

Student demoralization in education The industrialization of university curriculum in 4 0 Era Indonesia

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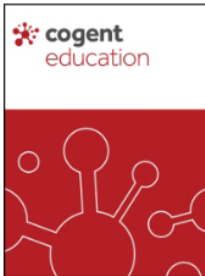
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EDUCATION POLICY | RESEARCH ARTICLE

Student demoralization in education: The industrialization of university curriculum in 4.0. Era Indonesia

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Abstract: Industrialization has transformed humans' perspectives and morality. At the same time, government policies have urged students to become innovators. This study argues that these policies have caused demoralization among Indonesian students in the Revolution 4.0 era. It applies a descriptive qualitative approach, using observation, interviews, and reviews of formal and informal policies available online. It objectively illustrates how universities have transformed in response to government policy. As shown in previous studies, higher education processes have ignored morality as they have industrialized and strived for innovation. Educational institutions are unable to act autonomously, being limited by state interests. At the same time, they have failed to dynamically articulate the meaning of Industry 4.0, focusing solely on products and the workplace. Critique and reflection are necessary to imbue students with civility and integrity. Such a constructive response is necessary to curb the demoralization process that has occurred in the Industry 4.0 era.

Subjects: Higher Education; Moral & Values Education; Curriculum Studies; Education Policy & Politics; Information Technology

4 ABOUT THE AUTHOR

The authors are members of IA Scholars Laboratory (IASL) which in the past three years has focused the research on the technological and commercialization processes in the world of education that Indonesia has experienced in the last twenty years. Under the coordination of Prof. Irwan Abdullah, IASL has carried out various case studies in various regions. This paper which specifically discusses students demoralization was written together with a diverse approach in accordance with the field of study of each author, from the perspectives of anthropology (Prof. Irwan Abdullah), moral values (Dr. Mustaqim Pabbajah), religious studies (Dr. Hasse Jubba), education management (Dr. Nur Alim and Ratri Nurina Widyanti, MBA). All authors are permanent lecturers at various universities in Indonesia, such as Universitas Teknologi Yogyakarta (M. Pabbajah & R.N. Widyanti), Gadjah Mada University (I. Abdullah), Universitas Muhammadiyah Yogyakarta (H. Jubba), and the State Institute of Islamic Studies (IAIN) Kendari (N. Alim).

PUBLIC INTEREST STATEMENT

The enthusiasm of universities to respond to industrialization in line with the era of the Industrial Revolution 4.0 tends to deny the importance of character-oriented education. This trend is strengthened by government policies that prioritize aspects of innovation, creativity, and instrumentalization in the world of education. Moral aspects and students character become neglected. Higher education is "forced" by the macroeconomic situation to implement learning policies in line with the needs and interests of the industrial market. This article finds that tertiary institutions have become a state tool to produce graduates with competencies that are in line with the needs of the world of work and industry. Education becomes an institution of transfer of knowledge and skills in line with industry needs. This mission ignores the autonomous status of higher education and the ideology of national education to educate graduates who are moral, have integrity, and have characteristics that are in line with the nation's culture.

Keywords: demoralization; industrial revolution; industrialization of education; students; Indonesia

1. Introduction

Industry 4.0 has caused demoralization in general society, with social bonds eroding as individuals have become less concerned for each other. In academia, including in universities, there has also been a significant change. Universities have oriented themselves more towards the workplace than academia (Muhson et al., 2012) as government policies have reacted to the changes wrought by Industry 4.0 (Ghufron, 2018; Rohman & Ningsih, 2018; Soesatyo, 2018). Industry 4.0 refers to a situation in which products are rapidly produced with an emphasis on quality and quantity (Shawer, 2017). In this situation, educational institutions have been positioned as “factories”, producing graduates who are ready for industrial labor. According to Statistics Indonesia’s *The Workforce in Indonesia*, in February 2019 Indonesia had a workforce of 136.18 million, having grown by 5.17 million (3.95 percent) since August 2018 (workforce: 131.01 million) and by 2.24 million (1.67 percent) since February 2018 (workforce: 133.94 million). However, a workforce is more than quantitative; it also requires a moral quality and capacity for dealing with the current industrial revolution.

