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Russian Vocational and Technical Education in The Transition: Tradition, Adaptation, Unresolved Problems

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Executive Summary

First impressions of western observers in the 1990s characterized vocational and technical education in Russia as being supply-driven, rigidly structured, and slow to adapt to economic change (Heyneman, 1994). With the collapse of industrial output, it was widely believed that unemployment would increase and the demand for vocational skills would decline. These impressions have proven to be only partly correct. In fact, Russian vocational education has demonstrated remarkable flexibility. Graduates seem to be in higher demand than western observers had predicted. These successes, however, may be temporary. Significant problems remain, and their solutions may determine whether previous successes can be sustained (World Bank, 1995). This note will mention a few characteristics of Russian vocational and technical education at the commencement of the transition period; then it will cover the ways in which the system has adapted to the economic and social challenges; and finally it will mention a few of the unresolved problems.

Russian Vocational and Technical Education in the Transition: Tradition, Adaptation, Unresolved Problems

Traditional Characteristics Russian vocational and technical education is well known for its wide coverage of specializations and its relevance to employment. This relevance, however, can be described as 'artificial,' because it was established within a tradition of central economic planning and centralized job placement. It was assumed that everyone should be equipped with job-specific skills before entering the labor force. This assumption led to the development of a huge vocational training system. Currently, as of 1995, vocational and technical education accounts for 55 to 60 percent of the enrollments in secondary education, with over 6,900 institutions and some 3.7 million students. (1) Course decisions allowed little leeway for local preferences. Central authorities determined standards, pedagogy, teacher training, remuneration, equipment and supplies. Courses were designed on the assumption that graduates would enter relatively predictable careers in specific enterprises using specific technologies. Because industrial investments including investments in new technologies were centrally determined, training in the use of these technologies was comparatively simple. This led to an unprecedented number of specializations (over a thousand as opposed to western countries with only a fraction of that number) and an unprecedented duplication in institutional authorities responsible. Perhaps a many as 30 different functional ministries -- industry, agriculture, metal, gas, oil, etc. -- managed their own vocational and technical training institutions, accounting for about 40 percent of the total (Johanson, 1996, p. 16). Because specializations were opened on the basis of administrative command rather than market demand, there was an imbalance across programs, with heavy emphasis on industry and low emphasis on services. Of course there was an absence of many vocational programs popular in market economies, such as small business skills and the like.

Early observers suggested there would likely be a significant restructuring of the economy including a massive shift in employment from one sector to another and large-scale transitional unemployment. This was to have led to unprecedented pressures on the vocational and technical education system, including shifts in skill demands and large scale unemployment of vocational school graduates. It was assumed that when faced with output declines in traditional industries, Russian labor markets would react like those in the west. There would be large scale unemployment among blue-collar workers in particular and a collapse in demand for vocational training. More academic training was thought to be better insurance against unemployment(2). The reality of the last five years in Russia has substantiated some, but not all of these predictions.

The Russian economy experienced a 47 percent decline in real GDP between 1991 and 1994, which included a 17percent decline in electrical power, a 31percent decline in fuel, 62 percent decline in petrochemicals and a 74 percent decline in light industry (3). By 1994, 80 percent of the enterprises, employing 60 percent of the industrial labor force, had been privatized. About a third of the enterprises expanded the variety of their products; and about a quarter reduced variety. About four in ten changed their technologies and reorganized their administrations to reduce bureaucratic layers and facilitate decision-making. Many of the larger enterprises split into small, more manageable units (Standing, 1995, p. 1). In 1990, 70 percent of the labor force worked in industry; but by 1995 this had fallen to 44 percent (Johanson, 1996, p. 4). These are the ingredients which western observers anticipated would lead to large scale layoffs and open unemployment, but so far this has not happened. While output declined by over 40 percent, net employment declined by only four percent. Why wasn't the economic decline mirrored by a similar decline in employment?

Registered unemployment in 1995 was approximately 2.7 percent; only eight percent of which was attributable to mass layoffs. In spite of low unemployment, there is significant turnover (Kuddo, 1996, p. 46). In 1995, 21 percent of employees resigned from their jobs and 18 percent applied for new jobs. New hiring is higher than had been anticipated, and open unemployment is lower(4).

Privatization has not led to large-scale labor shedding, perhaps because the privatization was led by workers and managers within the enterprises themselves. Privatization has not necessarily led to market competition. Open shedding of labor has severance costs for the enterprise which may exceed the costs of other alternatives, such as administrative leave or part-time employment. It may be less expensive to continue to employ workers rather than fire them, regardless of output. By some estimates, underemployment now characterizes up to a third of the Russian labor force (Standing, 1995, p. 56).

Output decline in Russia has been accompanied by surprising growth in areas of the economy which had previously been monopolized or outlawed. These areas include tourism, trade, hotels and restaurants, auto service, and office and home repair. Trade and catering has expanded its workforce by 14 percent since 1992. The service sector grew by 13 percent in 1995 alone (Johanson, 1996, p. 4).

