toward self-direction using PC QUANL showed three types. Each type reflects the subjectivity of the students in the department of nursing toward self-direction to investigate the types of self-direction of the students in the department of nursing, and explain and understand the characteristics. Among the total research participants of 23 people, 4 people belonged to the first type, 9 belonged to the second type, and 10 belonged to the third type. People with higher factor weight in each type are the typical or ideal people in the type they belong to, representing the type. **Improvements/Applications:** This research shows that self-direction raises the self-efficacy and performance toward the studies in major, giving sense of satisfaction and eventually creating positive prospects in the studies in major.

**Keywords:** Anaphora Resolution; Linguistic Rule, Rule Based Method

## 1. Introduction

Self-direction in learning is a term which was first used in the personal responsibility disposition model. It is a concept that focuses on the internal and personal characteristics of the learner. Here, personal responsibility means that individuals take responsibility as agents of their thoughts and actions and that they have a control over the situations and the environment in dealing with them. That is to say, the self-direction in learning is the

personality characteristics of individuals, which indicate the degree of effort and intention to accomplish learning under their responsibility. It is the disposition and action of leading in which individuals can make their own decisions on learning and push it forward on their own. The characteristics of this self-direction in learning emphasizes the independence and autonomy, but we can see that it actively utilizes others and environment as a learning resource in the process of planning, performing and evaluating learning. In other words, self-directed

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in learning is not something that is separated from the external environment but the interaction with the learning environment that surrounds the learner<sup>2</sup>.

According to the meta-analysis of the 67 pieces of data conducted by McCune<sup>3</sup>, self-direction in learning is linked to the activity level of self-directed learning, positive concept of the self, education level, self-development, autonomy, adaptability in social relationship, and the years of work. Also, it had significant relationship with age and gender among the demographic variables. However, this result needs to be verified as there are previous researches claiming that females had higher self-direction than males<sup>4,5</sup>, that there was no difference according to gender, and that there was also no difference according to gender in the research targeting at college students<sup>6</sup>.

And self-direction in learning is a personal characteristic in which individuals have a control while trying to complete their learning under their responsibility; self-direction in learning can be a personal variable that affects the career adaptability. People with high self-direction in learning systematically activate and maintain their perception, action, and emotion to achieve their learning goal, effectively creating the outcome by actively utilizing others and their environment as learning resources. The ability that this self-direction in learning has makes people recognize themselves as active agents who lead the improvement of the employment situation even under the unpredictable situation<sup>7</sup>, and plan and adapt to the career by utilizing the possible opportunities that they can use in their surroundings under the changing career environment and adapting their career expectations to the changes.

Previous researches have shown that the self-direction in learning among college students is related to the overall adaptation to school and decisions on their career in the future<sup>8</sup>. In the area of career, college students with high self-direction raise the possibility of getting a job through their self-directed search activities to find information on the career world while lowering the rate of turnover and early retirement<sup>9</sup>, which makes self-direction an active strategy at a personal level<sup>9</sup>. Self-direction means the behavioral characteristics of the learners in which the learners plan their learning in a self-directed way, form the resources, and evaluate the outcomes of the learning on their own. It is a concept that includes the self-directed learning attitude and behavior as well as the personality aspect of the learner<sup>10</sup>. The sub-elements that compose the self-direction include self-efficacy as

an effective learner, responsibility for learning, enthusiasm for learning, independence or autonomy, openness to the experience, and creativity. These learner characteristics are known to actually make the self-directed learning revealed<sup>11</sup>.

Self-direction reportedly affects the career adaptability for college students and the career attitude development of the adult learners<sup>12</sup>. As such, when learners perform the process of planning the learning they need, tuning up the learning process, and reflecting on the learning outcomes by forming the learning motivation on their own, it can bring positive effects in important areas of life such as career planning and career development. In this respect, we can infer that the performance level of career search activities can be enhanced by raising the self-direction of the college students. With these characteristics, self-direction has been discussed as a core capacity of life career in the knowledge-information society, proving that self-direction of the adult learners in the organization has a positive effect on the career adaptability of the college students as well as it contributes to the activation of the organization and self-innovation, having a positive effect on the enhancement of labor quality and organizational adaptation<sup>13</sup>. We can see that when individuals have high self-direction, it brings a positive effect in terms of the important aspects of life related to career including vocational life, future planning, and career development. It is quite predictable from this that college students with higher self-direction will perform career search activities more actively, which is also supported by the results of the previous researches<sup>14</sup> which showed that self-direction of the college students had a positive impact on the career search activities.

In this regard, this research will apply the Q methodology to investigate the types of self-direction of the college students.