Demoralization in the Industry 4.0 era has received little attention from education researchers. Existing studies may be divided into three categories. *First*, studies that examine the reorientation of higher education as a result of the current industrial revolution. Such studies have found that universities emphasize students’ cognitive achievements over their affective development (Hennissen et al., 2017; Sutiyono, 2015; Sutyitno, 2012). This has been identified as the conceptual participative model (Sutiyono, 2015). *Second*, studies that position Industry 4.0 as an opportunity for preventing demoralization (Ecclestone, 2004; Heryanto, 2016)—understood as having both psychological and mental health components (Briggs & Macleod, 2006; Hillman, 2016; Liao et al., 2018). *Third*, studies that highlight the sub optimal performance of educational institutions, wherein curricula only introduce specific characteristics to students (Baygin et al., 2016; Lele, 2019; Mrugalska & Wyrwicka, 2017; Roblek et al., 2016; World Economic Forum, 2016; Xu et al., 2018). Such studies have failed to consider the consequences of Industry 4.0 on education and the demoralization of students.

This article seeks to fill this gap by describing the demoralization of Indonesian university students in the Industry 4.0 era. It does so by answering three questions. *First*, how have educational institutions responded to Industry 4.0? This question focuses on how universities have responded to the massive disruptions caused by the current industrial revolution. *Second*, how has demoralization occurred amongst university students as a result of innovative policies in the Industry 4.0 era? This question deals predominantly with how students’ morality has been affected by the new values brought by the current industrial revolution. *Third*, how have university policies influenced students’ competencies? These three questions are answered in the following sections.

This article departs from three arguments. *First*, the current industrial revolution has yet to receive a constructive response from higher educational institutions, and as such the moral values incorporated in their curricula have been degraded by government policies and even ignored as education has been industrialized and instrumentalized. *Second*, the lack of concern for morality has deleteriously affected students’ values and behaviors, limiting their understanding of etiquette, character, and spirituality. *Third*, higher educational institutions must accommodate morality in their curricula and balance moral teachings with industrial demands. In other words, education must maintain its idealism as it strives to create scholars with morality and integrity.

2. Literature review

2.1. Industrialization

Education's past contributions to development have transformed as materialism, capitalism, efficiency, and effectivity have been framed as life's ultimate goal. Unwanullah (2015) argues that, as social paradigms have shifted, the quality and success of education has been measured through students' ability to immediately enter the workforce. Education is seen as a capital investment, being used to support industrial activities (Ogasawara, 2018; Sulfasyah & Arifin, 2016). As education has industrialized, it has also been commercialized, and this has increased the cost of education, limited access, increased privatization, and reduced scholarship (Sulfasyah & Arifin, 2016). Studies have predominantly focused on the articulation of industrialization's benefits (Prasetyo & Trisyanti, 2018; Shaver, 2017), the transformation of higher education (Hensley, 2018), and the challenges faced by educators (Gazali, 2018; Grinin et al., 2015; Said, 2013).

As a concept, industrialization was introduced by Friederich Engels and Louis Auguste Blanqui in the mid-19th century (Usman, 2019). Today, industrialization has entered its fourth phase. Simon defines industrialization as the transfer of products and resources, as agricultural means of production have shifted to non-agricultural means (Chao et al., 2011). Higher education is used as a means of improving skills and professionalism to meet market and industrial demands. Higher education in China, for example, has successfully produced graduates who excel academically. There has thus been a significant gap between students' theoretical knowledge and the practical skills demanded by industry (Liu et al., 2012).

2.2. Morality

Numerous scholars have examined the question of morality in education (Jacobson, 2010; Joseph & Mikel, 2014; Krek et al., 2019; Qin, 2018; Shumeiko et al., 2015; Wang, 2011). One of the ultimate goals of education is the ability to distinguish right from wrong, good from bad (Ayeni, 2012). Morality is derived from the word *moral*, the behavioral norms that guide our lives (Potgieter, 2011). Schofield (in Ayeni, 2012) identifies morality as a social phenomenon, something intended to maintain harmony in social relations and ensure fairness in all interactions. Moral education, thus, teaches students to maintain peace and harmony (Ayeni, 2012).

