

**PENERAPAN MODEL PEMBELAJARAN BERBASIS MASALAH (PROBLEM
BASED LEARNING) UNTUK MENINGKATKAN HASIL BELAJAR GEOGRAFI PADA
MATERI DINAMIKA PERUBAHAN HIDROSFER SISWA KELAS X SMA NEGERI 1
MANGOLI UTARA**

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Abstract: *Learning geography is learning that discusses more about social problems that are logical in nature and identical to rote memorization, so that if teachers are not creative in applying learning models, students will feel bored in participating in classroom learning and this will certainly affect student learning outcomes. The low activity and results of students in participating in teaching and learning process activities are caused by, students lack the courage to express opinions during teaching and learning, students lack the ability to formulate their own ideas, besides that there is less active interaction between students and teachers and students do more note-taking and listening activities. This situation, after the researchers looked at it, it turned out that the learning methods used were less varied and innovative. The type of research used in this research is Classroom Action Research (CAR), using a qualitative research approach. With the aim of improving geography learning outcomes in class X SMA Negeri 1 Mangoli Utara after learning is carried out using a problem based learning model. Based on the results of the research in the first cycle, it shows that the ability of students' knowledge about the dynamics of hydrospheric changes. The average value obtained by students on this test is 61.74, the test results show that most students have not been able to solve problems on the dynamics of hydrospheric change and the percentage of students who achieve completeness is 47.83%. While in the second cycle the students' knowledge ability which shows that the average value obtained on this test has increased, namely 74.61, on the test almost all students have been able to solve problems with the material and the percentage of students who achieve completeness is 82.60 %.*

Keywords: *Problem Based Learning Model (Problem Based Learning). Learning outcomes*

PENDAHULUAN

Pendidikan merupakan bidang yang sangat berpengaruh untuk meningkatkan kualitas Sumber Daya Manusia (SDM). Pendidikan berkembang seiring dengan perkembangan Ilmu Pengetahuan dan Teknologi (IPTEK). Segala sesuatu yang berhubungan dengan pendidikan harus dapat menyesuaikan perkembangan IPTEK. Hal ini terjadi karena pada abad terakhir ini manusia dikatakan unggul apabila mereka berpendidikan dan menguasai teknologi. Pendidikan yang semakin baik diharapkan akan menghasilkan SDM yang semakin baik pula. Oleh karena itu, perpaduan antara teknologi dan pendidikan berperan untuk membentuk SDM yang cakap, kreatif, terampil dan profesional.

Untuk menunjang kesuksesan penyelenggaraan pendidikan, perlu menyediakan lingkungan yang memungkinkan peserta didik dapat mengembangkan bakat dan kemampuan secara optimal. Peserta didik atau siswa dapat mewujudkan dirinya dan berfungsi sepenuhnya, sesuai dengan kebutuhan pribadinya dan kebutuhan masyarakat sesuai dengan tujuan pendidikan nasional yang tertera dalam Undang-undang RI Nomor 20 tahun 2003 tentang Sistem Pendidikan Nasional pasal 3, yaitu yang berbunyi untuk mengembangkan potensi peserta didik agar menjadi manusia yang berakhlak mulia, sehat, berilmu, cakap, kreatif, mandiri, dan menjadi warga negara yang demokratis serta bertanggung jawab dan berfungsi mengembangkan kemampuan dan membentuk watak serta peradaban bangsa yang bermanfaat dalam rangka mencerdaskan kehidupan bangsa. Sehingga seorang guru harus dapat melaksanakan fungsinya sebagai agen pembelajar yang berperan sebagai fasilitator, pemacu, perekayasa pembelajaran, dan pemberi inspirasi belajar bagi peserta didik. Mengarahkan peserta didik untuk melakukan sendiri aktivitas pembelajaran membutuhkan bantuan dari guru yang berperan sebagai fasilitator.