## 2. Research Methods

### 2.1 Selection of Q-Samples

Research The population of Q-samples was extracted by collecting the data through literature review and in-depth interviews on the self-direction of the students in the department of nursing. To select the Q-samples, we went through the examination and revision by professors in the department of nursing who have a lot of experiences in the Q methodology research field to see if the theme and

the contents of the categorization are valid. The final 34 statements were selected among the chosen statements.

## 2.2 Selection of P-Samples

The Q-methodology is not limited in the number and selection of people because unlike the qualitative research, it deals with the differences in the importance or the significance within individuals rather than the differences between individuals. Here based on the small sample theory which claims that when P-sample gets bigger, the characteristics do not clearly appear because multiple people will be concentrated on a single factor, the samples which have the same number as the statements are ideal<sup>15</sup>. In this regard, this research selected 23 students from the department of nursing who agreed to participate in the research. Before starting the research, we received the informed consent from all the applicants and explained that they can quit during the research whenever they want. We explained the goal and process of the research to the target of the research before collecting the data and asked them for consent, and promised that we will guarantee anonymity and never use the survey and interview contents for other purposes.

## 2.3 The process and Method of Q Classification

After explaining the goal and method of the research and asking for their consent, we had the participants read the Q statements, check if there are questions that are hard to understand, and complete the questionnaires to investigate the socio-demographic characteristics. The participants selected the statements they agree the most and also the statements they disagree the most according to their opinions, and classified them by 9-point scale. To make the opinions approach the normal distribution, we made forced distribution according to the principle of Q methodology. Here, we had the participants write the reasons for selecting the 6 statements which are at the opposite extreme.

## 2.4 Data Processing and Analysis Methods

To analyze the value, belief, and attitude of the students in the department of nursing toward self-direction, we coded and input the collected data into the computer after completing the survey for the 23 people who were selected as P sample. We handled Q classification using QUANL PC program and acquired the result.

## 3. Research Result

The result of analyzing the subjectivity of the students in the department of nursing toward self-direction using PC QUANL showed three types. Each Q-type forms a type with the people who have similar opinions and thoughts according to their state of consciousness about self-direction that the participants perceive. Each type reflects the subjectivity of the students in the department of nursing toward self-direction to investigate the types of self-direction of the students in the department of nursing, and explain and understand the characteristics.

Among the total research participants of 23 people, 4 people belonged to the first type, 9 belonged to the second type, and 10 belonged to the third type. People with higher factor weight in each type are the typical or ideal people in the type they belong to, representing the type.

According to the result of analyzing the variate and the factor weight for each type and conducting factor analysis of the three types using Q sample, the total variate explains 45.17%, and as for the explanatory power of each type, the first type was 25.92%, the second 11.72%, and the third 7.53% in Table 1.

**Table 1.** Eigen value and variances, cumulative variance

	Type 1	Type 2	Type 3
Eigen value	15.2228	3.8951	3.0263
Variance	.2592	.1172	.0753
Cumulative Variance	.2592	.3902	.4517

### 3.1 Characteristics of Each Type

Among the statements that selected the questions of the most positive or most negative in each type, the characteristics of each type were described focusing on the items whose standard score (Z-score) for each type was  $\pm 1.00$  or higher. And to take a closer look at the characteristics of the participants of each type, individual in-depth interview was conducted. The first type was classified into the self-problem-solving type, the second type into the effort type, and the third type into the continuous learning type.

As for correlation in each category, .493 was derived between category 1 and category 2 followed by .640 between category 1 and category 2 and .490 between category 2 and category 3 in Table 2.

**Table 2.** Correlation between types

	Type 1	Type 2	Type 3
Type 1	1.000		
Type 2	.493	1.000	
Type 3	.640	.490	1.000

### 3.1.1 The First Type: Self-Problem-Solving Type

The subjective statements of the 12th participant (factor weight 1.7329), who represents the type 1, say “I tend to complete the work that I must do or want to do no matter how long it takes.”, “It is because knowing to learn efficiently is beneficial in many aspects.”

The subjective statements of the 9th participant (factor weight 1.2325) say “I feel good when solving the complicated problems because I thought about them a lot and made a lot of effort.”, “I try to find the information that I need in whatever way.” The first type is the type in which the participants try to solve the problems facing them on their own, being named as “self-problem-solving type” in Table 3.

**Table 3.** Representative items of Type 1

No.	Q Statement	Z-score
36	I can learn things that I am interested in even if they are hard to learn.	2.29
15		1.71
37	I like it when the professor tell the students what to do exactly in class.	1.62
24		1.51
16	The more difficult and complicate the problem is, the happier I feel after solving it.	1.49
6	Great people are those who always try to learn. It is totally up to myself whether I learn well or not. Learning the way of studying is very important to me.	1.18
23	If I know as much as I get a good score on the exam, it doesn't really matter if I have things that I don't understand.	-1.03
11		-1.17
39	I play a role of a leader in the situation of studying in a group.	-1.62
25		-1.72
40	It is interesting to discuss problems which are hard to judge right or wrong. I like to think about things that will happen in the future. When the problem is hard to solve, I would rather give up than keep trying.	-2.26

### 3.1.2 The Second Type: Effort Type

The subjective statements of the 3rd participant (factor weight 1.4524), who represents the type 2, say “It will be beneficial to learn things that we need in the course of life other than studying.”, “I respect people who always try to learn as it is not easy to have courage and determination to learn new things.”