Moral education is conveyed through schools and intended to create individuals with spiritual and moral integrity (Shumeiko et al., 2015). It thus serves to improve and reinforce students' morality, supplementing or even replacing families in the conveyance of prosocial values (Joseph & Mikel, 2014). Moral education refers to a planned and structured means of instilling students with positive beliefs and habits, as defined by social norms and character (Mulyani et al., 2017). Mulyani adds that, as part of value education, moral education must help students recognize and acknowledge the importance of moral values in their everyday lives, as only then will they be guided by said values in their individual and collective lives.

2.3. Instrumentalization of education

In all education systems, there are standards and guidelines that are used to measure and improve education quality. One commonly used instrument is accreditation, which Awaludin (2017) defines as the comprehensive evaluation of the quality of an education system by applying national standards to ensure accountability. Accreditation involves the comparison of schools' real conditions with established criteria (standards) (Sumintono, 2013, p. 2). It is thus the main measure of school quality, which can also be ascertained through evaluation of their curricula, learning processes, graduate competencies, staff evaluation and education, infrastructure, and funding (Cahyono et al., 2015).

According to Haryati (2014), the Indonesian accreditation system is intended to ascertain whether schools follow the National Education Standards (Standar Nasional Pendidikan, SNP), and higher levels of accreditation indicate higher quality. Haryati adds that education standards

and school accreditation have four main purposes: (1) as a reference for improving school quality and planning school development, (2) as a means of motivating schools to act competitively and improve educational services at the regional, national, and international level, (3) as useful feedback for helping schools implement their vision and mission, and (4) as useful information for schools, as learning communities that receive government, social, and private sector support, to improve their professionalism, morality, human resources, and finances.

3. Methods

In the current era of industrialization, demoralization has affected all aspects of the educational system. Higher education has failed to provide moral education, and as such a new morality has emerged. The demoralization that has plagued students in recent years requires significant attention. As such, this article focuses on several cases in which students' morals have eroded as a result of universities' spontaneous response to government policies in the Industry 4.0 era.

This study is a qualitative one, with data being collected through observation, interviews, and document review. Observation was used to see how universities have responded to innovative policies in the Industry 4.0 era, as well as how students interact with their lecturers in class. Various systems that have supported curriculum changes were also observed. This was complemented by a review of the formal policies that have been ratified by the Ministry of Research, Technology, and Higher Education, as well as the informal policies that have been socialized through online media. Interviews were conducted with lecturers to identify various forms of demoralization amongst students, as well as lecturers' perceptions of this phenomenon.

Information for this article was obtained from informants who were asked for data related to the four domains that were the focus of the study, namely the psychological domain, counseling, religion, and management. Observations and interviews were carried out for three months involving dozens of lecturers as informants. This research focuses on how lecturers view students in their direct interactions in the daily teaching and learning process. The lecturers were chosen because of their direct involvement in forming students' attitudes and behavior. It is they who witness the ongoing practice of demoralization among students.

For lecturers from the discipline of psychology, questions were raised in the mindset, idealism, individualism, empathy, and communicative involvement of students. Questions related to counseling include, among others, orientation, mentality, enthusiasm, resilience, deviation, and attitude of protest. In the realm of religion, emphasis is placed on aspects of ethics, morality, spirituality, respect, and violations that occur. For the management domain the questions are directed towards issues of rights, accessibility, participation, control, and discipline among students (Table 1).

Interviews were conducted in several sessions to ensure the availability of data. Some interviews were conducted formally by making special appointment, while informal ones took place openly and related to opportunities and conducive situations. The validity of the data in this study was achieved in two ways. First, the data needed is seen in a comparison between levels of knowledge, values and practices by which relationships and data synchronization can be carried out. Second, the validity is also determined by different categories of information that allow comparison and also testing of data. The data used are not only objective but also subjective so that truth can be obtained.