Berdasarkan hasil observasi yang telah dilakukan diperoleh data dan informasi tentang kondisi pembelajaran geografi di kelas X SMA Negeri 1 Mangoli Utara belum mencapai hasil yang maksimal. Pembelajaran geografi merupakan pembelajaran yang lebih banyak membahas masalah sosial yang sifatnya logika dan identik dengan hafalan, sehingga apabila guru tidak kreatif dalam menerapkan model pembelajaran, maka siswa akan merasa bosan dalam mengikuti pembelajaran di kelas dan hal ini tentunya akan berpengaruh terhadap hasil belajar siswa. Kriteria Ketuntasan Minimum (KKM) yang ditetapkan di X SMA Negeri 1 Mangoli Utara yaitu 70. Sementara siswa yang berada di kelas X dengan jumlah 20 orang, hanya 7 orang siswa atau 35% yang

mencapai KKM dengan nilai 70-90, sementara 13 orang siswa atau 65% tidak mencapainya dengan perolehan nilai 40-60.

Rendahnya keaktifan dan hasil siswa dalam mengikuti kegiatan proses belajar mengajar disebabkan oleh, siswa kurang memiliki keberanian untuk menyampaikan pendapat saat belajar mengajar, siswa kurang memiliki kemampuan untuk merumuskan gagasan sendiri, siswa belum terbiasa bersaing menyampaikan pendapat dengan teman yang lain. Selain itu Interaksi aktif baik antara siswa dengan guru juga kurang dan siswa lebih banyak melakukan aktivitas mencatat dan mendengarkan. Keadaan tersebut, setelah peneliti cermati ternyata tidak lepas dari metode pembelajaran yang digunakan kurang variatif dan inovatif.

1. INTRODUCTION

Although the policy of abolishing fares in public transport (PT)—here referred to as “fare-free public transport” (FFPT)—exists in full form in nearly 100 cities worldwide, it remains highly controversial. On the one hand, it is criticised by transport engineers and economists. They argue that from the perspective of utility, efficiency and economic growth (Cervero 1990; Storckmann 2003), zeroing fares may harm PT networks financially and generate “useless mobility” (Baum, 1973; Duhamel 2004). They further claim that FFPT negates the essentially liberal principle according to which a commodity such as collective transport must always come at a “right” price (CERTU 2010). Moreover, scholars and practitioners who perceive mobility problems through the question of “sustainable” development (Kębłowski and Bassens 2018) point out the weakness of FFPT in terms of generating a modal shift from private vehicles to PT (Cats et al. 2017; Cats et al. 2014; Cervero 1990; Fearnley 2013). On the other hand, albeit much less prominently, a number of arguments in favour of FFPT have been raised by academics working in the field of transport and mobility (Briche 2017; Briche and Huré 2017; Volinski 2012), as well as outside it—most notably by political scientists (Ariès 2011; Larrabure 2016), urbanists (Brown et al. 2001, 2003; Kipfer 2012; Maricato 2013), critical historians and sociologists (Schein 2011), and communication scholars (Santana & Silva, 2013). FFPT is also praised by a plethora of non-scientific publications, in which political activists and public officials (Brie 2012; Cosse 2010; Ługowski 2017; Prince and Dellheim 2018; Robert 2015) have defended fare abolition, often speaking from cities where this policy has been put to a test (Giovanangelli and Sagot-Duvaurox 2012). They posit that FFPT may not only generate operational savings, generate a

modest shift from cars to PT and reduce car traffic externalities, but also work towards a social and political transformation.

