Optimising Cooperation Between School Personnel and Students' Self-Development in the Industrial Revolution 4.0

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Many challenges must be faced in the industrial revolution 4.0. In the scope of education, students are expected to develop themselves in the personal, social, learning and career fields. To help students develop these four fields, collaboration and cooperation between school personnel and the community (including parents) is needed. In order for this collaboration to be effective, efficient and practical, a reliable model is needed. The design of the model developed is based on the results of research related to the collaboration between school personnel in their service to students, especially guidance and counselling services. The research involved 428 respondents from various regions in Indonesia.

Keywords: Cooperation between school personnel, self-development, industrial revolution 4.0.

I. INTRODUCTION

The era of industrial revolution 4.0 demands a lot of changes in various aspects of life, including in the competencies that must be possessed by individuals (Z Ardi et al., 2019, 2018; D Daharnis et al., 2018). Unlike what has been the case so far, intelligence and academic achievement shown by student report cards or student GPAs are considered to play a major role in the success of individual lives (Ifdil et al., 2018). In the era of industrial revolution 4.0, competencies that are also important for students are related to hard skills and, more importantly, soft skills. This is indicated by the results of Thomas J. Stanley's research, which indicate that intelligence is number 21/100 factors that determine the success of one's life. Graduating with the best score is 30/100. (Madsen, Bilberg, & Hansen, 2016; Mourtzis, 2018; Richert et al., 2016).

Sequentially, 10 factors that determine a person's life success in the industrial revolution era 4.0 are (1) honesty, (2) discipline, (3) interpersonal skills, (4) the ability to work hard, (5) the love of work, (6) leadership mentality, (7) enthusiasm and competitiveness, (8) good life management, (9) support from partners and (10) the ability to sell ideas and products (Almeida & Simoes, 2019; Made Sudana, Apriyani, & Nurmasitah, 2019).

In order to achieve individual life success, it is necessary to have an education that develops a successful life (*tri sukses*). This leads to learning, personal, social and career success. It is implemented in formal education ranging from elementary/basic education to higher education (Siegel et al., 2018; Thomas, Alphonsa Jose, & Aneesh Kumar, 2018; Watkinson, Goodman-Scott, Martin, & Biles, 2018). Successful development must also be carried out in informal (family and community) education (Syahniar et al., 2018).

In formal education, successful development is carried out in four fields of development. These are personal, social, learning and career development fields (Zadrian Ardi & Maizura, 2018; Zadrian Ardi, Putra, & Ifdil, 2017). The development of the four fields is carried out in a system that requires collaboration and cooperation between various sub-systems. These involve school personnel and family and community support.

Collaboration and cooperation between various school personnel, including parental and community support in the development of the four fields, requires a model that is effective, efficient, practical and reliable. To achieve a model that is effective, efficient, practical and reliable, the results of research that support the development of the intended model are needed (Ifdil et al., 2018; Rangka et al., 2019).

This research is a preliminary study of students' conditions as a result of the lack of collaboration between school personnel and other related parties (Ristuccia, 2019). From the results of the study, a model that is effective, efficient, practical and reliable (in terms of its system, material, container, media, forms, strategy and role of school personnel) is designed (Afdal et al., 2019; Hidayat, Herawati, Syahmaidi, Hidayati, & Ardi, 2018).

II. METHOD

This study involved 428 respondents with a diverse distribution of demographics originating from various regions in Indonesia. Sampling was done randomly by taking into account the diversity of population demographics. The data in this study was obtained through the deployment of Daharnis-Zadrian Majoring Choice Inventory (DZ-MCI) with a Cronbach Alpha value of 0.91. The DZ-MCI measuring used a Likert attitude scale with 25 statement items (Daharnis Daharnis & Ardi, 2016b). Data analysis was performed with simple statistical techniques (Mean, SD, Max, Min and Percentage).

III. RESULT AND DISCUSSION

Clarity of information about higher education

The data from this study is thought to be the impact of a lack cooperation used as a source for the development of models related to the field of career guidance. These have an impact on other fields, especially learning. Data on the development of the career field is related to the selection of further education for students. Data on information clarity about higher education, chosen by respondents, is illustrated in Table I.

TABLE I.