4. Results

4.1. Universities' responses to government policies in the industry 4.0 era

Government policies have transformed how society views educational institutions, including universities. As policies have changed, they have been used by universities as guidelines and shaped the learning process. Innovation has thus become prominent in universities' practices and policies,

Table 1. Data knowledge, values, and practice

DOMAIN	DATA COVERAGE		
	KNOWLEDGE	VALUES	PRACTICE
PSYCHOLOGY	Mindset Selfism Existence Competition Idealism	Empathy togetherness Egoist Disregards Generality	Late response Individualism attachment isolated Identification
COUNSELING	interests Orientation Perception The self The others	Interconnected Dependency Resilience Spirit Sensitivity	Deviance Accommodation Protest Connection Agressive
RELIGION	Morality Ethics Openness Knowledge Communication	Politeness Respect Religiosity Obeying spirituality	Time allocation Responsibility Unstructured Violation Performance
MANAGEMENT	Moral Structuring Object matter Right Egalitarianism Achievement	Responsibility Accessibility Empowering participation Product Oriented	Control Discipline Resistance Inclusiveness Worker oriented

as they have prioritized products and academic skills over morality. Universities are expected to promote innovation, to instill students and lecturers with a creativity and innovativeness.

Two types of policy have promoted innovation. First, the written policies that have been passed by the government through the Ministry of Education and the Ministry of Research, Technology, and Higher Education. The most prominent of these is Decree of the Minister of Research, Technology, and Higher Education No. 29 of 2019 regarding the Evaluation of Innovativeness. As seen in Table 2 below:

These policy points show that the government has emphasized students' and lecturers' capacity for developing products, and as such universities have prioritized the development of innovativeness and ignored morality. Students, thus, have focused on activities through which they can create innovative products and outputs. Innovation is thus measured in terms of the products it produces, as well as their benefits for the government, industry, and society.

Second, informal (oral) policies voiced by government representatives (in this case, representatives of the Ministry of Research, Technology, and Higher Education) at academic activities and seminars. Several of these informal policies are identified below (Table 3):

The formal and informal policies implemented by the Ministry of Research, Technology, and Higher Education have been responded by universities, which are used to create new innovators. As these institutions' have applied their interpretations of innovation, students' morality has shifted, becoming oriented predominantly towards materialism. Industry 4.0, through its emphasis on innovation, has unwittingly resulted in demoralization.

4.2. Student demoralization as a result of innovative policy in the industry 4.0 era

Industry 4.0 has resulted in extraordinary disruption and transformations, which have affected aspects of modern society (including industry, finance, society, and education). In higher education, for example, curricula have become oriented primarily towards industry and the workplace. Courses seek to promote the interests of industry, which itself constantly adjusts to meet the

Table 2. Written policies regarding innovation

No	Policy	Notes
Article 1, Paragraph 1	<i>Innovation refers to the process of research, development, and/or invention in order to create practical benefits and scientific advances, or by applying existing science and technology to products and production processes.</i>	Operational definition of innovation
Article 1, Paragraph 2	<i>Innovative products are products created through research and development that have been produced for and used by users.</i>	Innovative products
Article 1, Paragraph 3	<i>Innovation Readiness Level, henceforth IRL, is a method for estimating the degree to which a company, research and development program, and/or institution is prepared to innovate, as determined by its technology, market, organization, partnerships, risks, manufacturing capacity, and investments.</i>	Innovation Readiness Level
Article 1, Paragraph 4	<i>Technology Readiness Level, henceforth TRL, is the degree to which research results or technological developments, as measured systematically, can be adopted by users, including the government, industry, or society.</i>	Readiness of innovative products
Article 1, Paragraph 5	<i>Evaluation is the measurement of size, dimensions, or capacity using a standard or unit.</i>	Standardization of innovation evaluation
Article 1, Paragraph 6	<i>Institutions of Higher Education are educational units that provide higher education</i>	Institutions of Higher Education as the creators of innovation
Article 1, Paragraph 7	<i>The Director General is the Director General of Strengthening Innovation</i>	Person mandated with controlling and evaluating innovation