Adaptations The nature of these demands have affected vocational training in ways which were unanticipated at the beginning of the transition. Contrary to western experience, the highest demand for new employment appears to be for manual workers. Net losses in employment are concentrated among clerical and other white-collar staff. According to one report, half the engineers, compared to 15 percent of the graduates from basic vocational schools, could not find employment in 1994 (Smirnov, Solomakhin and Sedykh, 1995). By another report, only 13 percent of the vocational school graduates 'found it difficult' to locate employment in 1994; and a surprising 45 percent for one reason or another, had turned jobs offers down (Castro and Feonova, 1995, p. 12). So high is the demand from the entrepreneurial sector for these skills, that manual workers appear the most likely to voluntarily leave employment in larger enterprise, hence lowering the stock of firm-specific skills, and raising the demand for new workers even at a time of output decline.

Challenges to the vocational system have mirrored those to the economy and society at large. After an attempt to shift responsibility for vocational education onto the regional authorities in 1995, the federal government continues to try and finance the system, but can only cover food and teacher salaries. Costs of teaching materials, maintenance, and utilities are the responsibility of the institution or the local authority. These authorities have responded to these challenges with considerable innovation. They have raised revenue through the production of local goods and services, leasing of property, charging of tuition (often from adult training),⁽⁵⁾ and by employing local tax revenues (Korostelev, 1993). In 1994 there were 400 cooperatives which employed students to generate school revenue. Recognizing the criticism of over-specialization, vocational authorities have radically reduced the number of occupational programs offered (from 1200 to 287), and instead concentrate on 'occupational families' intended to supply trainees with a set of skills intended for use across many different types of employment and traditional sectors (Smirnov, Solomakhin and Sedykh, 1995). The number of occupational families available within institutions has also broadened, from 2 - 3 in the past to 10 - 15 today (Johanson, 1996, p. 24).

Since the new legislation does not (in contrast to the past) attempt to mandate the length of training, variations are beginning to appear based on occupational requirements. Fifteen percent of the vocational institutions have added a new year and now classify themselves as a vocational lyceum, and about a fourth of the technical secondary schools have become preparatory colleges for a university. Innovations are also appearing in the location of training. Vocational education may be delivered in secondary technical institutions, and may also be delivered in some higher education institutions. School directors now assume considerable managerial responsibility and raise about 40 percent of the resources. They hire new staff and set salary levels above the minimum, supervise the teaching process, and develop new curricula and new programs for (local or federal) approval. The balance of training programs have shifted away from heavy industry toward services. There exists a plethora of private training providers which act to stimulate competition between themselves and the income-dependent public institutions. Three hundred new private institutions applied for licenses in 1995 (Johanson, 1996, p. 21).

Remaining Problems In spite of these signs of vibrancy, problems remain. It may no longer be feasible for enterprises to hold under-employed labor. As both federal and local authorities turn their attention to the problems of growth, pressure will increase on the enterprises to become more efficient. This is likely to alter the labor markets for vocational graduates⁽⁶⁾. Surprisingly, the number of vocational institutions has not declined since the beginning of the transition. This suggests that there are rigidities in the use of these institutions. This also suggests an unwillingness to innovate in terms of rationalizing staff, equipment and programs.

One reason for this hesitancy is that Russian vocational education is used for social purposes as well as educational purposes. Concern about illegal and criminal youth behavior is genuine. Similar concerns in the western experience may be relevant. OECD countries have also used vocational education to 'keep youth off the streets'. Nevertheless, the general conclusion is that using vocational schools for these social purposes is more expensive than other mechanisms; it lowers the general quality of vocational program, and it fails to resolve the behavior problem.

Providing pre-employment skills to all who enter the labor market is an assumption which has not yet been sufficiently questioned. Definitions for pre-employment skills are changing rapidly. Typing, consumer economics, entrepreneurial skills (market research, raising capital, accounting, employee management), driving, statistics, and foreign languages used to be treated as specialized functions. Yet today they are essential ingredients of a general secondary education. There is no reason why woodworking, plumbing, and small scale agriculture and horticulture should be characterized as part of a vocational specialized program. General assumptions about academic secondary education have not been included when questions have arisen about secondary vocational education. The time has come in

Russia to question both.

There are also problems of quality. Quality problems are obvious in programs that did not exist prior to the economic transition, such as economics and business management. The teachers in those courses have been shifted from other areas of responsibility and are heavily dependent on textbook translations. Lack of personal experience is a significant handicap. Little new investment has been made to upgrade teacher training institutions and to insure a supply of new skills in the teaching profession. Moreover, regulations make it difficult to reward teachers who have the scarce marketable skills in such areas as foreign languages, business, construction, and computer programming, thus ensuring a constant outflow of the most valuable teachers away from teaching.