Level of clarity about higher education

Information about higher education	Mean	%	Category
Majors	3.78	75.64	High
Learning systems	3.29	65.73	Moderate
Campus atmosphere	3.03	60.62	Moderate
Campus environment	3.12	62.33	Moderate
Lecturers	2.96	59.19	Moderate
Impressions	3.09	61.71	Moderate
Professional Orientation/career prospects	3.47	69.38	High

Based on Table 1, it is known that the level of clarity of information obtained by respondents (students) is still far from expected. In general, it is in the medium category, even though there are two aspects that are in the high category (but still in the lower level). The aspect that is already quite high is the general nature, namely information about the department/study program and the prospects of the department to be chosen.

It is known that the information is mostly obtained from BK teachers. Consequently, things that are specifically related to majors (learning systems, campus atmosphere, campus environment, teaching staff/lecturers) are not made very clear to the respondents before they choose the department they occupy.

Conditions like this indicate a lack of collaboration between BK teachers and subject teachers in the provision of information. This information is related to specific matters about the department to be chosen. This is related to the principle of providing information, namely information provided by people who master the information and ensure it is new and up to date (Lim & Wong, 2018).

To overcome this problem, school personnel should cooperate with each other and collaborate (Tadlock-Marlo & Hill, 2019; Witkowsky & Clayton, 2019). This should be done through the division of roles and tasks using media and interactive forums such as consultations, meetings, incidental meetings, case conferences and social media. It should follow the steps and Standard Operating Procedures (SOP) that should be contained in the model of cooperation between school personnel. With the existence of a complete, effective, efficient, practical and reliable model of collaboration, it is expected that the information received by students in choosing further education will be well understood and be the main reference in decision making. This is because the determination of a choice must be supported by clear and complete information (Mousavi et al., 2018; Watkinson et al., 2018).

In addition to clarity, information was revealed about respondents' considerations in the selection of further education, as shown in Table 2. There are three aspects considered by respondents in the selection of further education. Although all three are already in the high category, the results were not expected. The thing that requires special attention is the immaturity of students in choosing the secondary education they currently occupy.

TABLE II.
Higher education selection based on considerations

Consideration of majors	Mean	%	Category
Favorited majors	3.43	68.52	High
Maturity of consideration when choosing	4.00	79.91	High
Consideration of alumni	3.41	68.29	High

This can cause students to fail in further education. For instance, students may tend to want to change majors or repeat the college entrance test. In accordance with the discussion on the contents of Table 1, this can be caused by lack of cooperation and collaboration among school personnel (counsellors and subject teachers), communities and parents, including alumni, as presented in Table 2.

Collaboration with alumni is more important, especially alumni who are studying in higher education. They can provide more up to date information because their information and conditions are up to date. These are the main requirements in providing information (Lim & Wong, 2018; Made

Sudana et al., 2019). A model of collaboration among all parties, including alumni, will be formulated and developed.

TABLE III.

Determination of higher education based on ratings

Determinants of advanced education	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Score	Rating
Student-self	305	61	26	6	8	1867	1
Parents	77	225	45	37	15	1509	2
Relatives	17	40	141	55	77	855	3
Subject teachers	18	33	70	98	82	710	4
Counsellor	18	34	69	87	95	702	5
Friends	10	26	54	94	90	594	6
Others	11	8	6	13	10	141	7

Although it was dominated by respondents themselves (71%) as the first determinant of further education, there were still other parties as the main determinants. In addition to other determinants, things that need to be considered are parents as determinants (18%). It is expected that parents do not impose their will in the selection of their children's continuing education. If there is coercion of will, it can have a bad effect on both the students themselves and their parents.

In order for the determinants of students' choice regarding further education to be a feature of independence, after consulting with related parties, collaboration between personnel and parents is needed. This is so that the selection of further education is done carefully (see Table 2). The creation of cooperation requires a model that is effective, efficient, practical and reliable. This is because it works based on a model/guideline that is proven to cause the selection of appropriate and thoughtful majors.

Cooperation and the collaborative aspects of counsellors' interactions with school personnel
In addition to the findings presented in the previous section, various research findings also reveal the importance of optimising the implementation of education at the secondary school level, among others. Research involving all high school students throughout West Sumatra shows that learning culture is related to prior activities. This is true during and after the learning process, which showed low quality achievements. These include the rate of students studying material before the learning process was conducted (achievement level 54.8%), students learning according to subject matter when a teacher was absent (achievement level 53.8%) and students learning exercises material in order to deepen their knowledge even though not assigned to by a teacher (55% achievement level) (Daharnis, Erlamsyah, Ifdil, Ardi, & Hariko, 2014). The conditions of these learning activities produces learning outcomes that are not optimal for students.