Source: Compiled by researchers, 2019.

needs of society. Industrialization has transformed classrooms into places where students' cognitive abilities are emphasized over their moral development. This has resulted in demoralization, as seen in the practices identified in Table 4 below:

Students' demoralization may be measured through four indicators. First, students' ability to follow instructions and obey campus rules. It was observed that students often ignore campus dress codes, even though these are clearly posted on campus. Some smoke on campus, despite prohibitions against such behavior, or follow the counseling schedules set by their advisors. It is common for students to be late in paying their tuition fees, and many use the money for other purposes.

Second is discipline. Students often enter class late, or submit their assignments after the due date. Their reasons are often illogical; since the implementation of e-learning, students have often blamed internet connection issues and other technical matters. Some students do not participate in classroom learning, but attempt to write their final exams. A lack of discipline is also evidenced in students' tendency to ignore processes in favor of instantaneous results; this has implications for students' moral development, which requires a lengthy process. Lecturers often feel pressured by students who, owing to their own unwillingness to follow the counselling process, are rushing to meet deadlines.

Table 3. Informal policy regarding innovation

Government Representative	Policy Narrative	Date	Source
Minister of Research, Technology, and Higher Education	<i>It is important for all ministries, as the users of innovative products, to coordinate. I hope ... let's love domestic products, let's love the products of Indonesia's children. For what? From Indonesia and to Indonesia, improving the Indonesian economy."</i>	11 September 2019	https://news.okezone.com
Director General of Innovation Reinforcement, Ministry of Research, Technology, and Higher Education	<i>... it is recorded that, between 2015 and 2018, industrial innovations at higher educational institutions have fallen into nine streams. He explained that, [the ministry] has urged universities to promote downstream innovation.</i>	26 December 2018	https://nasional.sindonews.com/read/1365723/144/finovasi-perguruan-tinggi-makin-berkembang-1545787655
Director of the Research and Development Institution, Ministry of Research, Technology, and Higher Education	<i>Students are expected to be capable of advancing research, not only meeting the criteria for graduation. Students must transform how they view research, understand it as an opportunity for innovatively developing themselves.</i>	14 March 2019	https://mediaindonesia.com/read/detail/223028-perguruan-tinggi-didorong-lahirkan-mahasiswa-inovatif
Director General of Research and Development Institutions, Ministry of Research, Technology, and Higher Education	<i>Five main components were used to evaluate the performance and quality of institutions of higher education in 2018. These components were human resource quality, institutional quality, student activity quality, research and service quality, and innovative quality.</i>	24 July 2019	https://republika.co.id/berita/pv4u4m423/kemristekdikti-kenalkan-metode-baru-pengukur-inovasi
Director of Innovative Systems, Ministry of Research, Technology, and Higher Education	<i>Requirements for innovation include downstreamability, benefit for society, and newness. He hoped that IRL can be referenced by companies, educational institutions, and research and development organizations.</i>		https://www.kompasiana.com/lsp3i/5d2708b607365e361412e5/inovasi-pendidikan-dan-kreatifitas-pembelajaran-di-perguruan-tinggi?page=all
Head of the Sub-Directorate of Innovative Systems and Networks, Directorate General of Innovation Reinforcement	<i>Improving Indonesia's capacity for innovation can be realized by improving the quality of universities' innovation management abilities, as universities are central actors who must collaborate with industry to improve their innovative capacity",</i>	11 October 2019	https://www.kompasiana.com/panduprasodjo/5da10db8097f36206f76ad02/sosialisasi-empat-kebijakan-menristekdikti-di-universitas-internasional-batam
Director General of Innovation Reinforcement, Ministry of Research, Technology, and Higher Education, and Director of Technology-based Enterprises, Ministry of Research, Technology, and Higher Education	<i>How academics produce innovative technology can benefit society and drive the economy.</i>		https://edukasi.kompas.com/read/2019/04/08/212204711-menumbuhkan-startup-kampus-lewat-cppbt-boot-camp-2019?page=all

Source: Compiled by researchers, 2019.