Despite the controversy surrounding fare abolition, few studies have attempted to closely scrutinise it (Cats et al. 2017). Detailed analyses have focused only on specific regions or countries (Briche and Huré 2017; Cordier 2007; Volinski 2012), or on specific cases (Brown et al. 2003; Cats et al. 2017; Fearnley 2013; van Goeverden et al. 2006; Storchmann 2003). Academics—within and outside the field of transport and mobility—rarely discuss FFPT. As a result, it is insufficiently researched, and there exists no comprehensive global overview of fare abolition programmes. In this paper I aim to start filling this gap. My first objective is to enhance conceptual clarity: in the following Section 2 I provide a definition of FFPT and discuss its different forms (in section 2). Most notably, I introduce a distinction between “partial” FFPT and—the main focus of the paper—“full” FFPT. In Section 3, building on Kębłowski and Bassens’s (2018) typology of approaches to urban transport I distinguish three perspectives on fare abolition—first, arguments that refer primarily to its economic performance; second, analyses that focus on its contribution to “sustainable” development; third, arguments highlighting its politically transformative and socially just potential. As these three outlooks on FFPT offer a variety of arguments pro and contra its viability and desirability, they serve in Section 4 as an analytical lens through which I identify and examine the geographical distribution of FFPT. Consequently, the key contribution of the paper lies in providing the most comprehensive inventory of full FFPT programmes, and in charting their geography to begin to unpack the diversity of different motivations behind fare abolition. To this end, I draw on three empirical vignettes displaying specific cases of full FFPT. to highlight the diversity of existing fare abolition programme, and to give preliminary insight into the impact of FFPT. This constitutes a first step towards providing a comprehensive study of how FFPT affects local finances, mobility patterns, and socio-political geography of cities and towns in which it is applied. Such a review, as I argue in section 5, should form part of a future research agenda, which builds on The final section 5 presents a several number of conclusions that can be drawn from this the mapping exercise explored in the paper. , and sets the agenda for further research on fare abolition.

2. Conceptualising and defining different forms of FFPT.

To prepare a comprehensive global overview of FFPT, I began by identifying academic literature on this policy. I searched Google Scholar,

Scopus, Web of Science, China Science and Technology Journal Database, and cairn.info for sources in Chinese (Mandarin), English, French, German, Polish, Portuguese, Russian and Spanish. The scope of thus retrieved scientific literature was nonetheless very small, as less than 50 relevant academic articles were found. Therefore, the second step towards creating an inventory of fare abolition programmes involved studying a variety of FFPT-related websites, blogs, Wikipedia entries and thematic Facebook groups and sites. Needless to say, I did not take these non-scientific internet sources verbatim, and instead approached them as entry points for identifying existing fare abolition programmes. I then verified each case reported by these outlets by analysing documents of relevant authorities in localities where particular cases were reported to have been implemented, and by scanning local think-tank and media reports. Moreover, I conducted my own research on selected full FFPT cases in Estonia, France and Poland, and regularly participated in FFPT-related conferences and seminars over the past three years. Thus gathered empirical material includes 40 semi-structured interviews with a variety of stakeholders (municipal officials, PT operators, urban activists) involved in the FFPT policy network, from whom information about specific cases could be acquired. I concluded collecting data from these various sources in January 2017—a timeframe that is reflected throughout the paper.

What emerges from my research is that the idea of “free” public transport is far from uniform, as it takes a variety of forms, exists in diverse locations, and for diverse reasons. However, before exploring their landscape, several conceptual issues need to be clarified. First, it is important to address an oft-made critique according to which the terms “free public transport” and “free transit” inaccurately suggest that as riding on board of public transport is “free,” nobody pays for it. Accordingly, throughout the paper I refer to the notion of “fare-free” networks. It highlights the absence of tickets or distribution of zero-fare tickets as the principal and unique characteristic of the policy, and accentuates that fares are “free” only because they are fully subsidised. A further clarification has to be made with regard to the ownership structure of fare-free transport. There exists a plethora of fare-free collective transport services that are private. Their instances include services offered by shopping centres interested in linking up with customers, large companies providing a commuting service to their employees or paying for their travelcards, hotel shuttles, or car-pool initiatives operating at different degrees of formality, and often organised via online platforms. Instead, the focus of this

paper is explicitly on fare-free public transport (FFPT), understood as a particular form of subsidy provided by (local) governments and institutions.

However, as I further explain below, not all instances of FFPT are equal, depending on when and for how long fares are suspended, where the fare-free regime occurs, and who obtains access to free rides. In other words, while some cases of FFPT can be identified as “full,” others are “partial”, as they incorporate important temporal, spatial and social limitations (as shown in Table 1). I define “full” FFPT as a system implemented on the vast majority of routes and services provided within a given PT network, available to the vast majority of its users, most of the time, and for a period of at least 12 months. “Partial” FFPT, on the one hand, appears to exist under four main forms: (a) “temporary,” (b) “temporally-limited,” (c) “spatially-limited,” or (d) “socially-limited”.