Before the transition began, the connection between employer and training institution was dependent upon an administrated labor market. Those regulations have passed from the scene, but there has yet to be a mechanism inaugurated to reinstate the interest of employers in training issues. Vocational institutions do not take responsibility for the employment fate of their graduates, nor do they commonly sponsor empirical analyses of graduate employment trends. This would suggest that vocational institutions have yet to fully appreciate the implications of a demand-based curriculum.

One way for a system of education to respond quickly and creatively to new demands is to have a variety of policy research studies and data supporting those studies available to the public. There is an embarrassing lack of reliable data in vocational education. There is also an absence of data on unit expenditures, off-budget income, and trends among graduates in employment and productivity. As a result, there is an absence of empirically-informed debate in the press and academic literature. The lack of good information leaves the system open to prejudice and wide variations in opinion. Tension in the discussion over what to do about vocational education policy could be alleviated if the public were better informed about these trends and circumstances. It would be helpful if vocational policy research could be the responsibility of both federal and regional authorities, and awarded on the basis of competitive contracts with many different capable institutions offering their services, including universities, economic research institutions and vocational institutions themselves. Research on vocational education should not be monopolized by government vocational research institutes.

Teaching in Russia is labor-intensive, with staff/student ratios at half or a quarter of what they are in western training institutions (Heyneman, 1996). This stems from the tradition of over-specialization, made possible because of low wages. Resistance to shedding teaching staff can be expected, but the cost of maintaining the number of teachers lowers the ability to invest in new and much needed teaching technologies.

There are usually three sources of vocational education revenue: general taxation, private enterprise, and self-generated resources. It is reasonable to assume that general tax revenues of neither the federal nor the regional governments will be sufficient to finance the modernization of vocational and technical education in Russia. It is also reasonable to assume that for the next 5 - 10 years, enterprises will not be able to finance a large percentage of training expenses. The incentives for enterprises are not obvious. Their tax burden is significant and there is no clear instrument for them to insure that the training will be relevant to their specific enterprise.

This implies that the vocational system itself will be the main source of new income. But many regulations restrict the ability of managers of vocational education institutions to raise and allocate new income. The federal allocations to specific institutions are based on enrollment and past budgets, thus restricting local ability to shift resources from institutions with low demand to institutions with high demand. Federal funding instead should be allocated on an aggregate level to regional authorities, who would be expected to allocate training funds on a basis of local demand. Raising money from renting

school facilities could be an option, but there are still restrictions on the use of this income. All but ten percent of the off budget resources derived from leasing land and property must be returned to the federal budget. This leaves little incentive to use school property creatively for educational purposes.

The Federal Employment Service seems to have established the sole precedent for awarding training funds on an openly-competitive basis. The lessons should be incorporated into the vocational training system itself.

In essence there seems to be an absence of a clear policy on vocational education sufficiently in tune with the new realities: regional decision-making, privatization, free choice of profession and place of residence. New federal roles and functions have yet to be adequately defined in the light of new regional obligations and responsibilities. Individual institutions and professionals seem to be adjusting to the demands of fiscal austerity more rapidly than the policy framework. The time may now be ripe, however, for vocational policy to catch up.

Summary

In many ways, Russia's vocational training institutions have confounded western experts. They have shown signs of adaptability and creativity in the face of massive economic and social change. They have expanded in response to new demand and have demonstrated a vigor which had been largely unanticipated. Nevertheless, the first stage of the transition may be drawing to a close. The second stage will likely illustrate that, at the macro level, the vocational system has many unaddressed problems (Heyneman, 1996). These include :

- integration of subject material with the general school curriculum;
- self-sustainability from its own resource base;
- the rationalization of low demand institutions and the reallocation of resources in order to invest in new teaching technologies and new subject matter;
- and the most difficult of all, resistance to the common practice of using vocational education for social instead of education purposes.

In other words it might be time for a rethinking of vocational policy in general. The vocational professionals have confounded western experts before and, if they are given an opportunity to drive the reforms in vocational policy, they may confound the experts again. If so, both Russian education and the Russian economy will benefit from the result of their innovation and creativity.

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Footnotes

1) In 1995, an additional 1.8 million workers in enterprises and 500,000 unemployed were enrolled in adult training programs. Moreover, about 80 percent of higher education might be classified as preparation of specific occupations.

2) The most common citation for this view from Psacharopoulos (1986).

3) Some argue however that output decline may be over-estimated on grounds that output figures during the Soviet period were systematically inflated. See: Gavrilenko and King (1994).

4) This is more true in western Russia and, of course, near urban areas.

5) According to Johanson (1996, p. 14), over 90 percent of the adult retraining programs of the Federal Employment Service are situated at existing vocational institutions.

6) Large-scale labor shedding lowers employment opportunities for vocational graduates. On the other hand, western experience suggests that the economic returns to investments in training are highest when business makes changes in work organization, job design and technologies. When workers are used more creatively, the payoff to vocational training increases

(Finegold and Soskice, 1988; Kochan and Osterman, 1991; Applebaum, 1991).

7) These may include work study programs and mandatory community service. It can also include new opportunities for higher education, financed in part by voluntary community service.