Table 4. Practices of demoralization among students

Obeisance	Discipline	Respect	Communication
Violations of campus dress codes	Tardiness	Not greeting others when entering class	Passive in class; silent during group presentations
Smoking on campus	Lateness submitting assignments	Protesting with unethical sentences	Actively consulting through gadgets and WhatsApp
Not acknowledging the time taken for consultation/counseling	Not participating in the learning process, but writing final examinations	Using cellular phones during class	Unwilling to communicate directly
Ignoring lecturers' academic requests	Uncompetitive	Not knocking on the door when entering a lecturer's office	Miscommunications resulting in misperceptions
Tuition money used for other purposes	Not graduating on time	Lack of sensitivity	Use of illogical reasoning
Individualistic and self-oriented	Not prioritizing end-of-term papers	Lack of respect for lecturers	Lack of analytical skills
Lack of mental capacity	Many off-campus activities	Aggressive when wanting something	Lack of verbal literacy

Source: Compiled by Researchers, 2019.

Third, there has been a shift in students' respect for and recognition of their lecturers. They are tardy, and when they attend class they do not heed their professors. They are inconsistent in their attendance. When they attempt to speak with their lecturers' in their offices, students fail to knock or make previous arrangements. Unlike previous generations, they do not recognize their lecturers as proxies of their parents on campus.

This was mentioned by UA, a lecturer:

"Apathetic ... students often ignore etiquette. Students in the current era also lack resilience dealing with problems, are prone to impulsive behavior, and act as they please without considering the risks. They may even act aggressively if there is something they desire"(interview, January 2020).

Fourth, students and lecturers often have difficulty communicating. Such difficulties have been experienced by various campuses, and as such several have implemented policies to promote ethical communication. Students act passively in class, but actively discuss matters on their cellular phones and on social media. Some even brazenly use WhatsApp to attempt to negotiate their grades with their lecturers. Students do not read academic literature. As such, their language tends to be simple and vernacular, and they lack the depth of reference to develop good arguments.

4.3. Influence of policy on graduate competencies

The government has identified specific graduate competencies through Article 5 of Decree ⁷ of the Minister of Research, Technology, and Higher Education no. 44 of 2015. Seven aspects are considered: content standards, process standards, evaluation standards, human resource standards, infrastructure standards, management standards, and funding standards. These competencies are intended to ensure that graduates have the skills, knowledge, and attitudes identified by Presidential Decree no. 8 of 2012 regarding the Indonesian National Qualification Framework.

Universities have sought to realize these competency standards by orienting their faculties and programs towards instilling students with three core competencies: 1) attitudes, as stipulated by

Appendix to Decree ⁷ of the Minister of Research, Technology, and Higher Education no. 44 of 2015 and reflective of universities' particular visions and missions, 2) knowledge, and 3) skills (divided into two categories: special skills, cultivated by study programs, and general skills, cultivated by universities). Graduate competencies are thus standardized using ⁵ a top-down process. Few universities have seriously considered morality and its importance, **focusing instead on socializing science and cultivating technical expertise** in order to improve productivity. Students are thus instilled with a technocratic paradigm.

Many universities have oriented students towards ⁵ the workplace, and thus inadvertently caused moral degradation. This has been exacerbated by **demand for a skilled and educated workforce that is** capable of competing on the complex global market. As production and enterprise have become multinationalized, workplaces have begun searching for workers around the world (Ghiara & Caminati, 2017; Handayani, 2015). Universities have responded by emphasizing the ⁵ workplace in their academic activities, even amongst prospective students. Similarly, they have **established partnerships with corporations to instill** students **with practical skills**. Campuses are thus no longer driven by academic interests, but by market interests.