The subjective statement of the 21st participant (factor weight 1.1129) says, “I could feel that my attitude changes how much I learn.” It is a type in which people try to solve problems that they face with new methods, being named as “effort type” in Table 4.

**Table 4.** Representative items of Type 2

No.	Q Statement	Z-score
35	I do not like to solve problems with multiple answers.	2.12
34		1.53
27	I like to use a warranted method that has been used better than to try new methods.	1.42
24		1.39
16	I try to connect what I am learning to my long-term goal.	1.28
6		1.15
15	Great people are those who always try to learn. It is totally up to myself whether I learn well or not. Learning the way of studying is very important to me. I like it when the professor tell the students what to do exactly in class.	1.05
19	I am not responsible for what I did not learn.	-1.20
30		-1.24
11	Education makes me think who I am and what I am will be.	-1.27
33		-1.62
32	I play a role of a leader in the situation of studying in a group.	-2.02
31	I like to discuss different opinions. I think of various methods when I try new things. I tend to come up with unique ways when doing something.	-2.12

### 3.1.3 The Third Type: Continuous Learning Type

The subjective statements of the 7th participant (factor weight 1.8236), who represents the type 3, say “We need to learn in order to fill up what we are missing.”, “People who always want to learn new things are those who continuously supplement things they are missing.”, and “As there are not many people who

know things well from the start, I think people who try to learn throughout their lives to overcome this are really great.”

The subjective statements of the 19th participant (factor weight 1.0723) say “I think life is about growing through learning and realizing every moment.”, “People cannot be perfect and always have to adapt to the new environment. So I think we need to learn and practice.”, and “Studying is necessary for development, and I would like to learn more as it is needed.” The third type is a type in which people try to solve problems while learning, being named as “continuous learning type” in Table 5.

**Table 5.** Representative items of Type 3

No.	Q Statement	Z-score
29	Humans are entities that learn throughout life.	2.32
24		2.04
21	Great people are those who always try to learn. I respect people who always learn new things.	1.80
23	If I know as much as I get a good score on the exam, it doesn't really matter if I have things that I don't understand.	-1.00
25		-1.08
19	I like to think about things that will happen in the future.	-1.20
39		-1.52
38	I am not responsible for the fact that I did not learn.	-2.10
40		-2.11
5	It is interesting to discuss problems which are hard to judge right or wrong. I do not try to understand things that I don't know very well. When the problem is hard to solve, I would rather give up than keep trying. My life is not greatly affected by new things that I learn.	-2.23

## 4. Discussion and Conclusion

This research showed three types of self-direction for the students in the department of nursing.

Self-direction has multi-faceted properties in which meta-perception strategies such as planning and monitoring of the learner, motivational factors such as voluntary participation and maintenance of objectives, and behavioral factors such as environment restrictions and behavioral control of the

learner work together in integration. This kind of self-direction has much to do with the intention of maintaining learning and level of immersion in learning<sup>14</sup>. Therefore, the result of this research shows that self-direction raises the self-efficacy and performance toward the studies in major, giving sense of satisfaction and eventually creating positive prospects in the studies in major. Also, as learners with high self-direction manage their learning resources on their own and have a strong tendency of playing a leading role in decision making and chosen behaviors in the course of learning<sup>15</sup>, reflecting these characteristics of the learner is necessary.

Author in<sup>1</sup> argued that self-direction reflects the internal psychological characteristics which seek self-control and autonomy of the learner, and that self-responsibility disposition in which the learners control the environmental elements and they play a key role in the self-directed learning process. Therefore, with the result of this study, the types of self-direction should be applied to the development of education and programs that can enhance the learning efficiency and performance of the learners.

The work of nursing in the future is rapidly changing<sup>16</sup>. For the nurses to cope with this efficiently, self-directed learning needs to be practiced from the department of nursing, and the learning strategies to fit this need to be developed<sup>17</sup>. For doing this, this research is expected to be utilized as practical data to develop and apply various self-directed learning types for the students in the department of nursing.

In this regard, this research tried to examine the subjectivity of the types of self-direction for the students in the department of nursing and three types were found. As the meanings of each type are different with different self-direction of each individual, the intervention strategies need to be provided differently accordingly, and individualized and specific intervention methods need to be prepared according to the characteristics of the types.

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