The problems of learning and self-development should be prevented, starting from the level of basic education (Ismail & Kevelighan, 2018; Savoy, Markey, & Rylander III, 2018), among others, through guidance and counselling services. This assumption is based on the condition of the existence of counsellors (especially in West Sumatra), which reached 99.18% (Daharnis Daharnis & Ardi, 2016a). Strengthening and optimising of the function of counselling services for student self-development can occur if there is solid collaboration between various parties and counsellors.

These collaborative efforts require clear, systematic and comprehensive program models/guidelines so that their achievements can be measured and evaluated on an ongoing basis. In realising an appropriate approach and model, it is necessary to identify aspects that should be the focus of cooperation between counselling teachers and school personnel.

Collaboration between counsellors and subject teachers
Counselling services in schools will find difficulties without coordination between counsellors and subject teachers. This condition is based on the position of subject teachers, who are vital in ensuring the success of counselling services. One of the significant roles of subject teachers is in the diagnosis of student learning difficulties. Subject teachers play an important role in the process of identifying the characteristics, location and causes of difficulties as well as the strengths and weaknesses of students who have difficulties. The conditions of these difficulties should be observed by subject teachers in real-time.

The follow-up to the analysis process of students who experience learning difficulties depends on the case. Excavation of problems and alleviation related to psychological conditions (non-subject matter) can be done by the counsellor. However, in relation to problems originating from the subject matter, the counsellor will transfer back to the subject teacher or other experts.

Based on the data that presented, the general problem that is the source of students' inaccuracy in deciding further studies and the incompleteness of information that supports them is the condition of suboptimal collaboration between counsellors and subject teachers. This is evidenced by the tendency of students to determine their choice of further study with information from themselves, parents and relatives, while counsellors and subject teachers only occupy the fourth and fifth ranks.
Subject matter teachers should ideally be able to provide truly adequate and comprehensive information about majors (especially those related to the subject teachers themselves). However, in reality, students do not get the information properly, especially from teaching staff in the campus environment.

Efforts to alleviate this condition through the cooperation model, involving counsellors and school personnel, should be able to accommodate all the findings. The model of cooperation can also be organised through a variety of institutions that are able to become a bridge between all school personnel, including parents and the community. This can take place in the form of meetings, discussions/consultations, incidental meetings, case conferences, social media and special meetings related to counselling services. The model of collaboration and cooperation between counsellors and

school personnel, in essence, can accommodate various institutions in various forms of these activities.

Collaboration between counsellors and school principals

Coordination between counsellors and school principals is also an important aspect in realising successful counselling services. One of the research findings in the previous section explained that one aspect that is considered by students in determining further studies is the existence of information and consideration from alumni. Of course, these activities will not be successful without the support of school leadership. This becomes one of the considerations in developing a model for counsellor collaboration with school personnel. The role of a school principal becomes very vital in relation to the coordination of counselling services, provision of facilities, guidance and supervision of counselling services.

IV. CONCLUSION

The development of technology in the industrial revolution 4.0 has had a major impact, especially in the field of education. It includes various aspects. Hence, changes are required in terms of students' mastery of various important competencies. In the era of the industrial revolution 4.0, important competencies possessed were not only related to cognitive conditions and academic achievement. They were also related to competencies involving hard skills and, more importantly, soft skills (D Daharnis et al., 2018; Suranata et al., 2018).

Mastery of the skills and competencies referred to is needed for education that develops four areas of success. These are successful learning, personal success, social success and career success. They should be implemented in formal education, ranging from lower education to higher education. They should also be carried out in a system that requires cooperation and collaboration between those in various sub-systems, including school personnel, families and communities (Zadrian Ardi & Sisin, 2018; Daharnis Daharnis & Ardi, 2016b; Yuca, Ahmad, & Ardi, 2017). Collaboration among school personnel, parents and the community develops the four fields. Students require a model that is effective, efficient, practical and reliable. To achieve a model that is effective, efficient, practical and reliable, the results of research that supports the development of the intended model are needed.

Based on the findings presented, the incompatibility of students with their choice of further study and the suboptimal learning process in general is the starting point for the development of counsellor collaboration and cooperation models with school personnel. This can be done by taking into account the orientation of the tasks, functions and roles of individuals. Collaboration and cooperation should be established in various forums, including meetings, discussions/consultations, incidental meetings, case conferences, social media and special meetings related to counselling services.

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