Accommodating industries' ⁸ technological orientation, universities have unwittingly shaped students in several ways. Students have become dependent on technology, driven not only by **advances in computer and information technology**, but also by a desire for efficiency and practicality (Brodić & Amelio, 2020; Riggan et al., 2014). Technology has become an integral part of human life, and thus created new dependencies; when it relies on technology, the human mind loses its capacity to think rationally or make calculations (McCulloch, 2011). The intensive use of technology has also promoted a sense of selfishness, wherein students think only of themselves and advance only their particular interests. As such, they ⁸ are incapable of working collectively during group assignments (Abdullah, Jubba et al., 2019). **At the same time, students lose the ability to empathize with others and the sensitivity necessary to understand their contexts.** Ultimately, industrialization undermines collectivist traditions and promotes individualism.

5. Discussion

5.1. Demands of innovation policy

The idealism of academia is being tested by the innovation policies implemented by the government in the Industry 4.0 era. Ideally, universities should not only create graduates with the intellectual capacity to create innovative products, but also with the moral integrity to conduct themselves in society. Rachmah (2013) thus argues that industrialization has deleteriously affected students' spiritual and moral integrity, trapping them in materialism, hedonism, and even secularism and atheism (Purwaningsih, 2010).

Industry 4.0 has significantly transformed paradigms around the world. This is evidenced in several phenomena, including the shift from conventional transportation systems to online-based systems. Airports, for example, use modern automated systems for check-in, passport/visa checking, and boarding pass review. Few airlines still offer offline check-in services, relying primarily on their online systems. Technological disruption has also created new professions; YouTubers, website developers, bloggers, and game developers, for instance. At the same time, technology has; (1) facilitated consumers' access to products, owing to reduced production costs, (2) eased the adoption of modern technologies, (3) increased competition, (4) created new jobs and reduced unemployment, and (5) promoted economic growth (Usman, 2019).

However, the implementation of innovation policy at universities has reduced the quality of moral education. Little time is dedicated towards cultivating morality and integrity; instead, classes focus on production and innovation. At the same time, traditional spaces for moral education have been replaced by new ones that emphasize students' cognitive abilities. Three causes may be identified. *First*, curricula are oriented towards technology and innovation, rather

than morality. *Second*, educational activities focus more on creating innovative products rather than cultivating ethical and moral values. *Third*, universities emphasize students' cognitive abilities and skills rather than their ethical and moral behavior. All of these have contributed to students' demoralization, as evidenced through their interactions with their peers and their lecturers.

No less importantly, the workplace has changed as a result of globalization as well as advances in communication and information technology. Consequently, universities must prepare their graduates to compete in new environments. It is thus necessary to evaluate their performance, with recognition that higher education is inexorably linked with social phenomena (Handayani, 2015). The dynamic relationship between higher education and labor has been examined by several scholars, including Teichler (1999, 2004), Muhson et al. (2012), and Musyaddad (2013). Higher education's focus on developing students' job skills while increasing their own coffers must be seriously examined. Ideally, education should cultivate attitudes and habits that promote peace, truth, and love. Money may come and go; morality and moral behavior must endure. Education is a matter of life, not livelihood, and the way one lives is more important than one's social status. It must provide students with empathy and love, which will ultimately bring them closer to God. A true education is more important than a mere academic degree. Consequently, universities should not only promote cognitive development, but also affective growth (Jubba & Pabbajah, 2018).

5.2. *Shifting student morality at universities*

All industrial revolutions, from the first to the current one, have been hoped to improve productivity and facilitate human endeavors. Technological breakthroughs have been made at an accelerated pace. In this regard, universities have been used as media for shaping the workforce. This has deleteriously affected students' culture, ethics, and character (Abdullah, Hidayana, Kutanegara, & Indiyanto, 2019). Students no longer have the obeisance, nor the respect, expected of them. Similarly, they lack discipline, as seen by their frequent tardiness.

Social relations have similarly transformed in the Industry 4.0 era, as seen in the values embraced and behaviors practiced on campus (Sutiyono, 2015). This is evidenced in three phenomena. First, in their relationships with their lecturers, students no longer respect their professors as proxies of their parents on campus. Students are often incapable of communicating face-to-face with their professors, finding it easier to use social media and WhatsApp. Although media technology is designed to promote effective communication, it has weakened the bonds between students and their professors, thereby impeding the learning process.