<PLEASE INSERT TABLE 1 AROUND HERE>

Temporary FFPT takes place when fares are abolished for a short period of time, defined here as at least 1 month and less than 12 months. This may happen when after a limited trial period FFPT is assessed not to have produced the anticipated results, and consequently is abandoned. This occurred in Stavanger (Norway), where having abolished fares in August 2011 the municipality restored them in December that year. The definition of temporary FFPT excludes a variety of fare-free campaigns explicitly conceived as exceptional and isolated events, and put into practice for a very limited time, for instance to respond to high air pollution levels, natural disasters, terrorist attacks, or financial and political crises, or to promote PT usage within the framework of the “car-free day” celebrated annually on 22nd of September in a variety of municipalities worldwide.

Temporally-limited FFPT occurs when fares are not charged in specific and regular periods of time. For instance, in Chengdu (China, Sichuan) fares do not apply in the bus network before 7am, while in Singapore collective transport is free to use before 7.45am. Thereafter tickets have to be validated.

Spatially-limited FFPT applies to a specific section of the PT network, a specific mode of transport, or to PT services that are in fact composed of only one or two routes, and therefore could hardly be considered as a network. Examples of spatially-limited FFPT systems can be found in Melbourne (Australia), where free travel is available within a strictly-delimited “free tram zone,” and in Boston (MA, United States), where it is limited to a single service within a larger PT network. Instances of specific ticket-free modes include

urban ferries in Amsterdam (The Netherlands) and short-distance “neighbourhood” buses in Chengdu (China, Sichuan). Many cases of spatially-limited FFPT are located in the United States, where it is common for nature parks and university campuses to offer fare-free services that follow one or two routes only.

Socially-limited FFPT embraces a specific group of users, which may include children (e.g. Kingston, ON, Canada), youth (Kołobrzeg, Poland), students (Zagreb, Croatia), the disabled (Lublin, Poland), the elderly (Canberra, Australia) and the pensioners (Shanghai, China). PT companies frequently apply this form of FFPT, in particular in Europe. One example of a well-established socially-limited fare-free scheme is the old age pensioner (OAP) concessionary fare programme in the United Kingdom (Fearnley 2006; O’Reilly 1990). Socially-limited fare abolition may well exceed the urban scale and be applied on the national level—for instance, in Slovakia the railway network in offers zero-fare tickets to children, students, retired persons and seniors. Furthermore, socially-limited FFPT may be approached as a form of providing social welfare to low-income groups, the unemployed (Gdańsk, Poland) the disabled and their guardians and caretakers (Tarnów, Poland), or as free service for meant to attract visitors and tourists (Geneva, Switzerland), or car owners (Kraków, Poland).

Finally, different partial forms of FFPT can be combined within the same transport system. For example, in Płock (Poland) FFPT is spatially-limited to a single line, the free use of which is further temporally-limited to weekends only. In Leuven (Belgium) fares are not charged in a small part of the local PT network (night buses), and only in specific periods of time (weekends).

Although the diversity of partial fare-free campaigns remains largely unstudied, in the remainder of the paper I focus on a somewhat more urgent issue of exploring full FFPT programmes, as particularly holistic cases of fare abolition.

3. Why (not) abolish fares? Three perspectives on the (non-)viability and (non-)desirability of FFPT.

The diversity of forms of fare abolition and the continuous growth of the number of cities and towns implementing this policy (discussed in section 4 below) have not yet led to a fervent debate, within and outside academia. Nonetheless, when reviewing arguments in favour or against full FFPT, three main perspectives on this policy can be distinguished. Building on a typology of different approaches to urban transport conceptualised by (Kębtowski and

Bassens (2018), I summarise them as viewing FFPT from the perspective of—
respectively—economic rationality, sustainable development and socio-
political transformation.