Owing to the industrialization of university curricula, workplace experience has been emphasized; universities have even worked in collaboration with corporate partners to implement practical learning programs (Shatreovich & Strautmene, 2015). Such programs, often termed "internships" or "apprenticeships", are formally included in university curricula as a means of preparing students for the workplace (Shawer, 2017). Consequently, students tend to have pragmatic motivations: finding employment. Admittedly, these practical learning programs are effective means of stimulating students and ensuring they consider their future careers. However, it is important for universities to remember that students also require moral education, which will enable them to live and work in general society.

5.3. *University policies in response to demoralization*

In Indonesia, universities are regulated through the Ministry of Research, Technology, and Higher Education, and they are thus required to implement government policies. Universities have used three main approaches to respond to government innovation policy. First, the Ministry has socialized its innovation policy, promoted a shared understanding of innovation, and sought to incorporate this understanding in universities' vision and mission. Second, study programs have written their curricula to prioritize technology and innovation. Third, students are urged to create products that can be commercialized (Cincera et al., 2018).

Universities should improve not only students' productive skills and competitive abilities, but also their morals and their behaviors. Innovation, as promoted by Industry 4.0, cannot be separated from morality. Ideally, democratization would enable universities to ensure academic freedom while still maintaining accountability. With such freedom, intellectuals can use their resources to accelerate and control development. Only once such freedom is available should more students be accepted, in order to provide the necessary human resources.

However, in reality universities are not autonomous, being shaped by state interests (through government policies), market interests (through the commercialization of education), and strategic interests (be they political, business, ethnic, and religious). All of these factors limit universities' ability to act autonomously (Warmadewa, 1995). They are instead trapped in a cycle of instrumentalization, wherein their curricula promote industry interests (Gibbs, 2017; Mavelli, 2014). This occurs, first, industries apply pressure to universities and shape their curricula. Second, universities' quality is measured through evaluation of their innovative abilities. Third, students' capabilities are evaluated using standardized, government-designed instruments. Consequently, as argued by Illich (in Samerski, 2018), the instrumentalization of education has resulted in universities being coopted by the government.

Where all education, from the elementary through the university level, is oriented towards business and capitalism, education becomes artificial and social life becomes money oriented (Hakemy, 2017; Pilliang, 2012; Schumpeter, 2013). To produce graduates of appropriate quality, it is therefore necessary to cultivate morality and spirituality (Anas et al., 2013; Purwaningsih, 2010; Sudrajat, 2011; Sutiyono, 2015). Universities must ensure that their graduates can not only compete on the international market, but also have the necessary intellectual, moral, and spiritual competencies to work collectively and create social harmony.

6. Conclusion

This study has shown that the current industrial revolution has wrought significant changes, both positive and negative. One prominent effect of Industry 4.0 is shown in this study, is demoralization amongst university students. In response to the Ministry of Research, Technology, and Higher Education's innovation policy, universities have industrialized their curricula and their graduate competencies. Morality, character, and spirituality—all of which are important for personal development—have been ignored. At the same time, student-professor relations have weakened under the influence of industrial moralities and values, and universities have been trapped in a cycle of instrumentalization.

This article recommends that universities respond to government policies dynamically, rather than limiting themselves to static and textual interpretations. Constructive and reflective analysis of policy is necessary to ensure that universities do not simply act to advance state interests. Autonomy is necessary to maintain educational idealism and academic nuance. It is also necessary to ensure that students, lecturers, and campuses use education to create personal and moral integrity. Graduates must be oriented not only towards meeting workplace demands, but also towards moral behavior.

This study is limited by its reliance on descriptive analysis of a limited dataset. As such, further study is necessary to examine demoralization on a broader scale. Campuses must critically consider how they can balance industrial demands, morality, and spirituality in their educational processes. At the same time, universities' continued standing in a transforming society must be evaluated; institutions of higher education should not only produce competent workers, but also individuals with moral integrity. Only then can universities meet market demands while simultaneously addressing wider social issues. Moral education remains important and relevant, and should be recognized as such by all stakeholders.

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